Grounded Research

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Chapter 13 in *Research Methods in Educational Leadership and Management* (3rd edition) uses a detailed example to exemplify the Grounded Theory (GT) concepts. This example is taken from a GT doctoral thesis on how successful women academics in Hong Kong managed their careers:

Lam, M.P. (2006) *Senior Women Academics in Hong Kong: A Life History Approach.* Unpublished doctoral thesis, University of Leicester.

The aims of the research, which are set out in the chapter, are reproduced here for ease of reference. The sections and figures which follow provide worked examples of two aspects of GT practice, as carried out in this doctoral research: aide-memoires and coding.

Senior women academics in Hong Kong: a life history approach

Research problem

The phenomenon of the under-representation of women in senior academic positions was the research problem. Specifically, the problem focused on the dearth of women academics in Hong Kong universities occupying senior academic positions. The study defined 'successful women academics' as those in senior positions at professorial level or above. It was based on participants' perspectives and accounts of the meaningful experiences and events in their lives, particularly those they perceived as impacting on their academic careers.

Research aims

Paradoxically, the GT study reported here did not set out to explore the veracity of the so-called 'pipeline theories'; nor did it set out to establish the existence of a supposed 'glass ceiling' for female academics in higher

education in Hong Kong. Rather, it sought to examine and analyse the life events, experiences and career pathways of a cohort of outstanding female academics in Hong Kong, thereby contributing to the existing body of knowledge of what is required of women who aspire and succeed to senior positions in academia. It was also hoped that senior female academics in the study could serve as occupational role models for future generations of female academics in Hong Kong because the experiences of these successful women offer valuable insights for those who might aspire to similar positions in future.

Research questions

The main research question was: 'What, in the life histories of particular senior female academics in Hong Kong, has contributed to their career success?'

This main question was fractured into specific research questions to make it more researchable:

- How did their childhood and education affect their careers?
- What life events and relationships have helped to lay the foundation for the development of their careers?
- What experiences, attitudes and skills were deemed to have been critical?
- What strategies, if any, did they use to attain senior positions?
- What factors were perceived to have affected the advancement of their careers?
- How did they manage multiple roles?
- What kinds of support did they deem as being necessary?
- What advice would they give to women who aspire to senior academic positions?

The following sections and figures provide worked examples of aspects of GT practice, as carried out in this doctoral research.

1 Aide-memoires

An interview schedule, or 'aide-memoire' (Burgess, 1984) for the semi-structured interviews of successful women academics, was developed on the basis of a list of topics and questions generated from the main research question. This 'aide-memoire' was intended to serve as a reminder to the researcher of what to ask in line with the project's objectives. Not all of the questions were asked in every interview and the question sequence and order also varied. Supplementary Figures 13.1 and 13.2 present the initial aide-memoires that were developed for the two interviews.

Aide-memoire: first interview

- Explain what the study is about and answer questions about the research aims, involvement, procedures, confidentiality issues, etc.
- Induce the interviewee to talk about what she does currently (for example, positions, responsibilities, how she sees her current jobs, etc.).
- Induce her to reflect on how she got to where she is today.
- Ask her how she got into higher education.
- Ask her whether she had discernible career paths.
- Ask her whether she followed 'traditional' academic routes (for example, serving a minimum number of years in a university department and waiting for promotion by seniority).
- Induce her to identify key attitudes, skills and experiences that have contributed to her success.
- Ask her which of these attitudes, skills and experiences were essential.
- Ask her whether she actively sought leadership/promotion opportunities.
- Ask her about strategies, if any, that she used to get to where she is now.
- Ask her to think about these issues for the second interview: (i) early life experiences (to identify key people, key turning points and critical incidents that influenced her academic career); (ii) any factors that have enhanced or inhibited her career advancement (and the kinds of support she needed); and (iii) any advice that she has for women who aspire to senior academic positions.

Supplementary Figure 13.1 Aide-memoire for first interview

Aide-memoire: second interview

- Begin by asking the interviewee to construct a 'mental map' of her life and career. Ask her to identify different phases of her life and career.
- Consider each stage of her life and career (childhood, adolescence, adulthood, teaching, etc.) to identify significant people, critical incidents and turning points that have impacted on her academic career.
- Ask her to describe how her upbringing and education affected her growth as an academic.
- Induce her to talk about the family in which she grew up, her family situation and the education she had.
- Ask her to identify life events and relationships that have helped to lay a foundation for her success.
- Ask her to identify the experiences or situations that were especially important to her success. Ask her what happened and why the event or situation was especially important.
- Ask her to identify particular persons who influenced or assisted her on her career path. Ask her how this person affected her and what the person did to make her feel special.
- Ask her to identify factors that enhanced or inhibited her career advancement.
- Ask her to identify the kinds of support that she deemed necessary to achieve success.
- Induce her to offer advice to women who aspire to senior academic positions, in particular any advice that she would give to a younger female colleague with regard to managing her career in higher education.
- Ask her whether she sees herself as a role model for other women.
- Ask her whether there are certain qualities or specific jobs that she perceives as being critically important in preparing female academics.

Supplementary Figure 13.2 Aide-memoire for second interview

2 Coding

Open coding

To generate concepts, the early interviews were coded on a line-by-line basis and, if appropriate, on a word-by-word basis. As some concepts and categories emerged repeatedly, certain sections of the later interviews were coded paragraph by paragraph to identify the similar categories. Throughout the coding process, code notes and memos were maintained with regard to: (i) the questions asked of the data; and (ii) the relationships among concepts and categories that emerged. Supplementary Figure 13.3 provides an example of an open-coded transcript from the first interview of the first round of semi-structured interviews.

Interview Transcript (A_INT01_240902)	Open Coding
A: Yes, yes. Let me think about my upbringing again, it might explain why I am like this. Many women are not like me, not so direct and frank, with little awareness of who they are; I mean, of people around me. This is how I behave at home. My mom always says that 'With good reasons, one can even beat up one's great grandpa'.	Self-reflection Unlike other women, Direct and not rank-conscious Following Mom Challenging authority
M: What do you mean by 'with good reasons … '?	Sense of right and wrong
A: You can even beat up your great grandpa! It means, with good reasons, it doesn't matter who you are, you can do what you think is right. My high school experience, I understand why I have always expected to be treated as an equal. I came from a girl school. I believe it's an important factor. In a girl school, you don't … how should I put it? Very often, those from a co-ed school, the girls, for example, in a lesson when they have to do a laboratory experiment, if they are with the boys, the girls will often be asked to take notes. (Laughing) I had a different upbringing. The girls somehow they know, I don't know any better word to put this, but they know how to behave in front of boys and guys. Whereas growing up in an all-girl school, I wouldn't know how to behave differently. I treat people as equals. I don't care whether you are a guy or a girl, or whoever, I just say what I have to say. Somehow, I am slowly realizing, actually more and more, that the males have big egos, really big egos. (Laughing)	Equal status Girl school vs co-ed school Different upbringing Peer influence Equal status Not gender conscious Direct Male colleagues Strong male ego
Coding Memo: **Girl school vs co-ed school** Are all girls from all-girl schools like her? Do girls from single-sex schools turn out to be more independent, direct? Do they exhibit a stronger sense of achieving equal status? Next interview: Check if informants are from all-girl schools. If so, do they make similar comments? **Male ego** What about male ego? What prompted her to make such a remark? Any unpleasant incidents with male colleagues? Check intensity and situations.	

Supplementary **Figure 13.3**   Open coding of interview transcript

Axial coding

Axial coding was used to make connections among the categories and their sub-categories, as identified in the open-coding stage. Hypotheses were proposed with respect to these relationships, and the hypotheses were then tested against existing and new data as they became available. Code notes and memos were maintained with respect to the relationships among categories and their sub-categories in accordance with the model proposed by Strauss and Corbin (1990, p. 99), as illustrated below:

(A) CAUSAL CONDITIONS → (B) PHENOMENON →
(C) CONTEXT → (D) INTERVENING CONDITIONS →
(E) ACTION/INTERACTION STRATEGIES →
(F) CONSEQUENCES

Theoretical memo: Mission Search
Ref.: Ref.: W1_Int2_200203_OC23_MS

Causal Condition	**→ Phenomenon**
Being a Christian, I joined a religious group in Waterloo because I had no friends there. I attended a missionary conference one summer and committed myself to God. The gathering instilled in me a sense of mission. I had a vague idea that my career would help me contribute my knowledge to people around me.	Mission search – waiting for God's direction

Properties	**Dimension**
Being Christian	Duration – long
Sense of mission	Intensity – strong
Nature of the mission	Clarity – low
Career and mission	Relationship – close
Dislike of office work	Intensity – strong
Belief that programming work is meaningless 'cause there is no human interaction	Intensity – strong
Belief that God will show me the way	Intensity – strong

→ Context	**→ Intervening Conditions**
After my Masters study, I helped out as a coordinator of a summer training camp organized by the church for some group leaders. We invited a trainer from the States but he couldn't come due to a visa problem. A friend and I had to stand in for him.	I was not afraid when I faced the audience. I really enjoyed sharing my knowledge with others. I believed that God gave me the energy and the opportunity to share.

→ Action/Interaction Strategies	**→ Consequence**
My Christian friends told me that I did well and my voice was loud and clear. They reminded me that some people were called to be teachers. I began to keep asking myself 'Is teaching my calling?' and if so, 'which setting?' I started to look around and decided that university environment was the one I felt most at home, and I needed a PhD to qualify for university work.	I didn't think I would be good enough for PhD study but I believed that if 'teaching is my calling', God would find the way. It took me several years, after doing other work that I finally got into my PhD study, and began my career in university.

Supplementary Figure 13.4 Example of an axial coding theoretical memo

Supplementary Figure 13.4 provides an example of an axial coding theoretical memo on a category (mission search).

Selective coding

Supplementary Figure 13.5 is an example of a selective coding theoretical memo on the core category (dominant attributes).

Core Category: Dominant Attributes

Patterns of relationships between female academics' dominant attributes and their career orientation and strategies.

Relationships between female academics' dominant attributes and their career orientations and strategies

- The respondents had many 'success attributes' in common – such as intelligence, a high energy level, perseverance, commitment and a positive attitude. The attributes that influenced their career trajectories are distinctive.
- None of the respondents began their academic lives with a clear career plan but once they had identified their preferred roles, they were able to make best use of their dominant attributes to enhance their careers.
- The women's attributes were continuously modified by socialization experiences, such as early upbringing, family demands, work situations, significant relationships and critical life events. These interactions account for variations in their career orientations and strategies.
- On the basis of the distinctive influential attributes, three types of senior female academics could be identified:

  ➤ *Type 1:* particularly strong in their quest for knowledge; investigative and research-oriented;
  ➤ *Type 2:* a strong sense of mission to educate; humanitarian and student-oriented;
  ➤ *Type 3:* a capacity to thrive on challenges; opportunistic and people-oriented.

Career Orientations

➤ *Type 1:* researchers; regard research and publishing as core aspects of their academic lives;
➤ *Type 2:* teachers; primary goal in academic life is to improve the quality of education;
➤ *Type 3:* managers; main motivation is to bring about change; career goals are short-term and flexible.

Career Strategies
Strategies in common: (i) focusing on essential tasks; (ii) building up academic reputation; (iii) being politically astute; (iv) taking up opportunities; (v) managing time; (vi) refining research and publication skills; (vii) thinking positive; and (viii) responding to the needs of students and departments.

➤ *Type 1*: (i) focusing on essential tasks; (ii) building up academic reputation; (iii) managing time; (iv) refining research and publication skills;
➤ *Type 2*: (i) focusing on essential tasks; (ii) managing time; (iii) thinking positive; (iv) responding to the needs of students and departments;
➤ Type 3: (i) being politically astute; (ii) taking up opportunities; (iii) thinking positive.

Supplementary **Figure 13.5** An example of a selective coding theoretical memo