

Chapter 9

Contextual Influences on Leader Development Among Natural Scientists in Uganda

Julius Lukwago

Graduate School of Business and Leadership, University of KwaZulu-Natal, South Africa

Ana Martins

Graduate School of Business and Leadership, University of KwaZulu-Natal, South Africa

Orthodox Tefera

Graduate School of Business and Leadership, University of KwaZulu-Natal, South Africa

ABSTRACT

The study's aim is to ascertain the role of contextual influences on leader development among natural scientists in Uganda differ from those of non-scientist leaders in the Ugandan context. The study design, methodology, and approach include a retrospective mixed-methods multi-case comparative case study to examine the leader development lifespan experiences of technical expert scientists holding leadership positions in organizations of different sectors. Purposive sampling was used to select senior expert natural scientists providing sustainability leadership at healthcare organizations, at the Uganda Ministry of Agriculture, Animal Industry, and Fisheries and affiliate agencies. Non-scientist leaders from Uganda Revenue Authority were included as a comparator group. Findings reveal that scientists experience normative behaviors right from their undergraduate levels only focused on technical skills being devoid of soft skills. Research limitations and implications direct to the need for developing leaders through coaching and mentoring, as well as leadership succession planning.

INTRODUCTION

As leadership effectiveness becomes recognized as a central pillar in any organization's success, natural scientists from disciplines such as engineering, agriculture, and medicine are increasingly looking for approaches that engender the nurturing of leadership skills. Until recently, natural scientists like physicians and engineers had ignored the value of leader development and focused mostly on technical competence development (Stoller, 2009; Rice, Davis, Soistmann, Johnson, Gray, Turner-Henson, & Lynch, 2020). However, while extant literature provides some insight into what approaches work in leader development, despite the recognized influence of context, most of the research has been conducted in developed country contexts, and moreover, overly focused on non-scientist leaders (DeRue & Myers, 2014; Geerts, Goodall, & Agius, 2020). Additionally, the few studies conducted have mostly been siloed into specific sub-disciplines within the natural sciences field. For example, looking at only engineers or only physicians or nurses, thereby diminishing our understanding of the collective characteristics of the leader development phenomenon among natural scientists as a group (Collins & Holton, 2004; Blumenthal, Bernard, Bohnen, & Bohmer, 2012; Funari, Feider, & Schoneboom, 2015; Goodall & Stoller, 2017; Perry, Hunter, Currall, & Frauenheim, 2017). This study sought to identify the contextual influences on leader development unique to natural scientist leaders in Uganda. The related research question was—how do attitudes, beliefs, subjective norms, intentions, and experiences of leader development among natural scientists in Uganda differ from those of non-scientist leaders? The emerging themes are discussed in this book chapter. This study further uses a retrospective mixed-methods multi-case comparative case-study approach to examine the leader development lifespan experiences of technical expert scientists holding leadership positions in organizations at the forefront of healthcare, engineering, and agriculture in Uganda and how such experiences differ from non-scientist leaders at a comparable organization.

REVIEW OF THE LITERATURE

In this section, a review of extant literature is presented. This study highlights a critique of the contextual factors and especially, the theory of planned behavior.

Contextual Influences

Studies have shown that contextual influences such as organizational culture, societal expectations, the structure and nature of undergraduate training, and resource constraints, impact leader development. Previous research has demonstrated that omitting leadership training in medical and engineering education curricula reduces the value these scientists attach to leadership (Colcleugh, 2013; Nakanjako, Namagala, Semeere, Kigozi, Sempa, Ddamulira, Katamba, Biraro, Naikoba, Mashalla, Farquhar, Sewankambo, Afya Bora Consortium members, & Sewankambo, 2015; Perry *et al.*, 2017). No such previous studies have been reported in the area of agricultural sciences. By integrating three natural science disciplines, this study shows the impact of lack of leadership training in STEM curriculums in general. A unique contribution of this study is the demonstration that the lack of both leadership skills and soft-skills training at the undergraduate level makes scientists worse off than their non-scientist counterparts who have soft-skills training in their programs. Moreover, the non-scientists undergraduate programs are structured in such

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