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Gender boundary and gender mobility in technology-Exploring the learning experiences of female technologists in Taiwan's universities

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Background

The rapid development of multi-media technology in Taiwan has not only changed people's life style but also the way of schooling. Within the macro social context, Taiwan's Gender Equality Education Reform in 2004 is meant to correspond to the revolution of gender structure in the field of technology and science. This policy also responds to the emerging social issues such as multicultural and electrical society. After 5 years of practicing Gender Equality Education in the primary and secondary school, there are getting more and more girls into technology. Although so far there are few female technologists working in universities, it is expected to have more female technologists in the future. However, are these female technologists aware of gender equality or are they just corresponding to the patriarchic society? According to the gender analysis on vocation, we can see that technology gender gap and gendered technology still exist in Taiwan. It is significant to understand how the field of technology shapes such gender boundary and how it could create gender mobility?

Research Questions

Addressing the policy of gender mainstreaming since 1985, this research project focuses on the gender-technology relations. It also questions the "technology as a masculine culture" and "technology as a male institution". This project aims to explore the contemporary discourse of gender boundary and gender mobility in technology, drawing the female discourses on technology, gender, and success. It is dealt with gender performance about technology learning. The research purposes are as follows:

- 1 To analyze the gender-technology discourse of girls into technology
- 2 To explore women success to the gender-technology relation and gender identity (femininity/masculinity).

Methods

In this research, empirical data about the gender-technology discourses were collected by individual interviews, situated interviews and focused group discussions from 12 female technologists in Taiwan's universities. They will be asked about their experiences of doing technology, doing gender and performing femininity or/and masculinity. Interviewing items were focused on the following questions:

- 1. the female experiences of learning technology and its dilemma, motivation and social model
- 2. the female epistemology on technological knowledge
- 3. the female epistemology on gender identity (femininity/masculinity)
- 4. the successful self of female technologists
- 5. whether female technologists depend on their femininity or masculinity toward success.
- 6. how the female technologists make use, transform, or discard their femininity during their career in technology
- 7. To interpret the gender boundary and gender mobility as well as mapping the gendered culture in the technology field

Frame

Based on the sociological approach of technology, this research uses a Critical Discourse Analytical (CDA) framework to analyze the gender-technology discourses. CDA framework is used to analyze any sort of discourse as it is proved as a successful tool of ideological analysis (Wang, 2008). The established CDA framework constitutes three stages: epistemological selection, methodological processing, and discourses induction. It targets on answering the following questions: (1)How are persons named and referred to linguistically? (2)What traits, characteristics, qualities and features are attributed to them? (3)By means of what arguments and argumentation schemes do specific persons or social groups try to justify and legitimise the exclusion, discrimination, suppression and exploitation of others? (4)From what perspective or point of view are these namings, attributions and arguments expressed? (5)Are the respective discriminating utterances articulated overtly, are they even intensified or are they mitigated?

Research findings

Based on the contextual data with a CDA analytical framework, this research concludes that female technologists grew up with some specific gendered subjectivity and identity which was intertwined with the complex interaction of their family, schooling and social contexts. Some of the female technologists were individually aware of the construction and destruction of the gendered subjectivity and identity, yet others were not. It depends on their gender consciousness and critical consciousness (Gill & Grint, 1995). Most of the female technologists have strong family support for technology learning. However, during their learning career in schools, there were no female technologists or scientists in the society as social models. In the field of technology, there exists a sort of masculine culture which intensifies masculinity yet mitigates femininity.

The discourse of female-technologist nomination acknowledges the female in the field of technology. The discourse of strong-woman predication on the one hand recognise female scientific characteristics and qualities by using appreciative language, yet on the other hand excludes certain female traits and discourages female identity by using derogatory language. Female technologists appear to be included in the field of technology but they have to perform masculinity as well as the male. Also they often felt success in technology but felt failure in female identity. The advantages as female technologists are that they could demonstrate their success both by femininity and masculinity much more naturally than the male.