

ICT, aspirations, and career decisions: How information access relates to Nigerian students' career decisions

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Abstract. In this poster we introduce our work in progress examining the relationship between ICTD and Nigerian users' career aspirations. We propose that an Internet information resource can influence a person's aspirations both through its informational content and through other psychological processes. We summarize work performed to date, particularly interviews and a focus group conducted at two urban universities in January, 2017. Although analysis of the data has just begun, we can identify preliminary trends in the qualitative data that suggest how we might augment our approach in future phases.

Keywords: Aspirations, Internet access, intranet, ICTD interventions.

1 Introduction

Aspirations have, in roughly the last two decades, become widely recognized as a contributing factor to ameliorating poverty worldwide [1, 2], even as prevailing ideas of the nature of poverty and development become more nuanced (e.g., [3]). Computer-based information and communication technologies (ICT) have potential to address poverty, but they are not exactly a panacea [4, 5].

In this poster, we provide a snapshot of our work on these questions: What is the relationship between, on one hand, individuals' career and work aspirations; and on the other, access and use of educational and reference materials from the Internet? The first phase of our project has started with a focus on the WiderNet Project's eGranary Digital Library, an extensive collection of resources developed specifically for locations where Internet access itself is cost-prohibitive, unavailable, or so unreliable and slow as to severely limit the usefulness of the Internet to gain information. Extant research from other countries suggests that new exposure to the eGranary can influence the aspirations of its users [6]. However, preliminary findings discussed below have made us more skeptical about the universality of this influence, encouraging us to broaden our research questions both in this first phase and beyond.

2 Theoretical Foundations

We propose a theoretical mechanism by which access to an information resource relates to the aspirations of users in marginalized communities. Access influences aspirations through a purely informational channel, so that individuals might learn about careers they did not know existed, as well to augment information about preexisting career ideas. But access also influences aspirations through a second psychological channel. Gaining use of an Internet resource allows users to hear stories of people outside their own surroundings, which can increase their propensity to view a similar goal as attainable. This idea draws on three well-established threads of psychological theory: self-efficacy [7]; role models [8]; and identity theory [9]. Seeing others' stories prompts users not only to *believe* they can “get there from here,” but also to *feel* they can. We theorize that access works through these two causal channels to lead an individual to consider new alternative career paths.

3 Related Literature

Theories of ICTD's impact range from thorough optimism to a more nuanced skepticism. The “leapfrog” view holds that technology allows developing societies to completely skip stages of development (as discussed in [10, 11]); a more critical “amplification thesis” counters that technology tends to magnify preexisting societal trends [5]. In any case, a broad consensus advocates assessing ICT's value in ways beyond tallying up traditional economic variables such as income and wealth [4, 12], and aspirations figure prominently among the nontraditional factors we must consider [13].

One anthropologist has identified a culturally-rooted “capacity to aspire,” expanded by giving “voice” to the poor [1]; alternatively, an economic view is that “aspirations failure” can occur if an individual sets aspirations too low [14]. Other international development scholars have addressed a “great shortage of career-related information” [15], with empirical evidence that simply giving more information about financial returns to education can affect student decisions [16].

Meanwhile, in addition to classic North American theories of career choice (e.g. [17]), empirical research has found nuances specific to Nigeria [18, 19]. One particularly salient factor is the role of parents “on matters of choice of occupations, life partners and other important life issues....”—but research has found an unclear relationship between the nature of adolescents' parental relationships and career information-gathering [18].

4 Background, Methods, and Data

Our primary method of data collection is semistructured interviews with one researcher and one to three participants; in addition, we conducted an impromptu focus group of 16 people and are gathering server logs. Qualitative analysis of data will use

the technique of constant comparative analysis (CCA) adapted from grounded theory (GT) [20].

Data for this first phase of the project come from the first author's field visit to Nigeria in January 2017, focused on interviewing students and staff at two universities. The sample for this phase was a convenience sample, intended to maximize the number of contacts with students in a limited amount of time. At University A, a private institution of about 1300 students and 300 academic and nonacademic staff, students and staff participated in interviews individually or in small groups as the university made them available. At University B, a substantially larger public university in the same metropolitan area, an *ad hoc* focus group was the most effective way to gain access to students. Both samples were convenience samples, so findings should not be generalized across a population.

5 Project Status and Preliminary Findings

The first phase of data collection, involving interviews and focus groups, is complete. By the time of the 2018 iConference, we will have completed transcription and analysis for the first author's dissertation. We are also working to secure trace data such as anonymous eGranary server logs that can give a picture of usage of that collection on a larger scale. Pending our more rigorous analysis, we present some trends observed, with the caveat that these are preliminary.

Students were using the eGranary only to a limited extent, if at all, to seek career-related information. Awareness was at least moderate at the better resourced University A, which included the eGranary in semi-regular trainings, but students interviewed had used it only sporadically and mostly for class-related tasks. The only career-related use of the eGranary, by a couple of students, was to answer specific questions or browse new knowledge related to their chosen field. For their part, students at University B demonstrated no awareness of the eGranary at all. Senior library staff there had only become aware they possessed an eGranary within the past few months, even though the the system had been acquired a few years before. There was no evidence there of any particular initiative toward wider adoption of the eGranary.

At both sites participants reported extensive use of ICT in general, with mobile phones nearly universal. For academic work, students also made moderate use of university-supplied Internet-based informational resources such as eLibraryUSA (produced by the US State Department). Despite their volume of ICT use, though, participants reported that family was a much bigger source of information and influence than any technology in choosing a career. A particular characteristic of Nigerian higher education also played a role: Sometimes students assess too optimistically their chances of being admitted to their first choice of field, and instead end up in their second choice, which they may have chosen based on casual interaction with friends. In summary, ICT figured less prominently in participants' career information gathering than direct interpersonal interaction.

We observed a tendency for both universities to procure other ICTs that went underutilized, not only the eGranary. This observation prompts new questions about the

organizational behavior of Nigerian universities in ICT acquisition, questions that fall outside the scope of the first phase of our project but could be fertile ground for future research.

6 Project Status and Preliminary Findings

Our preliminary results so far indicate that the student populations studied are only using the eGranary sporadically, and rarely to explore career options. In the near term, we have responded to this trend by broadening our investigation to include career information-seeking behavior related to other resources beyond the eGranary. We infer low eGranary utilization to be reflective of the respective context at each institution: At University A students have access to a wide variety of technological resources hence have relatively little reason to value an intranet-based resource, whereas University B shows signs of profound difficulty translating ICT investment into implementation. Each of these could be an intriguing area for further investigation, and we plan to explore them in the next phase of this project. We also plan to seek out less-resourced universities for more interviews.

This project takes an important step toward understanding the career-related information behavior of Nigerian university students, and in so doing it points the way toward many additional lines of research. The social and intellectual impact of this research are closely intertwined—the agenda proceeding from here contributes to an ongoing scholarly conversation about aspirations and development, an interdisciplinary conversation still in its early stages. But in keeping with recent calls for ICTD researchers to engage more fully with practitioners who could use their work to social benefit [21], it is important to aggressively seek to dialogue with practitioners and policymakers so that all of us can better understand the value of ICT interventions. If technology does have the power to improve people’s lives by allowing them to elevate and expand their aspirations, augmenting our understanding about this relationship can only help us deploy technology more wisely.

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