

Chapter 6

Structural Context

ABSTRACT

Chapter 6 examines the structural context and factors referenced in the literature. This context is another recurring theme of women in technology research, with numerous factors identified as deterrents to women choosing IT education or careers. However, again the conclusion is that they are not significant factors today, and interventions to address them have had minimal effect.

You study Medicine to become a doctor to help people when they are ill. You study Law to become a barrister to help people navigate the law. You study IT to ??? to ??? That is the crux of the issue – Sonja Bernhardt (c. 2005)

The body of women in technology research has recurring themes of several structural factors that influence female participation in computing, often deterring them from choosing future technology education or careers in IT (European Commission, 2018; Adya & Kaiser, 2005, 2006; Castano & Webster, 2011; Ashcraft, Eger & Friend, 2012).

These issues are reinforced by comments made by Telle Whitney, CEO of the Anita Borg Institute for Women and Technology, in her introduction to the *ABI Solutions To Recruit Technical Women* report (Simard & Gammal, 2012): “The barriers facing women as they strive to enter the computing field often persist throughout their careers and affect their advancement... This resource is Part 1 in a series of reports focused on solutions companies can employ to improve the recruitment, retention, and advancement of technical

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women... These solutions are not intended as one-offs for companies to pick and choose from, but an ‘arsenal’ that companies should bundle together and deploy broadly to achieve maximum impact. Companies wishing to benefit from gender diversity need integrated strategies on the recruitment, retention, and advancement of technical women through the highest levels of the organization. We do not prescribe a particular path to success but instead suggest that each company start by looking at the numbers, taking stock of where its challenges are most acute and then developing a coherent strategy that best addresses its particular culture given available resources. Rather than relying on ad hoc efforts, success depends largely on the development of an integrated array of programs and tactics to address each company’s particular challenges as it seeks to recruit, retain and advance women.”

This chapter explores the structural factors raised in past research such as that report. The issues are summarized in visual form in Figure 1, as the Structural component of the STEMcell Model.

The structural influencing factors shown in Figure 1 were identified from the literature sources shown in Table 1. These factors are dissected below and provide input to the recommendations presented in Chapter Ten.

GOVERNMENT STRATEGY AND POLICIES

Governments have so much power in so many areas that their strategies and policies provide an overriding context. Governments provide information, set educational policies and procedures, make employment laws, engage in direct specific activities such as interventions, subsidies and payouts, and are themselves a very large employer using a host of IT systems.

As such they play a critical role in putting policy and regulatory settings in place that could catalyse (or inhibit!) digital transformation. There are four key elements of governments’ role: political leadership; talent access; finance; and infrastructure (Thomason & Taureka, 2018).

1. **Political Leadership:** There needs to be bold political ambition to motivate digital transformation and develop policies to attract talent and investors to the country and be at the forefront of innovation. Governments need to create policy frameworks that foster, and do not hamper, digital innovation. Government actions that can dramatically

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