



# Learning and empowerment: Designing a financial literacy tool to teach long-term investing to illiterate women in rural India

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## ABSTRACT

The objectives of this paper are two-fold. First, it aims to bring attention to the learning and educational needs of the almost one billion illiterate adults in the world who have little or no means for furthering their education in traditional settings. More than two-thirds of illiterate adults in the world are women and their education can have an immense impact on societal development. When we think of learning in its cultural context through social interaction, this population presents a unique vantage point to test and extend our theoretical ideas. Second, the paper presents an exploratory case study that demonstrates how research on learning can guide human empowerment by addressing everyday problems and how addressing these problems, in turn, can contribute to our understanding of how people learn. Specifically, we present a design-based research and implementation case of a financial literacy tool constructed to assist learners in understanding the advantages of long-term investment. Our findings demonstrate the advantages of leveraging the local context to construct teaching aids and supports viewing learning as the creation and enactment of situated practices.

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## 1. Introduction

Over the past couple of decades most research on learning and education has concentrated primarily on educational and learning issues of importance to advanced industrialized societies (for exception see [Kral and Heath \(2013\)](#)). Salient issues addressed by researchers have focused on improvement of conceptual understanding or higher level thinking skills in science and mathematics and the use of advanced information technology. Furthermore, with the exception of some recent research, the community's attention has been on formal learning environments, particularly K-12 settings. This overall research agenda has been determined by institutional constraints, funding imperatives, and areas of national needs within the context of 'developed' countries. In order to increase the impact of research as well as improve the theoretical and empirical preciseness of our research we need to address issues that have been sidelined and we need to reach constituents other than those traditionally targeted by the research community. Of the many potential avenues available to researchers, one target area is the almost one billion illiterate adults in the world, most of which reside in South Asia with India having the largest number ([UNESCO, 2008](#)).<sup>2</sup> Many of them, especially women, have lost the opportunity for formal education but are dependent on informal or non-formal learning for their empowerment and advancement. The education of this population is critical if they are to break the cycle of poverty that engulfs them and subsequently their children.<sup>3</sup>

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<sup>3</sup> <http://www.undp.org/content/dam/undp/library/corporate/fast-facts/english/FF-Poverty-Reduction.pdf>, <http://www.un.org/millenniumgoals/pdf/report-2013/mdg-report-2013-english.pdf>, [http://www.un.org/womenwatch/directory/women\\_and\\_poverty\\_3001.htm](http://www.un.org/womenwatch/directory/women_and_poverty_3001.htm), <http://www.euractiv.com/specialreport-un-development-goia-un-failing-women-poverty-eradica-news-530504>

While seemingly novel within the context of current research efforts, analysis of non-industrialized settings has a significant lineage within the research on learning. Starting with studies by Cole and Scribner (1981), Lave (1987), Saxe (1990), and indirectly, even scholars such as Luria (1976), empirical findings from non-industrialized settings have significantly shaped research on learning. As a quick review of the field shows, ideas such as situated learning, legitimate peripheral participation, cognitive apprenticeship, and the integration of learning and everyday practices, as discussed for instance by Lave and Wenger (1991), have emerged primarily from ethnographic studies of non-industrialized communities (Lave, 1987). Their findings from settings as diverse as Papua New Guinea (Saxe, 1990) and Liberia (Lave & Wenger, 1991) have played a critical role in giving an understanding for the role of culture and social interaction in learning. Yet, if we examine the impact of learning research or even attempts to design learning in non-industrialized settings, the outcome has been minimum (for exceptions see Evans et al., 2008; Kral & Heath, 2013; Moed et al., 2009). There seems to be either the implicit assumption that what is good for most advanced societies is transferable and applicable to other settings or that learning is so contextually-bounded that it is not productive to even try and transfer lessons to settings different than those commonly found in industrialized societies. Consequently, educational institutions have started to look the same across middle higher-income level populations across the world, propagated in no small part by funding agencies, and what Rogoff (2003) describes as the Westernization of schooling,<sup>4</sup> further increasing the disparity between the haves and have-nots as the opportunities are not equally available to everyone in the society. Although formal educational institutions are essential for imparting consistent education at a large scale, as argued by many learning scholars, informal or non-formal settings not only form a legitimate mechanism for learning applicable skills but in many contexts they are often a more potent mechanism, as illustrated by recent findings from the family math project (Martin, Goldman, & Jimenez, 2009).

In this paper we present an exploratory empirical case study that demonstrates the critical role of informal learning in financial empowerment of women in rural India. The goal of our project was to improve participants understanding of financial matters to allow them to better manage their finances, including borrowing and lending, and consequently escape the trap of high interest rate applicable on loans available from the local moneylender. The institutional mechanism we leveraged for our project was microfinance linked self-help groups (SHGs) of women (described in-depth later). The women we worked with are illiterate, in some cases semi-literate, and are aware of the advantages of financial independence and willing to work towards their financial goals. What they lack is an understanding of how finances work, including concepts of simple and compound interest. Furthermore, given their lack of formal literacy skills they find abstract concepts hard to understand. In undertaking this work, we were motivated by two broad questions: how can theories of learning be applied to empower illiterate women and what role do we as researchers and designers play in this theory-practice transition? From inception, we believed strongly that research in uncommon contexts such as these, with non-traditional populations and non-traditional issues, can contribute significantly to broaden our understanding of how people learn.

In the next section we discuss the theoretical framework for our work, followed by a description of our design-based research and implementation in detail. We end with a discussion of our findings.

## 2. Theoretical framework

The social aspects of learning now form a core aspect around which learning environments are designed, with active, collaborative learning emerging as a legitimate model for learning (Greeno, 2006). Our theoretical underpinnings come from the same tradition but are specifically embedded in the embodied sociocultural tradition of teaching and learning. Our approach is best reflected in Rogoff's (1991, 1993) concept of guided participation (GP), a powerful metaphor that can be applied across settings, whether it is designing for formal education or for establishing and sustaining connections among communities, neighborhoods, schools or youth organizations (Kirshner, 2008).

### 2.1. Guided participation (GP)

Rogoff proposes a sociocultural approach to understand development. Her approach, involves observation of development in three planes of analysis corresponding to personal, interpersonal, and community levels. Developmental processes corresponding with these three planes of analysis are termed, by her, as apprenticeship, guided participation, and participatory appropriation. She notes that the three planes are inseparable and mutually constituting and at different periods of analysis, the focus can shift from one to the other. Furthermore, empirically, understanding each of them requires the involvement of the others and the analytical distinction between them allows clarification and salience to different processes. In Table 1 we describe each plane in detail and how it relates to our project. Although all three planes are applicable in this work, we use guided participation as the primary foundation for our research and design, given our role as the designers and our focus on the SHG meetings as the primary setting for our work. Guided participation refers to means of access to specific, community-valued practice that is organized by shared goals. Guided participation describes the explicit and implicit rules, recipes, spontaneous feedback, and workarounds appropriated by new members desiring to participate more fully. Most importantly, guided participation highlights the need to connect more knowledgeable members with novices and encourages members to adopt diverse roles, referents, and devises

<sup>4</sup> "Interventions such as introduction of Western schooling and other change efforts may not actually replace the more traditional ways of a community. But interventions do contribute to subtle and not so subtle changes (Rogoff, 2003, p. 352)."

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