RESEARCH ARTICLE

TRANSFORMING LIBERIA THROUGH TECHNOLOGY

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ARTICLE INFO

ABSTRACT

Over the past decades, advances in technology have helped accelerate globalization. For developing countries, access to technology can have many economic and social benefits for their economies, business and employment growth, communications, and education. As with most developing countries, technology in Liberia needs to be distributed more equally than is currently the case. To date, the poor, rural parts of Liberia have not enjoyed full equal access. This paper discusses ways in which very much better access can be provided to such areas, changing them irrevocably for the social good.

INTRODUCTION

Technological advancement has changed lives around the globe and has quickly become a critical source for addressing Liberia's significant problems. Liberia is a West African country with an approximate population of 4.9 million, of which less than five percent are computer literate, according to the World Bank. Doubling the computer literacy rate to 10% of the population in Liberia would have enormous influence on virtually all major systems, notably healthcare. Of evident importance, therefore, are the available methods for transforming education and technology delivery systems to align with such a goal.

Transformation Methods

Healthcare: As the use of cell phones has become a common feature of life in Liberia, it may be worthwhile to explore the use of such technology to deliver health information and to increase educational access. A significant health factor in Liberia is the simple lack of knowledge and awareness of how to use it. Mobile health technologies would give people unprecedented access to actionable resources on diseases that threaten lives in Liberia, such as malaria, tuberculosis, stroke, diarrhea, HIV, AIDS, and Ebola. Health-text messaging can be a tremendously valuable resource in Liberia, as it could provide communities with emergency health alerts, reminders for hospital visits, or as cues to trigger taking medications. Similarly, portable health conditions monitor sensors can also help to revolutionize care for people who do not have access to hospitals.

Given evolving technology, even in those rural areas where there might be no electricity or running water, mobile signaling technology could provide access to test or examination results through digital health (Michael, 2019). For example, images of diseases (suspicious tissue) can be photographed with mobile phones and sent to professionals at a local health care facility for diagnosis and recommendations for treatment options. Consider, in the case of Ebola, that such information could be disseminated more quickly and reach more people to stop the spread of the disease more immediately. Full development and utilization of technology in Liberia require a major commitment to training and supervision (Mayes & White, 2016, 2017). Healthcare professionals in developing countries have had little experience with the integration of technology. Because of these limitations, they are unable to meet the challenges of incorporating technology into their work. Most healthcare professionals in Liberia need training that emphasizes technology to enhance their capabilities as healthcare providers. The higher the number of doctors and nurses being trained to exploit healthcare technology means the greater will be the computer literacy in the professional population, and the better will be the care for the entire community (Mayes & White, 2016, 2017). Since they support interaction between and among users, modern computer and communications technologies encourage health professionals to collaborate and health providers to communicate and share data (Santiago, 2019). Additionally, the introduction of social networking allows doctors and their patients to connect. The same process can be used to share knowledge in the form of presentation and feedback, both essential to increasing health awareness. However, the appropriateness of the communication platform and the type of information shared need to be considered to ensure that the boundaries of doctor-patient interaction do not become blurred and prone to error.

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Education

Education is the foundational element in the development of any country, and especially for developing countries. Because of its scalable efficiencies, many expect interactive technology to play a major role in transforming the delivery of instruction in educational contexts. Educational delivery in Liberia, however, currently depends on traditional methods, which requires both human infrastructure and physical infrastructure in the form of physical school buildings and their installed equipment. Technology has the power to alter Liberia students' lives and transform how students learn (Morrison & Camargo-Borges, 2016). In particular, "e-learning" involves user interaction both to instruct, to monitor and manage progress, and to evaluate what students know and how effectively they are learning. Such interactions are provided under various organizational auspices via the Internet. Under an e-learning regimen, students may participate in live lectures, video conferences, small group learning, and one-on-one tutorial. Moreover, such interactive sequences can be received at any time subject only to the availability of Internet access to the appropriate software and a support terminal technology, e.g., a "smart" phone.The introduction of e-learning in underdeveloped countries will help governments overcome the shortage of teachers in educational settings and increase the number of educated persons.

Environment: According to the World Health Organization (WHO), more than 1.8 billion people lack a dependable source of drinking water. Even more, 2.4 billion have inadequate sanitation facilities. Upgrading living conditions to accommodate drinking water and sanitation is the mission of the civil engineer. Engineers are responsible for the structural and mechanical features present in civil projects, for example, building piped connections or sanitary sources such as protected walls, public taps, and boreholes. The WHO reports that in 2015, more people had an improved source of drinking water due to these efforts.

Economy: Technology can also be a means of solving Liberia's economic difficulties. Access to financial services is one way to help decrease poverty rates. Mobile devices and the Internet can be used to teach the importance of saving and to provide mobile banking services in rural areas where banks are not accessible. The comprehensive nature of the mobile app features would enable the easy deposit of checks, transfer of money within a customer's bank account, and in many cases, transfer money to another financial institution(Sampaio, Ladeira, & Santini, 2017). Mobile banking apps can caution customers when they are reaching or have reached their account limits, automatically move money into savings on their payday, and let them set controls on their cards to restrict spending.The ability to access one's financial records anytime, anywhere makes mobile banking appealing. The more often an account is monitored, the higher the chance to discover fraud more quickly or spot times when to slow down on spending.

Policing and Criminal Justice: New Internet-based technologies make possible "predictive policing." Such policing strategies are based on directed, information-based patrol, geospatial technologies, and fact-based intervention models to reduce crime and improve public safety(Belina, 2016). The predictive policing approach does not replace traditional policing. Instead, it enhances already existing approaches such as community policing, problem-oriented policing, hot spot policing, and intelligence-led policing. Predictive policing uses computer models — such as those used in the business sectors to anticipate market trends or conditions (Brantingham, Valasik, & Mohler, 2018) — but for law enforcement purposes. In predictive policing, predictions can focus on factors such as people, places, incidents, or groups. Other factors include parolee populations,demographic trends, and economic conditions, which may all affect crime rates in particular areas(Shapiro, 2017). Hence, the general practice comes with that criticism that it can reinforce existing biases against minorities. So, it is essential to train law enforcement personnel who are users of such methods in the detection and avoidance of such biases.

Conclusion

Advancing technology has changed the ways we conduct our daily lives and has quickly becoming a productive source of addressing developing countries' major problems. The introduction and integration of such technology in Liberia would benefit the country's healthcare, education, social, and economic life, and in keeping pace with the corresponding advances in the family of nations. The Liberian government ought to study, evaluate, and prioritize the benefits that technology brings and support technology's adoption and integration. Prioritizing technological innovation in such a way as to emphasize and achieve job creation is probably the most important, achievable benefit in the short term.

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