



Gender Equity in Tanzanian Classrooms

Jessica Essary^a, James Hoot^b

^aUniversity of Mississippi ^bThe University at Buffalo

Jessica N. Essary, PhD, is currently Assistant Professor of Early Childhood Education, and the coordinator of the M.Ed.ECE program, at The University of Mississippi. Her primary research interests are diversity teacher preparation and international education. Prior to her work at Ole Miss, Dr. Essary received her PhD at the University at Buffalo, The State University of New York, and spent 4.5 years as a faculty member in the College of Education at Zayed University in Dubai, U.A.E.

James L. Hoot, PhD, is currently Professor Emeritus at State University of New York at Buffalo. His primary research interest is global issues concerning early childhood education. Dr. Hoot is a member of the Executive Board of the World Organization for Early Childhood Education (OMEP USA) and he has served two terms as President of the Association for Childhood Education International (ACEI).

Abstract

While rhetoric concerning gender equity is beginning to emerge in many African nations, a dearth of research examines the status of gender equity in actual Sub-Saharan African classrooms. The purpose of this study was to explore teacher views of gender equity pertaining to primary grade boys and girls. Data were collected using the Teacher Attitudes Survey (TAS) (Anderson, 2005). This instrument was administered to 137 randomly selected Tanzanian primary grade teachers. Findings suggest significant differences exist in what teachers perceive to be important for boys and girls to learn when the curriculum is broken down by subject. Discussion of findings provides suggestions for future international comparative research on gender equity in African classrooms.

Introduction

The positive outcomes associated with completion of basic education are well known internationally. Among these are an increase in literacy rates, economic prosperity, status mobility, and individual autonomy (Spodek & Saracho, 2014; Zachrisson, & Dearing, 2015). On the African continent, nine out of 10 children begin primary school. However, only six will finish primary school and only three will master basic literacy and numeracy skills (ADEA, 2006). Perhaps the major reason for this dropout rate is that more immediate issues (e.g., health emergencies, sanitation provisions, and water access) often take precedence over national education agendas, leaving issues such as gender inequities in schooling not addressed.

While providing quality education in African nations is becoming a priority for increasing government agendas, understanding the complex needs of marginalized children in order to address educational inequities continues to be a major challenge. During the 1990's many African countries increased access to education in response to Education for All (EFA) and Millennium Development Goals (MDG) by providing more schools and teachers (Zhang, 2006). The number of schools and teachers increased from 1999 to 2009 by 500% (UNESCO, 2010). National leadership, outside aid, and more effective policies have allowed many African countries to demonstrate that it is possible to provide education even in the world's poorest areas (UNESCO, 2010). However, while brick and mortar schools have become more accessible for some, the *quality* of that education, levels of achievement, and advancement among students remain problematic (Oldekop et. al., 2016). For education to be accessible and valuable, improvements in both access and quality in schooling need to progress simultaneously. The Education for All Global Monitoring Report (UNESCO, 2010) has the following to say:

The ultimate measure of any education system is not how many children are in school, but what- and how well- they learn. Yet there is growing evidence that the world is moving more quickly to get children into school than to improve the quality of the education offered (p.7).

Since the quality of education is strongly linked to the quality of the classroom teacher, this current study begins to explore one critical variable in educational improvement-gender equity. Specifically, this investigation provides researchers, teacher educators, and policy makers with an extended understanding of gender equity with respect to teachers' pedagogical decision-making.

The influence of teacher perspectives on teacher pedagogy

Reports of gender inequities in Sub-Saharan African societies raise increasing concerns among government officials and education stakeholders. As in many African nations, policy makers in Tanzania are working to prioritize improvements in curriculum and teacher pedagogy to address these concerns. Resulting policies have the potential to begin to close the gender divide (Aikman, Unterhalter, & Challender, 2005). As has been recently pointed out, however, early education policy at the national levels seldom translates into improved *classroom* practices (Bakuza, 2014; Tandika, 2015). Perhaps the major reason for this is that the voices of practicing teachers are seldom considered in policy development. Research suggests that teachers' prior beliefs have a greater influence on teachers' pedagogy than their formal knowledge (Ethell & McMeniman, 2002). As Anderson (2005) notes, "Theories about the role of beliefs in pedagogical decision-making are important... since efforts to raise awareness about gender equity in school may confirm or challenge teachers' existing beliefs about boys' and girls' ability to succeed in an academic setting" (p. 41)." In light of these findings, greater attention to teachers' beliefs appear warranted.

Teachers' expectations of boy and girl students in Sub-Saharan Africa

Teachers' expectations of their students are highly related to variations in student achievement (ADEA, 2006). Primary school environments, which have similar treatment of both genders and equal curricular opportunities for boys and girls, have been significantly associated with decreased dropout rates among girls. However, investigations in Sub-Saharan Africa stake strong claims that teachers view academic subjects as more or less important for boys and girls (Lloyd, Mensch, & Clark, 2000). In agreement with

an earlier investigation in Malawi (Davison & Kanyuka, 1992), Anderson's (2005) Benin study also found that teachers believe girls require primarily domestic skills in their lives. This study analyzed 324 teacher views of student behavior and questioned how these perceptions influenced gender equity in teachers' pedagogical practices. Anderson (2005) found that when teachers addressed their perceptions of the importance of vocational/domestic studies, they, on average, emphasized cooking, sewing and typing as subjects important for girls. In contrast, they listed mechanics as an important subject for boys.

Formal schooling may also maintain messages of a hidden gender curriculum. Images in textbooks often display females engaged in domestic chores more often than males. For example, in an analysis of the home economics curriculum in Tanzania, a strong reflection of the participants' belief in girls' roles as mothers and homemakers emerged (Stambach, 2000). When teachers utilize these materials, they are sending hidden messages, which condone a gendered curricular belief system.

The historical context of equity in educational development in Tanzania

Indicators of gender-equity in the classroom are relational and exist within a cultural context. In the article "Gender Equality in Education: Definitions and measurements," Subrahmanian (2005) calls on researchers to recognize these relational aspects within the educational system. To comprehend equity in education, it is helpful to understand the general context of education within a particular society before conducting a baseline examination of equity in the classroom. This allows for looking beyond the surface of equality indicators to understand deep-rooted traditions, which may have influenced the equity within an educational experience (e.g., power influences, collective action efforts, and opportunities for distributive justice). Each country in Sub-Saharan Africa has a historical education account of its own. In order to better understand educational equity in Tanzania, it is valuable to know a bit about the historical context of education in this country.

On December 9, 1961, after centuries of foreign rule (i.e., Portugal, Germany, and Britain, respectively), Tanzania was challenged to quickly implement a new education system. President Julius Kambarage Nyerere (1922 -1999) implemented a First Five-Year Development Plan. Within this plan, there was a response to the urgent need for educated citizens. Without tribal discrimination, classes were offered to any and all adults in Tanzania. The implementation of this plan reduced the illiteracy rate, from 71.9 percent in 1961 to 15 percent by 1985. Tanzania's history of supporting ideals of equity among ethnicities in education and within the government since the 1960's is often discussed as a factor which can be attributed to making it a relatively peaceful nation in contrast with its many war-torn, neighboring countries (Marlow-Ferguson, 2002).

Within Tanzania's *Primary Education Development Programme II Plan (PEDP)*, mainstreaming gender issues is recognized as a goal that is an "important contribution to the achievement of access to education and quality and equity in education" (Tanzanian Ministry of Education, 2007, p. 6). This is consistent with Tanzania's Vision 2025. Within the PEDP, the Tanzanian Ministry of Education (2007) clearly addresses the desire to design capacity training models to respond to gender needs, provide gender responsive pedagogy, monitor and evaluate gender mainstreaming, take into account system-wide variations among schools when implementing interventions, and create indicators for gender responsive pedagogy (Objective 28, Tanzanian Ministry of Education, 2007). In planning for the future, the recommendations from the current research investigation may be helpful for the government, considering the lack of baseline data, which pertain to the relevance and need for such goals.

Research Question:

The following research question guided this investigation:

What are Tanzanian teachers' perceptions of the value of boys and girls studying particular subject matter?

Methodology

Sample

Tanzania is composed of 364,900 square miles. According to the last Population and Housing Census in Tanzania, there were approximately 44.9 million Tanzanians in 2012 (i.e., with about 1.3 million living on the island of Zanzibar). Teacher training is offered in 34 government and 43 non-government colleges in Tanzania (United Republic of Tanzania, 2013). The most recent data suggests that out of the 205,387 teachers employed in Tanzania in 2007, approximately 5,958 obtained a degree in teaching (Tanzanian Government Ministry of Educational Statistics, 2007). This investigation samples 137 degree seeking, primary emphasis, in-service teachers in training.

The site where this research was conducted was purposively selected. The teachers enrolled were from a variety of regions making it the most geographically representative teacher training college (TTC) in Tanzania. Permission to collect data was granted after the senior researcher met with the headmaster on site. Next, university affiliates administered the survey to a random, interval, systematically selected group (chosen from the entire enrollment list). The survey was provided to this group in February, 2012 after an assembly session. The final copy of the surveys were mailed in a sealed envelope to the senior researcher by a representative from the Immaculate Heart Sisters of Africa. Out of the 150 original teachers randomly selected, 10 declined the opportunity to remain and fill out the survey. Further, three surveys were eliminated due to a large amount of missing data.

The average age of the teachers in this sample was 22. Descriptive data collected from the sample demonstrates that out of the 137 participants, 41(29.9%) were predominately from the city and 96 (70.1%) were predominately from rural areas. As the population is increasingly becoming more urban and less rural, the sample mirrors this ongoing, slight demographic shift, which corresponds with the trend documented over the last decade (United Nations Population Division, World Urbanization Prospects, 2015).

There were 83 males (60.6%), and 54 females (39.4%). In 2007, there were 10,036 (53.5%) males in government teacher training colleges and 8,718 (46.5%) females for a total of 18,754 teachers enrolled (Ministry of Education and Vocational Training Mainland and Zanzibar 2008, p.17). Although there were 83 males (60.6%), and 54 females (39.4%), this may be representative of trends in 2012. The enrollment of girls in government schooling has decreased by more than 200 students each year from 2004-2007 (Ministry of Education and Vocational Training Mainland and Zanzibar, p. 18). One might assume that the larger representation of males in this study's sample (60.6%) may be due to an increasing number of females entering non-government institutions instead of government schools.

In this study, 14.6% of this sample had mothers or fathers with no schooling. In the sample, 54.7% (75) of teachers' mothers and 38% (52) of fathers were reported to have dropped out of school after completing primary education. When it came to achieving higher levels of education, 19 (13.9%) of the fathers completed the advanced form of secondary school (high school) while only five (3.6%) of mothers were able to achieve this level. In addition, only three teachers' mothers had college degrees, while 10 fathers had college degrees. Table 1 provides a descriptive overview of the sample of this study.

Table 1
Sample Description (n = 137)

Variable	Description	Values	Range	Mean	Median	Mode
Age	Age of teacher	Continuous	18-48	21.61	21.0	20
Gender	Sex of the teacher	0= Male 1= Female	0-1	.39	0	0
Urban/ Rural Personal History	Teacher grew up predominately in a village/villages or a city/cities	0= village 1=city	0-1	.30	0	0
Mother's Education	The last grade achieved by the teacher's Mother	Number of Years 1-7= Standards 8-11= Ordinary Forms 12-13= Advanced Forms 14-16= College 17-18= Masters	0-16	7.50	7	7
Father's Education	The last grade achieved by the teacher's Father	Number of Years 1-7= Standards 8-11= Ordinary Forms 12-13= Advanced Forms 14-16= College 17-18= Masters	0-18	8.85	7	7
Career Satisfaction	Teachers' satisfaction rating of the teaching opportunities in Tanzania	1= Very Unsatisfied 2= Slightly Unsatisfied 3= Neutral 4=Somewhat Satisfied 5= Very Satisfied	1-5	3.79	4.0	4.0

Instrumentation

Until Anderson's (2005) development of the Teacher Attitudes Survey (TAS) there was *no* instrument specifically designed to measure teachers' perceptions of gender equity in their practices. The TAS examines Tanzanian teachers' self-reported beliefs about girls' and boys' needs and abilities as students. This instrument was further chosen because it was the only survey found specifically designed to measure gender equity in teacher pedagogy as it relates to teacher perspectives. The Cronbach's Alpha reliability levels of the composite variables of the TAS (at an alpha level of .05) suggested a strong reliability among each formed subset of the questions, with even the lowest score being rather strong at .68 (Anderson, 2005, p. 120-122).

Adaptations were made of the original survey through a number of sources. First, a focus group of Tanzanian primary teachers provided feedback on the content of this survey (e.g., taking out unnecessary words that did not change the meaning). Additional questions were provided as a result of research recommendations from Aikman, Unterhalter, and Challender (2005) who developed additional indicators of gender equity in teacher pedagogy. By adapting the instrument in terms of: 1) the descriptive information collected, 2) the order and wording of the questions, and 3) the particular questions chosen, the investigation provided a different, yet meaningful, comparable analysis that may better examine common links among the predictor and predicted variables between the Benin (Anderson, 2005) and Tanzanian data. This provided an opportunity for cross-cultural comparisons, such as that suggested in Anderson's study (2005).

Since subjects in Tanzania are taught in English in primary schools, the survey was administered in English. Teachers self-rated their support for the importance of different curriculum content on a 1-7 Likert scale, where 1-3 represent decreasing levels of agreement (negative perception), a value of 4 represents neutrality, and 5-7 represents increasing levels of agreement (positive perception) for each indicator.

Results

The primary purpose of this investigation was to examine Tanzanian teachers' perceptions of the value of boys and girls studying particular subject matter. To determine possible gender differences among teachers' perceptions regarding course content more suitable for boys/girls, paired t-tests were conducted (see Table 2). The largest mean differences existed regarding: mechanics (5.04) and cooking (5.48). Teachers favored boys learning mechanics and girls learning how to cook. Teachers tended to be 'neutral' in their perceptions about the importance of boys learning biology (4.64), and girls to learning English (4.40). To discuss the remaining results, we begin with teachers' strongest reported beliefs and end with areas teachers' 'strongly disagreed' for each gender.

Table 2: Teachers' Perceptions about Subject Matter Importance in Boys' and Girls' Primary Schooling in Tanzania, According to Paired T-tests, N=137

Boy-Girl Difference in Teacher's Perceptions Statistical significance based on paired t-tests (2-tailed hypothesis test)	Boys' Mean (S.E.)	Girls' Mean (S.E.)	Boy-Girl Mean Difference: 2-tailed Statistical Significance
It is important for <u>boys</u> /girls to learn basic Math	5.45 (.119)	2.81 (.139)	2.64***
It is important for <u>boys</u> /girls to learn advanced Math	5.95 (.196)	2.81 (.148)	3.14***
It is important for <u>boys</u> /girls to learn Chemistry	5.82 (.205)	2.40 (.218)	3.42***
It is important for <u>boys</u> /girls to learn English	3.85 (.257)	4.40 (.256)	-.555
It is important for <u>boys</u> /girls to learn Accounting	5.20 (.236)	3.09 (.246)	2.11***
It is important for boys/ <u>girls</u> to learn Kiswahili	3.12 (.155)	5.62 (.101)	-2.50***
It is important for boys/ <u>girls</u> to learn Cooking	1.17 (.087)	6.65 (.121)	-5.48***
It is important for <u>boys</u> /girls to learn Mechanics	6.61 (.127)	1.57 (.151)	5.04***
It is important for boys/ <u>girls</u> to learn Typing	2.42 (.106)	5.62 (.101)	-3.20***
It is important for <u>boys</u> /girls to learn Biology	4.64 (.251)	3.63 (.255)	1.01*
It is important for boys/ <u>girls</u> to learn Sewing	2.84 (.237)	5.38 (.228)	-2.54***
It is important for boys/ <u>girls</u> to learn Computer	2.31 (.213)	5.99 (.192)	-3.68***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Teachers tended to 'agree' that it is important for boys to learn mechanics and 'somewhat agree' that it is important for boys to learn math (5.45), advanced math (5.95), chemistry (5.82), and accounting (5.20). For their female students, teachers tended to 'agree' that it is important for girls to learn cooking (6.65) and 'somewhat agree' that it is important for girls to learn Kiswahili (5.62), typing (5.62), sewing (5.38), and computer skills (5.99).

The teachers in this sample 'somewhat disagreed' that it is important for boys to learn English (3.85) and Kiswahili (3.12). These teachers 'disagreed' that it is important for boys to learn typing (2.42), sewing (2.84), and computer skills (2.31). The importance for boys to learn cooking is something with which teachers 'strongly disagreed.'

Teachers in this sample 'somewhat disagree' that it is important for girls to learn accounting (3.09), and biology (3.63). These teachers tend to 'disagree' that it is important for girls to learn math (2.81),

advanced math (2.81), and chemistry (2.40). Teachers ‘strongly disagree’ that it is important for girls to learn mechanics (1.57).

The perceptions of teachers did not significantly vary among teachers depending upon their profiles in combination with their background characteristics [i.e., age, area of origin (rural or urban), parents’ schooling level achieved, sex (male or female), and career satisfaction]. Yet, there are stark differences in what the teachers in the sample perceive to be important when the curriculum is broken down subject by subject. Overall, the null hypothesis was rejected for every indicator except for English language learning. English language learning was the only item that was not significantly different. The teachers considered English to be important for the education of both boys and girls.

Discussion

Similar to most societal norms (Aikman, Unterhalter, & Challender, 2005) and related research studies (e.g. Davison & Kanyuka, 1992; Anderson, 2005), teachers in this study believed it is more beneficial for girls to learn domestic subjects (cooking and sewing) than boys. These data are consistent with findings (Biraimah, 1989) from a Nigerian classroom study, which demonstrated designated roles for boys were often positions of authority, while girls were mostly assigned leadership roles that related to domestic responsibilities.

Cross-cultural comparisons between this study and Anderson’s study in Benin suggests that teachers in Benin were less gender specific about the subjects boys and girls may be taught, on average, than the teachers in the Tanzania sample. Moreover, teachers in this Tanzania sample, on average, ‘somewhat disagree’ that it was important for girls to learn accounting (3.09), and biology (3.63), tend to ‘disagree’ that it was important for girls to learn math (2.81), advanced math (2.81), and chemistry (2.40), and ‘strongly disagree’ that it was important for girls to learn mechanics (1.57). However, on average, Benin teachers did not disagree with any indicators, and, instead, selected various levels of ‘agreement’ on every subject being important for both boys and girls to learn.

In addition, in Anderson’s Benin study, there was no statistically significant difference in teachers’ perceptions of the importance of computer skills, accounting, biology, and advanced math subjects for boys and girls to learn. However, teachers considered more of the subject matter indicators of greater importance for girls than for boys to learn [i.e., advanced math (-.213, p.001), typing (-.213, p.001), accounting (-.403, p.001), French (-.197 p.01), sewing (-.467, p.001), and cooking (-.601, p.001)] with the only exception being mechanics (.537, p.001). Contrasts in the Tanzania and Benin studies suggest that teachers’ perceptions may vary by cultural context. Yet, due to the lack of in-depth teacher explanation, findings from these exploratory studies call for further investigation.

Designing culturally-relevant gender equity teaching interventions

Gender sensitivity training in Tanzania has recently been recognized as a major educational weakness. The need to strengthen the current teacher-training curriculum in terms of gender has been suggested in government recommendations (Tanzanian Ministry of Education, 2007). Moreover, goals regarding educational reform in Tanzania are heavily focused on improving teacher professional development and practice in the area of gender equity by the year 2025 (Tanzanian Ministry of Education, 2007). Although

this study identifies inequities in teacher perspectives, which may be found in their practices, gender inequities are complex problems requiring thorough examination prior to implementing effective solutions. Therefore, additional research is needed to determine how these perspectives are developed, how the perspectives may influence individual learners, and how might gender inequities in curriculum influence a child's social capital in a particular cultural context.

Table 3: Comparative Table of Teachers' Perceptions Regarding Subject Matter Importance in Boys' and Girls' Primary Schooling in Tanzania (Essary, 2012) N=137 and Benin (Anderson, 2005) N=324

It is important for boys/girls to learn...	Boy-Girl Mean Difference: (Anderson, 2005) in Benin	Benin direction of opinion favoring: N = Neutral B = Boys G = Girls	Boy-Girl Mean Difference: (Essary, 2012) in Tanzania	Tanzania direction of opinion favoring: N = Neutral B = Boys G = Girls
basic Math	-.021	N	2.64***	B
advanced Math	-.213***	G	3.14***	B
Chemistry	.035	N	3.42***	B
Accounting	-.208***	G	2.11***	B
Cooking	-.601***	G	-5.48***	G
Mechanics	.537***	B	5.04***	B
Typing	-.403***	G	-3.20***	G
Biology	.003	N	1.01*	B
Sewing	-.467***	G	-2.54***	G
Computer	-.112	G	-3.68***	G

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Political and educational leaders often develop broad goals to address inequities in classroom scenarios from a narrow viewpoint (UNESCO, 2010). UNESCO (2010) suggests "successful interventions against marginalization have to tackle specific underlying causes that may be missed by blanket interventions" (UNESCO, 2010 p.185). When complex problems arrive on a political agenda, solutions may overlook the human, material, and financial resources needed. Consequently, complex issues (e.g., gender inequity

in the classroom) are frequently bandaged with blanket responses. Without research to support these decisions, solutions are likely to be ineffective and/or unsustainable (e.g. such as providing a gender equity training package without knowing about the specific contextual factors which influence teacher perspectives).

In her study of gender issues in Benin classrooms, Anderson (2005) noted specific unexpected findings. This researcher found that teacher's professional academic preparation in Benin had an unintended negative impact on teachers' use of gender equity in classroom practices (EIC) with girl students. Results suggest that by introducing gender equity training systems, the training itself may emphasize gender prejudices and thus negatively impact teacher pedagogy. Anderson (2005) suggests, "The negative relationship between professional certification and the implementation of EIC strategies, challenges that commonly held view that training expands teachers' professional knowledge base and generally improves teacher practice" (p. 73).

Examining and expanding previously documented variables that create gender equity in teacher pedagogy (its predictors & indicators) might provide future researchers with a more thorough understanding of the structures and processes taking place in a gender-equitable classroom (Subrahmanian, 2005). Future investigations may examine the norms and values institutionalized within the pedagogical relationship between students and teachers in Tanzanian classrooms and further define the predictors and indicators of gender equity in teacher pedagogy.

A review of research on pedagogy and teacher development in eastern Sub-Saharan Africa states that "there is a robust body of knowledge that suggests that teaching practices are informed by ideas, beliefs and images that (a) teachers begin to develop well before embracing teaching as a career and (b) that traditional teacher preparation isn't successfully challenging" (Dembele & Miaro-II, 2003, p.3). By recognizing the existence of gender biases, teachers may more readily begin to consider how to eliminate them (Frawley, 2005). For example, while referring to the research findings evidenced within this investigation, teachers can be asked to theorize why the individuals in this sample reported that mechanics are more important for boys to learn about and less important for girls. Teachers' perspectives may be collected through qualitative methods, which provide in-depth insights on the development of their opinions on subject matter importance for boys and girls. Such insights and teacher suggested solutions for inequities might be used in designing culturally responsive gender equity training.

The availability and quality of primary schooling in Sub-Saharan Africa has been a growing focus of research, political change, and international financial support over the past two decades. Yet, when considering the level of complexity involved in understanding gender inequities, research initiatives continue to be warranted, and this challenge is not to be underestimated. Prior to designing teacher-training interventions, additional studies are necessary to examine which factors have influenced teachers' perspectives. Since teachers' perceptions shape the way they receive, resist, and transform policies (Blackmore, 1998), if a pedagogical change to improve equity in education is warranted, teachers may be more willing to use new strategies when reform efforts consider their beliefs, experiences, and backgrounds. Before designing training programs, conducting a community level evaluation may provide a detailed narrative on how each teacher's experiences led to development of gender bias. Through participatory, critical, reflective analysis, teachers can examine how such biases may be a problem within the classroom. Also, through this process, the teacher may be offered an opportunity to become a part of designing an intervention to address such issues. This aim cannot be achieved solely through other common methods of qualitative investigation (e.g., interviews, focus groups) (Donnelly, 2015).

Recommendations for Practice

Training interventions and gender research may encourage gender equity if the focus is on exploring how to improve the quality of education for both boys *and* girls. Currently, much international gender equity research focuses on girls' needs in the classroom. If too much focus is placed on girls, the pendulum may shift and perceptions and practices towards boys may display more inequities (Weaver-Hightower, 2003), or vice-versa.

When implementing training programs, organizers must be mindful of the social landscape that is being targeted. For example, if teachers receive gender training in areas that are already demonstrating equity, their time may be wasted. In addition, due to exposure to popular gender stereotypes, teachers may also create biases that did not previously exist.

The training design and other gender equity interventions should receive feedback from focus groups of gender equity researchers before being conducted. These researchers may assist in providing practical considerations for the proposed intervention. For example, one anonymous gender equity expert who briefly provided commentary in a *European Evaluation Society* session in Dublin, Ireland recently suggested that all trainings should be co-conducted by a male and female who share responsibility equally. She believes this provides a model of both gender equality and equity. What trainers have to say may gain credibility with the teachers when they see the trainers are able to model gender equity in their practices while working together, regardless of gender differences.

Direction for future studies investigating gender equity in curriculum content

Improving gender equity in teacher pedagogy is *not* a complete solution for all gender inequities that children face in their school experience. Beyond individual teacher inputs, factors such as the resources in the physical classroom environment or other systematic differences may result in differential discouragement for girls and/or boys. For instance, if girls and boys are taught the same content, with 'equity in the classroom pedagogy' used for both, yet still perform poorly or drop out, other influential factors may be interacting.

Educational quality is not simply created with inputs or variables that undergo certain reliable combinations to ensure predictable outcomes. For example, poverty can influence inequities. Further, politicians and researchers rarely come from marginalized backgrounds and often go to great lengths in order to understand what solutions might be most effective in confronting complex educational problems. Efforts for school improvement may be in vain if the social processes of teaching, learning, and mediating changes (teachers, students, and management/policies) are not well understood before intervention planning commences. This can lead to slippages and oversights that can weaken improvement efforts (Tao, 2010).

There are a plethora of potential gender equity research topics in Sub-Saharan African education that may be investigated further. For example, one might conduct research that examines:

- 1) What activities outside of school hours may compliment or distract from educational attainment among rural vs. urban female and male children.
- 2) What cultural beliefs and common proverbs influence the importance of children's familial roles? How do these roles influence a boy or girl child's schooling?

- 3) How might teachers' childhood experiences influence how they developed their own gender equity perspectives over time?

These are a few among many examples of factors that may be resulting in differential discouragement for girls' and/or boys' education and warrant examination in future research in Sub-Saharan Africa.

Limitations

This baseline study sought to begin examining gender inequities in the classroom in Tanzania. There are many aspects that can influence gender inequities in teacher pedagogy. This study was designed to examine only teachers' perspectives regarding gender-related subject matter importance. Essentially, this study contains preliminary information for future studies of gender inequities in Tanzania and other Sub-Saharan African countries. This is the first step in approaching subsequent research on gender equity in Tanzanian classrooms, but not entirely representative of all the possible factors. Further, teachers' voices were limited in this study. Although teachers were able to report their perceptions on the TAS, there was a limited option of responses and no area for teachers to elaborate on the rationale for their views.

Conclusion

Understanding the negative effects training can have on teacher pedagogy encourages careful planning prior to testing an intervention for gender equity teacher training. This study was minimally invasive by design in order to gather baseline data on gender equity in Tanzanian teacher pedagogy. The collection and substantiation of more evidence and information are needed to continue this process in the most nonintrusive manner as possible. In the PEDP, the Tanzanian Ministry of Education noted in the Gender Equality section (Goal 4.5 Educational Research: "Responses to unique local realities can only be achieved if local educators organize and reflect on their own experiences and use these reflections to design local interventions that will improve pupils' learning" (Tanzanian Ministry of Education, 2007). Teachers' voices may be amplified through practical aspects of national involvement (e.g., non-profit organization to support teacher networking) and teacher research involvement.

This study provided baseline data and contextual information that systematically informs *what* teachers' perspectives and practices appear to be among Tanzanian primary school teachers. This information may assist others in understanding the call for future *sequential explanatory mixed-method* research designs. Such a design may allow for insights from a participatory, critical, and reflective qualitative examination to highlight *why* teachers maintain the perspectives and practices illuminated in this study (Creswell & Plano Clark, 2007). For example, teachers' reactions to gender inequities may be collected by including pictures of scenarios that suggest individuals are crossing gender boundaries and videotaping survey participants' reactions and in-depth critical reflections.

Finally, as educational practitioners, teachers should be more involved in suggesting what changes (e.g., policy, additional resources, etc.) might support the use of more equitable practices. In order for gender equity teacher training to be meaningful for educators, training should evaluate how to challenge the perceptions of teachers in a way that accurately represents their needs. Therefore, involving teachers in the design of gender equity training is highly warranted.

References

- Aikman, S., Unterhalter, E., & Challender, C. (2005). The education MDGs: achieving gender equality through curriculum and pedagogy change. *Gender and Development*, 13 (1), 44-55.
- Anderson, S. (2005). *Girls' Education and the "Pedagogy of Difference:": A Study of Teacher Attitudes and Gender Equitable Pedagogy in Benin*. (doctoral dissertation, Harvard University, 2005). Retrieved October 10, 2010: retrieved from ERIC database.
- Association for the Development of Education in Africa (ADEA). (2006). *More and Better Education*. ADEA Newsletter. 18 (1) 1-16.
- Bakuza, R. F. (2014). Differences between stated and implemented policies in early childhood education leadership: A Case Study of Tanzania. Unpublished PhD Thesis, University at Buffalo, USA.
- Biraimah, K. (1989). The process and outcomes of gender bias in elementary schools: A Nigerian case. *Journal of Negro Education*, 58 (1), 50-67.
- Blackmore, J. (1998). The politics of gender educational change: Managing gender or changing gender relations. In A. Hargreaves, A. Lieberman, M. Fullan, and David Hopkins (Eds.), *International Handbook of Educational Change* (p. 460-481). Norwell, MA: Kluwer Academic Publishers.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Davison, J. & Kanyuka, M. (1992). Girls' participation in basic education in Southern Malawi. *Comparative Education Review*, 36, 446-466.
- Dembele, M. & Miaro-II, B. (2003). *Pedagogical Renewal and Teacher Development in Sub-Saharan Africa: A Thematic Synthesis*, A working document of the Association for the Development of Education in Africa., retrieved from, http://www.adeanet.org/adeaPortal/adea/biennial2003/papers/4A_synthesemartial_e_final.pdf.
- Donnelly, J. (2015). Towards gender equality through equity in community-level evaluation. *Evaluation Journal of Australasia*, 15(1), 15.
- Ethell, R. & McMeniman, M. (2002). A critical first step in learning to teach: Confronting the power and tenacity of student teachers' beliefs and preconceptions. In C. Sugrue and C. Day (Eds.), *Developing teachers and teaching practice: International research perspectives* (pp.216-234). London: Routledge-Falmer.
- Frawley, T. (2005). Gender bias in the classroom: current controversies and implications for teachers. *Childhood Education*, 81.
- Lloyd, C.B, Mensch, B.S., & Clark, W.H. (2000). The effects of primary school quality on school dropout among Kenyan girls and boys. *Comparative Education Review*, 44(2), 113-147.
- Marlow-Ferguson, R. (2002). *Tanzania*. (2nd ed). Farmington Hills: World Education Encyclopedia.
- Ministry of Education and Vocational Training Mainland and Zanzibar. (2008). National Report of the United Republic of Tanzania. (1-44).
- Oldekop, J. A., Fontana, L. B., Grugel, J., Roughton, N., Adu-Ampong, E. A., Bird, G. K., ... & Agbarakwe, E. (2016). 100 key research questions for the post-2015 development agenda. *Development Policy Review*, 34(1), 55-82.
- Spodek, B., & Saracho, O. N. (2014). *Handbook of research on the education of young children*. New York: Routledge.
- Stambach, A. (2000). *Lessons from Kilimanjaro: Schooling, community, and gender in East Africa*. New York: Routledge.
- Subrahmanian, R. (2005). Gender equality in education: Definitions and measurements. *International Journal of Educational Development*, 25, 395-407.
- Tandika, P. (2015). Stakeholders' Construction on the Quality of Pre-primary Education in Tanzania. *International Journal of Education and Literacy Studies*, 3(4), 24-35.

- Tanzanian Ministry of Education. (2007). *Education and Training Sector Development Programme 2007-2011*. Dar es Salaam: TME.
- Tao, S. (2010). *Applying the capability approach to school improvement interventions in Tanzania*. EdQual Working Paper. 22. Institute of Education, University of London, UK.
- United Nations Educational, Scientific and Cultural Organization. (2010). *Reaching the Marginalized: EFA Global Monitoring Report*. Paris, France: UNESCO & Oxford University Press.
- United Nations Population Division. (2015, July 15). Analysis, Tanzania--- Rural to Urban Population Trend. <https://esa.un.org/unpd/wup/>
- United Republic of Tanzania (2013). 2012 Population and Housing Census. Population Distribution by administrative areas, National Bureau of Statistics, Dar-es-Salaam.
- Weaver-Hightower, M. (2003). The “boy turn” in research on gender and education. *Review of Educational Research*, 73(4), 471-498.
- Zachrisson, H. D., & Dearing, E. (2015). Family Income Dynamics, Early Childhood Education and Care, and Early Child Behavior Problems in Norway. *Child development*, 86(2), 425-440.
- Zhang, Y. (2006). Urban-rural literacy gaps in Sub-Saharan Africa: The roles of socioeconomic status and school quality. *Comparative Education Review*, 50(4), 581-602.