## Gender bias in the classroom

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## Gender Bias in the Classroom: An intervention approach

This paper is a research proposal that will offer an extensive examination of the sources and effects of gender bias that occurs in the classroom. After a literature review on the subject, this paper will outline a research task, which will suggest a future means for deepening the understanding of gender bias in classrooms. The hypothesis of the study is that having educator awareness alone will not be sufficient in eliminating bias.

## The Problem

The problem of gender bias in the classroom, particularly in terms of differential treatment, has been widely and heatedly debated as well as published in academic and popular literature for years (Beaman, Wheldall, \& Kemp, 2006). The debate has been researched and can be traced back throughout the twentieth century, to when it intensified significantly in the 1970s, when researchers began to look more intensely at the particular treatment that boys and girls received from their teachers in a classroom setting (Beaman et al., 2006). There is, although not surprisingly, been variation in research and conclusions over the subsequent years, but with further investigation of a small section of the literature on the subject over that period reveals that there is significant evidence to suggest that there is institutionalized gender bias in classrooms. In simple terms, boys and girls are treated different by educators by efforts of their gender alone, surprisingly, even when all other factors have been present and accounted for.

The extending implications of this problem should be readily apparent. Almost wholly unintentional, gender bias in the education system is so prevalent, that even when teachers do make a genuine effort to change their behaviour in regards to biased or differential treatment, subtle forms of it still creeps in. (Beaman et al., 2006; Swinson \& Harrop, 2009). The importance of recognizing and eliminating this bias is evident in the arguing of making single gendered classroom and creating two educational curricula, one that will severely shorten the ambitions and accomplishments of students (Brannon, 2008; Frawley, 2005). Although studies have revealed that many teachers are unaware of their differential treatment, it must be the goal of the teachers and educators to believe that he or she is not above this kind of behaviour and to recognize that gender bias in the classroom is present more often than not. Educators must be trained to recognize how to recognize this behaviour, and how they can develop strategies that can be employed to lessen the effects of gender bias in the classroom. Only by doing so, can educators hope to provide an educational experience for all students that enhance their ability to learn and achieve educational success, rather than hinder the experience based on nothing more than gender (Frawley, 2005).

The goal in this paper is to outline a research approach that will hopefully help move educators closer to the realization of gender bias involvement within their own classrooms. As such, I will begin with a literature review on biases in the classroom to familiarize readers with some of the significant conclusions that other researchers have drawn over the past decades in examinations into gender bias in the classroom. The proposed research will
examine the important question of whether or not making teacher's conscious of the gender biased behaviours has a positive impact on reducing such bias. In other words, can we reduce gender bias in the classroom simply by making educators aware of it and providing them with some basic scholastic tools to use in order to treat their students on a more evenly based level of gender? The hypothesis given is based on a plethora of previous research that suggests that gender bias has become far too institutionalized, both for teachers and students, for such a simplistic plan to be effective (Tournaki, 2003). The information that was researched and developed previously in the literature review will play a significant role in helping readers develop thoughts and put into context, the importance of this proposed study and its results.

## Literature Review

Starting in the mid-1970's, likely with the rise of the feminist movement in academic research which also occurred during this time (Beaman et al., 2006; Brannon, 2008), questions regarding gender and gender bias really started to come into focus in much of the educational research. In particular, researchers were interested in knowing whether or not there was a statistically significant preferential treatment of boys over girls in the classroom. By the late 1980's, more than eighty studies had come to the same conclusion regarding gender differentiation in the classroom:
[...] boys attracted more interactions than girls, with girls receiving less criticism but also less instruction. Boys received both more academic and behavioural criticism than their female counterparts. Although girls were just as likely (slightly more in fact) as boys to volunteer to answer teacher
questions, girls on average participated in only 44\% of classroom interactions. Kelly's finding that boys attracted more teacher attention than girls held true regardless of the gender of the teacher (although male teachers gave girls less attention than female teachers), age level of the students, subject areas, ethnic origin, socio-economic status, country, and in terms of when the study was conducted (Beaman, Wheldall, and Kemp, 2006: p. 340).

At one time, the gender bias debate was predominately based on girls being disadvantaged by boys but, now it appears as though the tables have turned with boys being placed under the microscope for their disadvantages. Girls seem to be gender biased in regards to sciences and maths whereas boys are disadvantaged by a " soft touch" approach to learning (Frawley, 2005). In effect, gender bias in the classroom was well established even as early as thirty years ago. Interestingly, the research has continued which suggests that despite this early realization, little progress has been made at finding a way of reducing gender bias or lessening the effects it has.

Lundeberg (1997) found that teachers and other educators are often utterly unaware of the differential treatment regarding gender biases that they continue to partake of in the classroom (Beaman et al., 2006; Swinson \& Harrop, 2009). Lundeberg's study consisted of 48 teachers ( 21 men and 27 women) that revealed that overall boys received greater amounts of attention, feedback, and praise from the teachers compared to girls. The researchers suggested a number of techniques for reducing this bias and increasing classroom equity, such as tracking student responses, alternating
interaction between male and female students, and encouraging teachers to not choose the first student to raise his or her hand.

Similarly, extensive research by Tournaki (2003) analyzed the responses of 384 teachers who were asked to respond to a case study of one of thirty-two students whose gender, reading abilities, behaviour, and attentiveness characteristics were manipulated experimentally to test teacher reactions and how it influenced them. What was found was that when these student characteristics were manipulated, the teacher's perception of the students and predictions of their academic and social success were also affected. In particular, Tournaki (2003) found that the gender of the student had a large influence on the attitude of teachers toward those students, even when all of the other characteristics were accounted for. The implication of this study clearly shows that students will be perceived and treated differently by educators simply based on their gender characteristics. This perception will not only seep over into student's treatment in the classroom but, it has the potential to have long-term effects and implications regarding the success of students in the classroom and in later life situations.

Swinson and Harrop (2009) conducted similar studies, but found that there was a large discrepancy in how many of the previous studies were not unanimously identifying, with consistency, the characteristics being observed. Having noticed this as a possibility of differing results across studies, a systematic examination of both boys and girls behaviours was devised that included specifically: a pupil on-task behaviour, teachers' positive and negative responses to both pupils' academic and social behaviour, teacher's questions and directions/redirections. Perhaps this new
detailed observation technique will set precedence for future consistent methodological studies. With a more systematic and detailed observation technique in place, the research supported that of which many other claims have; being that boy's still received more overall communication from teachers than did girls. Results of this study confirmed that teachers spend more time talking to boys than they do girls, especially when giving instructions and redirections. Girls received an average of less than twothirds that of boys.

Sneller (2001) points out that despite " a ban on gender discrimination in public schools [...] imposed by Title IX of the Education Amendment over twenty years ago, gender bias in our educational institutions is alive and thriving" (p. 196)(Brannon, 2008). The reason for this, as the research reveals is because girls are discouraged, often unintentionally, from pursuing many academic disciplines, especially in math and science disciplines. The key word to focus on from this research is ' unintentional'. While there are without a doubt examples of gender bias in classrooms that are purposeful and subjective, these can easily be dealt with because they are obvious and not within the standard realm of data considered to be a problem. Gender bias has become so pervasive that it has become part of the educational background noise and is more difficult to address because most educators don't even realize they're contributing. Worse, some may even think that whatever ideas they have, are improving gender fairness in the classroom while in fact, they are actually still perpetuating the same gender roles.

That was the case for a feminist researcher, Spender, who in 1982, taped her own classroom teaching for an analysis all the while making a concerted
effort to not be biased and spend an equal amount of time interacting with both male and female students (Beaman et al., 2006). To her surprise as well as dismay, she discovered that her efforts were still in favour of an underlying gender bias. During the ten taped lessons what was revealed was that the maximum class time that was spent interacting with girls was $42 \%$, ( $38 \%$ being the average), compared with boys receiving a minimum of $58 \%$ of classroom attention. For Spender, a feminist instructor and researcher that believed she was sharply aware of gender bias in the classroom, to still fail to create a gender equitable classroom hints at the hidden issues of bias against which educators must fight. Her research illustrates the problem for educators who assume that simply appearing to take a popular stance, yet making little effort to actually adopt or implement that position in private regarding gender equality in the classroom is enough to overcome the strength of the differential treatment being distributed to male and female students. It will require nothing short of a cultural shift in attitudes for educators regarding the behaviours and aptitudes of students.

## Research Question

The purpose of this research, as suggested, is to put the matter of gender bias in the classroom into a sharper perspective. Obviously, the existing literature on the subject reveals that gender bias has not only been a longstanding historical issue, but also a modern day one that continues to shape educational policies and behaviours. The actions of educators because of subtle and pervasive gender bias in the classroom influences the academic as well as the potential social success of their students, in particular by limiting the options available to female students. What is worse
is that most educators seem utterly unaware of their participation in a culture of bias, some even considering themselves progressive enough that they have successfully created gender equitable classrooms.

The reality, as seen in previous studies, paints a much different picture. Gender bias is alive and unfortunately a thriving part of modern education, and, what's more, it is an issue that will be difficult to get a handle on. The importance of teachers' predictions being negatively influenced by certain characteristics could create, for some students, particularly those with special needs, a greater risk for educational advancement (Tournaki, 2003). The focus of this research study will be to examine in greater depth the nature of that difficulty. More precisely, the author wishes to develop a research project that will focus on the success or failure of specific techniques at reducing gender bias in the classroom via raising awareness of the issue with educators. Numerous approaches are being attempted within the teaching profession: teacher-student interaction/communication, instructional styles, curriculum and instructional materials as a few of the ways educators might adjust biases within a classroom. It is the hypothesis of the author that these methods, while improving superficial concepts of gender inequity in the classroom, will fall far from the more difficult goal of altering pervasive gender biases in which all educators and students find themselves entrenched.

## Method

Like any good research proposal, it is important to define the methods employed, or that are intended to be employed by the researcher. The methods will adhere to scientific strategies of reducing gender biases.

Without the ability to replicate and the potential for falsifiability, the research itself cannot be considered scientific by any stretch.

## Participants

The participants for this study will be teachers and students in high school classrooms from the Kawartha Pine Ridge, Durham and Toronto school boards. This study will incorporate a ratio of 30 students to every teacher. The author would prefer to pursue as wide a sample as possible in order to reduce local variability that could taint the results. Therefore, the research should strive for a sample of at least 500 distinct classrooms consisting of 500 educators and 15, 000 students. A sample size of this scale will possibly present some difficulties, but it will help illustrate the true effects of gender bias intervention techniques across a more general population in the classroom.

## Measures

Two primary measures will be used to determine the success or failure of the tested techniques. The first will be based purely on the amount of time each educator gives to his or her students; male and female. Percentage of time allotted to male versus female students will be measured and tabulated to illustrate what portion of classroom time was granted to both genders. The second measure will be more subjective and will consist of two questionnaires comprised of forty questions each, and distributed to all of the teachers, as well as to a random sampling of 500 students ( 250 male and 250 female). One questionnaire will be given at the start of the study and will ask respondents to evaluate the extent of gender bias in their classroom
setting presently. The second questionnaire will be given at the end of the study, and will ask participants to evaluate any changes in bias that they perceived were better or worse.

## Procedure

The procedure will be straightforward, if slightly extended due to sample size. Because it is the hypothesis of this study that improved awareness will not result in significantly reduced gender bias in the classroom, educators will be told that the study is designed to evaluate grass-root efforts to limit gender bias. The teachers will be asked to create their own plan for improving gender equity in each of their assigned classrooms, or to implement no plan if they feel that their classroom is already gender equitable. In either case, documentation of the teacher's proposed technique will be required at the start of the study. The classrooms will be evaluated by an observer that is placed in the classroom as a teachers' aide over the course of a fall semester via the aforementioned questionnaires and previous classroom recordings that will indicate time allotment by gender. The teachers' aide will follow and record observations of the educators based on the categorical methods defined in Swinson and Harrop's (2009) study: questioning, instructions and redirection, approval for academic behaviour, disapproval for academic behaviour, approval for social behaviour and disapproval for social behaviour.

## Analysis and Discussion

It should be noted that the purpose of this study is not to test the success of a particular technique for improving gender equity in the classroom, but
rather to make educators aware that they are being observed and tested on this matter. By formulating the study in this way, it will make the educators conscious of the potential problem and, presumably, force them into action to reduce gender inequity. The significance of the results will rest in whether or not there is any improvement in gendered time allotment over the course of the semester, as well as any altered perceptions of students and teachers over the same period.

If the results of this study support the research hypothesis, it would imply that making teachers aware of the problem of gender bias is not a successful approach for eliminating it from the classrooms. It would on the other hand suggest that the issue of gender inequity runs far deeper than can be alleviated even by the conscious efforts of educators. If, however, there are changes in time allotments over the course of the semester, and the perception of equity supports this change, it might suggest that such techniques (and even perhaps which specific ones) are effective in reducing bias.

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