Migrant Girls in Australian Schools: Voicing Their Mathematics Learning Experiences

Ana Borges Jelinic, ACAP - Australian College of Applied Professions

In Australia, since the 1970s, policies regarding gender equality and multiculturalism had important but limited impact on education. This paper focuses on the schooling experience of girls from Non-English-Speaking Backgrounds (NESB) in different school years, particularly when learning Mathematics. The study identified how the girls relied on peers or previous experiences to navigate the learning space with little school support, despite national and state policies. This research also indicated the importance of considering the girls standpoint and the intersection of gender and multiculturalism when designing and implementing policies, (Reitman 2005, Fraser 2010) explained however that women in minority cultural groups require the accomplishment of fundamental points in both the feminist and multicultural agendas and the consideration for the specific intersection of these agendas in order to achieve social justice.

This qualitative study employed Carol Gilligan’s Listening Guide (LG), the application of her feminist theory of women’s voices in research (Doucet and Mauthner 2008, Brown and Gilligan 1993). In the LG, semi-structured interviews are recorded, transcribed and simultaneously listened to and read in four steps that give the basis to the data analysis (Doucet and Mauthner 2008).

Semi-structured interviews were conducted with the participant girls (Patti, Idina, Bernadette, Sutton and Marin) and 10 with informants (the girls’ parents, siblings and a childcare worker). Informants were interviewed to enrich the participants’ stories.

The interviews were between one and two hours long in the participants’ homes. The interviews sought to listen to their voices to elicit an understanding of the girls’ experiences of negotiating gender and multiculturalism at school, what their schools had made available and the difficulties in navigating their intersecting realities. The girls’ schools’ websites were

Corresponding Author: Ana Borges Jelinic, anaflaviaerep@yahoo.com.br
also consulted to contribute to the context of the interviews. These websites are a government requirement for all schools to communicate with the broad community and possess numerous official documents (Department of Education 2011).

**Mathematics – Data Analysis**

Some girls believed schools should intervene to make Mathematics more accessible, instead of leaving it to peer support. Patti suggested, ‘translating the numbers to the girls’ (tr) (girls she imagined used different numbers in their countries) and Marin suggested it should be made ‘more fun’ (tr). Marin told me she underperforms in Mathematics, while her mother affirmed that Marin is a high achiever in all subjects. This perception that girls underachieve in Mathematics is often reported in research (Fine 2010; Wiest and Johnson 2005) and it is the myth that feeds girls’ later decision to opt out of Mathematics- and Science-based courses in Western countries (Cousins 2007). High achievement in Mathematics here remains associated with males and masculinity almost exclusively (Mendick 2006), and many girls perceived Mathematics as difficult.

Mathematics is a common concern in feminist work in education because in the West it is often presented as more suitable for boys, promoting competition and individualism that tends to reaffirm boys as strong and rational and girls as the opposite: passive, weak and emotional. Such stereotypes (when not examined) can guide teachers’ and students’ expectations and influence the set-up of such disciplines, reinforcing the students’ perception of gender as somehow natural and the girls’ perception of themselves as outsiders in these subjects (Terzian 2006; Povey 2004; Kenway et al. 1997).

Participants’ relationships with Mathematics were prevalent in Patti’s, Idina’s, Bernadette’s, Sutton’s and Marin’s interviews. While Idina and Marin talked about their difficulties with the subject, ‘I am not good at it so I do not like it’ (Marin), and ‘I do not believe I am a good student in mathematics’ (Idina), Patti talked about how she excelled in it, even though she ‘knows’ boys are usually better,

I really like Mathematics

I see a big difference (between boys and girls) but

I was the smartest one in Mathematics (tr).

Sutton described herself as a ‘Science geek’ while Bernadette talked about her previous knowledge in Mathematics, ‘I used to be good at Mathematics you know, and some students
would be like, ‘how did you know that?’ and I would be like, ‘because we already studied there’ (in Iraq).

Mathematics appeared in the girls’ narrative as in literature, a subject focused on individual achievement and competition (Terzian 2006), difficult for most, while for instance, English was viewed as a social subject with friends’ support being fundamental to learning (Yuen and Cheung 2013; Oliver, McKay and Rochecouste 2003), becoming even easy. Therefore, even though most of the girls were more familiar with Mathematics than English when they arrived in Australia, besides Bernadette, they found an environment in learning English that possibly incidentally, mostly catered to the qualities often associated with femininities and girls in both countries (Povey 2004). This way, most girls perceived English as more accessible than Mathematics.

Bernadette was the only middle eastern participant and the only one who mentioned willingness to pursue a career involving high levels of Mathematics (Computer Engineering) in a male dominated field that also (or therefore) usually attracts high salaries. She was also the only girl who mentioned her previous schooling in her country of origin as an advantage, particularly regarding Mathematics. She believed that assumptions regarding gender division of labour in the marketplace should be challenged and spoke about how it is necessary to be seen as a woman in a male dominated field, so other girls, ‘will follow’. Bernadette’s parents supported her decision, stating that she could study, ‘whatever she wants to do’ (Bernadette’s father), but Bernadette could not identify anyone at school that gave her the same feedback.

This is particularly relevant because of the gender stereotypes in Mathematics and Science discussed earlier. Research indicates that middle eastern women and Muslim women (middle eastern or not) have often presented high levels of confidence that they are achieving as well as their male counterparts in Mathematics and Science, while there is no significant difference in achievement between the sexes or a smaller gap in achievement when compared to Western countries (Shafiq 2011; Duru 2010; Mukhopadhyay 2004; Mittelberg and Lev-ari 1999). Although these are also patriarchal societies, that reminds us that there is no universality on women underachieving in Mathematics, as it is not biologically determined and that a cultural background that does not naturalise those differences can be an asset in that environment.

The girls and their informants could not identify any attempt from their schools to challenge assumptions about gender and Mathematics including attempts to directly acknowledge the myth of a ‘masculine subject’; incentives for the participants to consider less popular careers or practicing skills to better understand their own achievement in mathematics. While research in education often needs to be aware of children’s ages and developmental stages, in this research the experiences of girls in primary and high school were dominated by unchallenged western gender stereotypes and a lack of resources for NESB girls or acknowledgement
of their diversity and assets.

Conclusion

Many of the issues identified seem to be a result of a combined difficulty to listen to these girls’ needs and their stories because they are deemed not important in a neoliberal/market driven educational logic. There is no acknowledgement of the collective benefits of creating spaces for Recognition of identities and Redistribution of resources (Fraser 2010) with these girls. There is no perspective of learning from them. This research aimed to invert that logic, claiming that by anchoring the analysis on the stories of these girls and listening their individual and collective voices, the analysis is placed at the most inclusive standpoint. Furthermore, this analysis points to possibilities to combine the multicultural and feminist agendas and create space for the Representation of these girls in policy development. This research acknowledges its limitations and the impossibility to generalise findings to all migrant girls with such a small group of participants.

An education that attends to multicultural and gender equality agendas must be prepared to deal with possible tensions (Martino and Rezai-Rashti 2008; Carter 2007). The participants of all ages were willing to discuss gender and culture and revisit their beliefs during the interviews, but they did not have the experience of doing so at school. This suggests the need for discussing gender construction and multiculturalism in the classroom (Matuk and Ruggirello 2007; Martino and Pallotta-Chiarolli 2005) as much as their intersection (Keddie 2010; Partington 2006).

Listening to these girls’ stories not only helps society to become better prepared to deal with these girls’ needs and concerns, but it also allows the girls to reflect and become aware, to some extent, of the power dynamics that shape their identities and broader life experiences. Awareness of these power imbalances allow people to be conscious of the ‘social rules’ regarding possibilities to succeed in this context or even ‘fight back’ and change the context (Saavedra et al. 2009).
References


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