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## It Still Takes a Village: An International Perspective on Technology and Mentorship in the Northwest Corridor

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*This undergraduate research is part of a new student-mentorship initiative on campus, Success Through Academic Research (STAR), sponsored by the Metropolitan College. Utilizing community-based applied action research, researchers developed a case study on secondary classroom technology usage in IPRC-Kigali, Rwanda, East Africa and in West Mecklenburg High School, Charlotte, North Carolina, United States. The objective of this research was to compare and contrast the educational technology divides at these two secondary institutions. Working with one focus group from each secondary institution, researchers were able to establish an online repository for data collection purposes. In both focus groups—IPRC-Kigali and West Mecklenburg High School—educational technology was imperative as both southern Rwanda and the Northwest Corridor of Charlotte, North Carolina, work to improve overall conditions of their respective communities. In this case study, we collected and assessed not only the computer-generated statistics but also the personal narratives of the students and staff constituting these communities as we sought parallels that yield technology support for both global communities. Face-to-face-interviews, web-based networks, field observations, international communiqués, and extensive scholarship review have provided research inroads for addressing the technological needs of students from Rwanda to the Northwest Corridor of Charlotte, NC.*

*Keywords:* undergraduate, mentorship, technology, secondary education

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In a recent CUR study (2013), researchers and student mentees shared the following:  
Time spent as an undergraduate is formative and novel; getting a young researcher involved in the research community beyond the student's specific project can inspire and dramatically encourage students. A mentor can suggest that students travel to conferences in different cities or countries, help them construct research posters, or use other institutional contacts to help the students find summer research opportunities. ("Five Effective Strategies for Mentoring Undergraduates: Students' Perspectives," p. 13)

This undergraduate research is the next phase of the research mentor's initial field research in the Northwest Corridor of Charlotte and in the African countries of Rwanda and Nigeria Success Through Academic Research (STAR), sponsored by the Metropolitan College, is the highlight of a new student-mentorship initiative on Johnson C. Smith University's campus. In a 2013 study, academicians Walker & Davenport observed:

Thus, while students enrolled in liberal studies courses at Johnson C. Smith University have traditionally explored diversity via textbooks and required university lyceums, this project allowed students to develop their own study samples, to engage critical scholarship, and to produce significant research findings for the university and the communities surrounding the university. Such professional practice affords incoming freshmen a tangible, direct interaction with Charlotteans that no textbook or classroom lecture can provide and promotes meritorious academic scholarship during their first-year freshman experience. ("Corridor to Charlotte: JCSU as the Cultural Bridge to Domestic and International Awareness")

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Utilizing community-based applied action research, the research mentor-mentee team is currently developing a case study on secondary classroom technology usage at IPRC-Kigali, Rwanda, East Africa and in West Mecklenburg High School, Charlotte, North Carolina, United States.

The overarching aim of STAR was to identify faculty eager and willing to engage ten Metropolitan College freshmen in rigorous academic research. In order to facilitate this opportunity, STAR administrators requested faculty to draft a three-page sketch outlining their current research focus and the proposed research budget not exceeding \$500. Based on the submission of this sketch, or proposal, and the subsequent presentation thereof, faculty were matched with a select group of high-performing freshman students in February 2013. These faculty-student matches formed the base of a nuanced, guided mentor-mentee program on the university campus. Initially, 18 interested students entered the mentor-mentee program; their declared academic majors included accounting, biology, criminology, political science, chemistry, social work, computer science, computer engineering, global studies, and sports management. (Students were selected based on their academic achievements in their first semester of college and their commitment to engage in meaningful research activities in addition to their second-semester course workload).

Each research mentor-mentee team was required to participate in mentorship training, to provide the mentee meaningful academic research engagement and supervision, to prepare the mentee for conference presentation of the research, and to attend a monthly lunch seminar Q & A forum. Researchers (2013) noted, "It is this fundamental comfort and connectedness that allow mentoring relationships to evolve into the most productive, educational, and constructive interactions in the research environment" (Pita, Ramirez, Joacin, Prentice & Clarke, p.11). Objectives included faculty mentors assisting research mentees in the development and refinement of their communication and presentation skills in relation to their research project. Research mentor-mentee teams explored key concepts related to conducting research, with particular focus on the research question, design, procedures, and methodological approaches. Via weekly team meetings and larger discussion groups, research mentor-mentee teams had ample opportunities to review team project details at various developing stages. Additionally, research mentees presented and discussed research outcomes in formal campus seminars in preparation for future academic conferences, such as the 9<sup>th</sup> Annual Conference on Applied Learning in Higher Education, at which the authors of this research presented.

Research mentees for this community-based applied research project had established university majors in computer engineering and communications while the research mentor was grounded in English, STEM-related writing, and interdisciplinary studies. Utilizing a project syllabus and projected timeline, the research mentor-mentee team was able to tailor overall project details to encompass both humanities and STEM interests of the team.

The project syllabus and timeline included a triad of research, discussion, and writing to fulfill STAR objectives. The research mentor reviewed thoroughly the research expectations for the mentees, providing each with a detailed syllabus and project stage completion dates. After two weeks of introductory academic research skills and university facilities prep—including library and applied research lab—the research mentor doled out assignments for project completion based on the skill sets and interests of the two mentees. Each week, mentees met with mentor to discuss assignment completion, literature review, and succeeding steps. Mentees were required to maintain research logs and to submit weekly progress reports to STAR administrators.

The official launch of the project commenced with an official communiqué with IPRC-Kigali, Rwanda, and West Mecklenburg High School, Charlotte in the spring of 2013. Both secondary schools agreed to provide the necessary assistance for the successful completion of the research case study in which the research mentor-mentee team compared and contrasted a number of factors that contributed to the enhanced focus on varied educational technologies for both focus groups.

The Soul of the Northwest Corridor Initiative was a 2012 university-sponsored survey conducted to assess the area in which Johnson C. Smith University resides. The campus is close to a growing and vibrant uptown Charlotte and is situated in the heart of the northwest corridor of Charlotte, an area undergoing major upheaval and revitalization as more professional establishments and middle- to upper-income families seek out resources closer to uptown Charlotte, North Carolina. The university, touting itself as “employing a leading-edge methodology... as one component in its community-planning process,” has sought to play the central leadership role in the revitalization efforts along the Northwest Corridor. Given the university’s historical mandate and reputation as an outstanding institution of higher education within the Northwest Corridor, the university has made education technology one of its key emphases at local grade schools occupying the same area. Of particular interest has been West Mecklenburg High School with its Project L.I.F.T. grant designed to retain high school-aged African-American males via technology in and outside the routine classroom setting (<http://www.projectliftcharlotte.org/>). The university’s investment in educational technology along the Northwest Corridor provides newer inroads to drastically improving both education and technology in the Northwest Corridor long term.

Similarly, IPRC-Kigali is a newer combined technology-driven high school established in the capital city of Kigali, Rwanda, East Africa, to provide hands-on educational technology for students anxious to compete in increasingly global education and employment markets. Studies of government-sponsored schools like IPRC-Kigali expressed, “ICT [information and communication technology] has become an important tool for teaching and learning and has therefore attracted a great deal of investments in the African countries” (Mukama & Andersson, 2008, p. 158).

Therefore, in this case study, the research mentor-mentee team collected and assessed the personal narratives of the students and staff constituting these communities as they seek parallels that yield technology support for both global communities.

## LITERATURE REVIEW

A review of more recent publications regarding both communities—West Mecklenburg High School and IPRC-Kigali—substantiates the fruitfulness of such a dynamic undertaking and international partnership between the groups. The social variables of gender, age, education, economics, cultural traditions, and religion cut across both southern Rwanda and the Northwest Corridor of Charlotte as both communities seek to revitalize mid-21<sup>st</sup> century. In the June 17, 2012, edition of *The Charlotte Observer*, in an article titled “Northwest Corridor Revival Needs Great Expectations,” journalist Ron Stodghill noted, “Counterbalancing the corridor’s rich cultural landscape of vibrant churches, historic neighborhoods, and plethora of small businesses is an entrenched culture of generational afflictions: joblessness, high crime, absentee fathers, poor health, and so on.” Similarly, communities such as Rivers and Imo States, Nigeria, hold narratives that speak to rich heritage overshadowed by poverty and crime. In a 2001 country synthesis report “Nigeria: Voice of the Poor,” field researchers observed:

Since a key finding is that poverty is linked to the inability of individuals and households to reciprocate and support other people, to build and use social capital within the community and the wider environment, the role of local level institutions in providing this opportunity to maintain reciprocity is crucial for the poor to be able to keep a sense of dignity in their lives.

According to a 2007 report from educational researchers Mukama and Andersson, “most schools in Rwanda, especially those in the remote countryside, do not have electricity let alone computers and telephone lines” (p. 157).

As both the Northwest Corridor of Charlotte and southern Rwanda work to improve overall conditions of their respective communities, it becomes imperative to bring education technology to the foreground. While more quantitative studies such as *The Soul of the Northwest Corridor Initiative* (2012) and the mixed array of government documents on the status of education in southern Rwanda are highly significant, these works do not chronicle the lives of individuals and subgroups within these communities.

The Rwandan government has invested much in technology-based education over the past few years as part of its strategic plan, known as Vision 20/20, which aims to see Rwanda become a middle-income nation by the year 2020 (Mukama, 2009, p. 539). According to educational researcher E. Mukama (2009):

The implementation of information and communication technology (ICT) in Rwanda as a development policy is expected to be realized in the course of four five-year rolling National Information and Communication Infrastructure (NICI) plans extended over the 20-year span of Rwanda's Vision 2020, which started in 2001. (p. 539)

The country's president has taken the leadership role on advancements in education as the country pushes its 20/20 agenda. Not unlike the efforts to revitalize the Northwest Corridor of Charlotte, President Kigame and others are working tirelessly to ensure the stability and growth of their respective home communities. Technology and enterprise founder John Vrakas (2012) stated, "Under Kigame's leadership, Rwanda is evaluating its own needs, setting its own priorities, and avoiding the prescriptive reform regimes of Western donors" ("From Genocide to 3G: Innovations in Rwanda, p.85).

In fact, in a recent *ComputerWorld* article brief, Dan Nystedt (2007) highlighted the excitement of rapid technological advancements in the East African region: "The partnerships with the organizations...are part of an effort by Google to expand the computing services available in developing countries..." ("Google to Provide Apps To Groups In Africa," p. 14). To this end, compulsory education was recently increased to 12 years (Mukama & Andersson, 2008, p.156). In 2009, a government decision changed the medium of instruction from French to English for all students above the third year of primary school. The abrupt shift has created huge challenges for both students and teachers (Kigali Education Advisor/Information Resource Centre). Such challenges are evidenced by researchers Mukama & Andersson:

ICT incorporation in Rwandan schools, as reported by the participants, is a new phenomenon that the whole school community is trying to cope with. Seemingly, many efforts are being made in terms of establishing ICT infrastructures, and training teachers, students, and outsiders. (Mukama & Andersson, p.163)

Regardless of the challenges to enhance technology education for all learners in Rwanda, "programs like e-Soko are heralded by techno-optimists as proof that mobile technology can make major strides in uplifting the world's poor" (Vrakas, 2012, p. 84). The e-Soko project gives farmers tools to quickly assess the market values of their products. In a report by Vrakas (2012), he invariably stated:

Their confidence is bolstered by the devices' rapid spread, which itself seems like a force of nature. Mobile phone penetration in Rwanda grew from less than 1 percent in 2005 to 27 percent in 2010, with three mobile operators competing for the local market. Rwanda's rapid technology adoption, unfortunately, is an exception among developing countries.

Many developing nations have struggles to scale up effective government-backed programs that tap into technology's promise. Often, these countries lack the capacity for innovation and grow programs slowly, if at all. (p.84)

Mukama & Andersson are convinced that "as technologies continue to develop, they change human interaction and actions. Through this, the students' ways of learning are also modified in line with what is regarded as relevant forms of learning in educational institutions" (p.157). Communities like the IPRC-Kigali, Rwanda and the Northwest Corridor of Charlotte are also convinced of the purposefulness of upgrading educational technologies in order to thrive in the 21<sup>st</sup> century.

### STAR RESEARCH CASE STUDY

The objective of this research was to compare and contrast the educational technology divides at two secondary institutions seemingly worlds apart yet maintaining similar internal and external community structures. IPRC-Kigali, for its own recruitment and management benefits, is actually housed alongside the Kigali Institute of Health Sciences, a prominent postsecondary educational institution (<http://www.iprckigali.ac.rw/>). West Mecklenburg High School, for its own retention and management benefits, has partnered with Johnson C. Smith University, a prominent postsecondary educational institution. Working with one focus group from each secondary institution, the research mentee-mentor team established an online repository for data collection purposes.

In both focus groups from IPRC-Kigali and West Mecklenburg High School, educational technology was imperative as both southern Rwanda and the Northwest Corridor of Charlotte work to improve overall conditions of their respective communities: "Creativity, innovation, knowledge, problem solving ability, appropriation, seeing the world in different ways, or transformation—these are some concepts utilized to emphasize cognitive change in learners' practice" (Mukama, 2009, p. 541). In this case study, the research mentor-mentee team collected and assessed not only computer-generated statistics but also personal narratives of the students and staff constituting these communities as the team seeks parallels that yield technology support for both global communities ("Preparing for a Collaborative Community Assessment," 2011). Face-to-face-interviews, web-based networks, field observations, international communiqués, and extensive scholarship review have provided research inroads for addressing the technological needs of students from Rwanda to the Northwest Corridor of Charlotte.

In this case study, the research mentee-mentor team specifically explored the technology resources in secondary school, IPRC-Kigali, and in secondary school, West Mecklenburg High School. The following community dynamics were assessed:

- What are the school needs related to construction, technology, and staffing?
- What are the student needs related to knowledge acquisition?
- How much is community involved in student education?
- How strong or weak are family/kinship ties?
- What are pressing needs and concerns of the community?
- How integral is formal and informal education to community development?
- What gender and health disparities are present in school and community?
- What are housing conditions within communities?
- How do school and community negotiate financial challenges?
- What does the school/community design look like?
- What does the school/community design look like to a secondary school in the Northwest Corridor of Charlotte, North Carolina? Vice versa?

The impetus for developing this series of assessment questions lies in the varied interests of school, student, and community: “In other words, they [researchers] maintain that both teaching and learning should converge to satisfy learners’ intrinsic needs” (Mukama, 2009, p. 541). Based on exploratory research, the school entity is strongly invested in raising the bar in terms of technology resources for students but suffers from an incredible lack of financial resources and properly trained staff comfortable enough to teach educational technologies in an interdisciplinary context. As stated in the educational research of Mukama & Andersson, “Unconditional support of the school administrators is a necessary condition for effective integration and implementation of ICT schools” (p.163).

The student entity is eager to acquire knowledge that comes from enhanced technology resources. This entity is cognizant of a wider global community that is intrinsically connected via technology: “Thus, knowledge building is a continuous process embedded in action and involving individual, social, and active participation” (Mukama, 2009, p. 542). Familial support, positive or negative, plays a strong role in avowing or disavowing the student entity from attaining and fully utilizing education technology resources. The community entity surrounding school and student must be assessed for assigned cultural and educational values as these systems greatly determine student and school outcomes. Student and school are directly dependent on community for school construction, administration, and other financial concerns. Additionally, entrenched cultural notions such as gender-based assignments and work ethic complicate the development of both the student and school entities.

## MATERIALS AND METHODS

The research mentor-mentee team isolated two focus groups of approximately 20 students of mixed genders from both applied research communities. IPRC-Kigali students were generally advanced high

schoolers aiming for job placements in banking, finance, mechanics, and science. West Mecklenburg High School students were generally incoming freshmen anticipating career paths that involved avenues of personal expression mingled with curiosity about postsecondary educational options. Collectively, both focus groups achieved a gender ratio of 15:25, female to male. The IPRC-Kigali focus group consisted of 14 females and six males while the West Mecklenburg High School focus group consisted of four females and 16 males. Gender variation in both focus groups was largely based on school demographics and established education intervention patterns. For example, West Mecklenburg High School had already isolated a population of at-risk African-American males for research purposes. These males were provided an intrusive educational leadership coaching staff that consisted of community businesspersons, noted educators, and technology personnel. Using educational technology, including an online discussion platform model, these males were engaged and continue to be engaged in meaningful mini-projects designed to boost self-esteem, leadership skills, and academic performance.

For the purposes of this case study and the interdisciplinary interests of involved researchers, the research mentor-mentee team elected to employ a variety of qualitative methods to assess the educational technology uses and needs of both focus groups, IPRC-Kigali and West Mecklenburg High School. To date, two major exchanges have occurred among the focus groups and the research mentor-mentee team (see Table 1).

Table 1. Major exchanges

	Focus Group (IPRC Kigali)	Focus Group (West Mecklenburg)
Exchange 1	Web-based	Web-based
Exchange 2	2 Months	2 Months
Exchange 3	Semester	Semester

Exchange 1 consisted of background research on both IPRC-Kigali and West Mecklenburg High School along with the communities in which both schools reside and initial contacts with each school. All initial contacts with IPRC-Kigali were web-based given the time and funding constraints of the research mentor-mentee team. One member of the research mentor-mentee team volunteered service hours with students at West Mecklenburg High School in order to gain familiarity with the Project L.I.F.T. intervention program. Exchange 2 consisted

of a more substantive period of building rapport with both communities and focus groups. During two months in the spring of 2014, the research mentor-mentee team established a framework for assessing the educational technology uses and needs of IPRC-Kigali and West Mecklenburg High School. Both schools provided endorsements for the completion of the applied research project. In Exchange 3, the research mentor-mentee team will spend the fall semester of 2014 compiling and analyzing a pool of data from the sustained semester-long web-based and physical interactions with both focus groups.

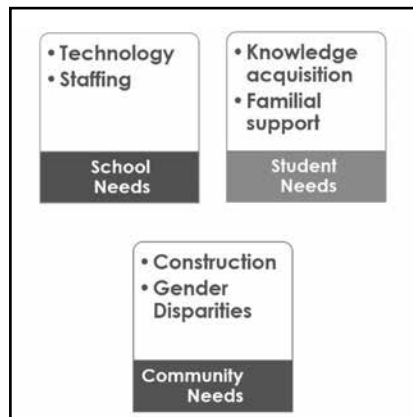
Qualitative methods for successful completion of the community-based applied research project on educational technology include:

- (1) Field observation via informal surveys and personal interviews
- (2) Focus group consisting of 1 secondary school in southern Rwanda
- (3) Unstructured participant observation in ongoing meetings with Rwandan Educators
- (4) A review of relevant literature, including research articles, agency reports, multimedia, and position papers.

### STUDY ANALYSIS

The research mentor-mentee team assessed a compilation of informal surveys and personal interviews from Exchange 1 and Exchange 2 of the applied research case study. The narrative data for both Exchanges was collected during the winter of 2013 and the spring and summer of 2014. Students from both focus groups eagerly responded to 10 open-ended questions related to their school needs, their personal needs, and their community needs (see Figure 1). The IPRC-Kigali focus group consisted of 14 females and six males while the West Mecklenburg High School focus group consisted of four females and 16 males.

Figure 1. Student responses to school needs, student needs, and community needs



On separate participant observation visits with the focus group from West Mecklenburg High School, one member of the research mentor-mentee team posed questions to students on topics of technology needs and uses inside and outside the classroom, family influences and education values, and racial and gender disparities within their larger community. With the IPRC-Kigali focus group, the research mentor-mentee team gathered responses to the same topics via email communications, video technology, and personal interviews. Interviews generally lasted 10 minutes per student. Additional data collection involved formal interviews with Rwandan educators and former IPRC-Kigali students and Project L.I.F.T. managers located at West Mecklenburg High School and at Johnson C. Smith University. These interviews were more extensive and ranged from 20 minutes to two hours per interview. Due to established research confidentiality agreement in Exchange 1 with Rwandan interviewees, respondents from both focus groups were not identified by name. Working with a cross sample of 25 interviews, the research mentee-mentor were able to correlate findings with currently published reports on educational technology in the Northwest Corridor of Charlotte and in Kigali, Rwanda. The research mentor-mentee team identified two common themes or patterns from the interview cross sample.

One common theme that emerged from the narrative data set was that of race and gender. In both focus groups, student, staff members, and community persons discussed ways in which they deemed race and gender significant to their access to educational technology. The West Mecklenburg High School focus group determined race to be a more pivotal agent in their access to quality educational resources, including technology. One student commented, “Just look at this; they don’t respect us and give us what we need because we are black.” Another interviewee stated, “We have significant challenges, in part, due to folks not understanding the culture.” The IPRC-Kigali focus group did not acknowledge race as a significant determinant in their access to educational technology. Rather, gender was determined to be a significant factor in access to educational resources. One student boasted of the increased access girls have to technology resources: “Now we have more girls getting degrees in business and technology, and they find good jobs.” A former IPRC-Kigali graduate noted in a more extensive interview with the research mentor-mentee team, “Yeah, it’s great! Rwanda has changed a lot, and so has my school. Females are advancing far more quickly than males in technology fields. I don’t know what has happened, but it is a good thing.” According to the American-based sponsors of the Rwanda Girls Initiative, “In Rwanda, however, less than 13 percent of girls attend secondary school” (Ruxin, 2011). Statistics on international education such as this one published in *The New York Times* run counter to gender education narratives found in many urban American communities, such as the Northwest Corridor of Charlotte in which race and boyhood compete with educational success.

The second theme that is significant in both focus groups is the impact of class privilege on equal access to educational technology resources. Students in the focus group from West Mecklenburg High

School equally emphasized that socioeconomic factors have hindered their knowledge acquisition in the 21<sup>st</sup> century. The families and communities of this focus group were also largely impacted by what they perceived as a technology divide based on monetary means; hence, class matters. Student responses included comments such as these: “My family cannot afford data like some people—that’s a big bill.” “I didn’t turn in my homework because my grandmother does not have Wi-Fi but his mama does because she works at the . . .” and “We don’t have enough computer time at my school.” The focus group differentiated between video gaming technologies and those technologies geared for classroom educational success. In the IPRC-Kigali focus group, students acknowledged the class variables when it came to educational technology in their communities; however, most of the students identified themselves as having class privilege in their communities. The educational technology resources made available to the IPRC-Kigali focus group were not viewed as reasonable handouts based on socioeconomic factors—including income and location—as much as these resources were considered necessary tools in 21<sup>st</sup> century global advancement. In a published interview, former Minister of Education Dr. Charles Murigande stated, “By far the most significant change has been democratization and equal access to education. Before 1994, education in Rwanda was reserved for the privileged few, but over the last 17 years access to education has increased tremendously. . . . The corruption that used to determine who could pursue his or her studies has been eliminated, and the only thing that determines how well a student does in school is their own hard work” (2014). And, during the research mentor-mentee team’s observations at the sixth edition of the Rwanda Day Summit held in Atlanta, Georgia, Rwandan President Paul Kagame encouraged Rwandans from the diaspora that “Agaciro [Kinyarwanda word meaning ‘dignity’] is about creating a sense of self-worth, and self-worth is only achieved if all of us together value one another” (Rwanda Day, 2014).

The choice for value in the educational arena for both focus groups was both complex and simple. Research findings indicated two communities worlds apart who shared similar cultural roots and patterns, economic and gender disparities, and educational programming. However, the IPRC-Kigali focus group made a choice to view their world and the world at large through a different lens whereas the West Mecklenburg High School focus group was heavily mired in community politics and demographic profiling. These varied perspectives of self-worth and value to state significantly impacted the appreciation of education and the creative use of available educational technology resources.

### STAR RESEARCH OUTCOMES

The research outcomes of this community-based action research are multi-layered. First, the research mentor-mentee team clarified the formal research design for full-fledged Johnson C. Smith University student research participation in both domestic and international affairs

as it relates to the mission of the research mentor and the nonprofit collegiate organization, Collegiate Sisters for Action, Inc. (CSA). Second, the research mentees involved in this applied research are better able to craft their own senior investigative research projects as mandated for degree completion by the university. Third, the research mentor-mentee team has successfully demonstrated the university faculty-student capacity to engage in broader-ranged cross-institution collaborations (Green, 2003). Faculty from the humanities division of the university clearly see the possibilities of linking their research to concentrated studies in STEM. Likewise, STEM researchers at the university more readily weigh the benefits of merging their research interests with those of humanities scholars.

In commencing this STAR research project, the research mentor-mentee team acknowledged the difficulties in reaching an international community, including financial and trustworthiness (“Conducting a Community Assessment”). As the team anticipated certain educational technology limitations, the researchers were not as prepared for the time and politics involved in executing the full research design. The IPRC-Kigali and West Mecklenburg High School focus groups, nonetheless, created interesting inroads for more fruitful dialogue and interventions in the areas of educational research and technology (Schultz, 2007). Using the direct narratives and educational profiles collected from both focus groups, the research mentor-mentee team desires to establish and maintain a public student-developed, student-friendly on-line repository and interface that fosters cross-institution, cross-national collaborations, study abroad networks, and funding opportunities for young researchers.

### STAR RESEARCH MENTORSHIP

Mentoring and guiding university students through the research process provided immense pleasure for the research mentor as the STAR research model created a new platform for the faculty mentor’s own research interest development. The two research mentees working on this applied research project were from two distinct disciplinary backgrounds that proved quite challenging for the research mentor. While the applied research project required the research mentor-mentee team to lean more on humanistic models of investigative research, the team was wary about straying too far from their respective disciplinary traditions (Stein, 2000). To resolve tensions—from personal preferences to external funding complications—the research mentor-mentee team tasked each other with research responsibility pertinent to their respective disciplines. For instance, the research mentee from the discipline of computer engineering developed online survey tools and web interfaces for the overall project while the research mentee from the discipline of communications often was the lead spokesperson for much of the face time with students and school personnel. The creativity and expertise of the research mentor-mentee team created a dynamically rich research foundation from which to build.

The short-lived STAR mentorship program established at Johnson C. Smith University allowed young scholars, or mentees, to integrate into the campus community, strengthen their resolve for academic achievement, and contribute to their preparation to complete their senior capstone projects (Stein, 2000). In scheduled sessions with peers and faculty mentors alike, mentees participated in peer-feedback sessions, with intended goals of learning to provide and to accept constructive feedback on conference presentation skills and possible published peer-reviewed publications. In addition to appraising peer presentations, mentees also were expected to participate in seminar discussions and Q&A sessions to develop an appreciation for, and understanding of, the ways in which the research process unfolds, even in disciplines other than their own. In a 2013 article titled "Five Effective Strategies for Mentoring Undergraduates: Students' Perspectives," researchers from the University of Central Florida emphasized:

Other studies investigating the merits of undergraduate research have shown development of research skills (Kardash 2000), enhancement of intellectual curiosity and logical thinking (Bauer and Bennet 2003), and increased college retention rates (Nagda et al. 1998). Positive effects are seen across the spectrum of disciplines from engineering (Zydney et al. 2002) to social science to the humanities (Ishiyama 2002). (Pita, Ramirez, Joacin, Prentice & Clarke, p. 11)

Future goals for the STAR research mentor-mentee team involve re-directing the focus of the project to ensure the original aim of capturing the individual oral narratives of women and children from similar socio-economically disadvantaged communities is not lost (Shultz, 2007). Using the STAR mentor-mentee cohort model, the research mentor will actively recruit interested students to continue with the community-based applied research that now has a solid platform. Within the next couple of years, the research mentor-mentee team would like to unveil an online educational resource database that addresses the disparities in gender, education, and health from the Northwest Corridor of Charlotte, North Carolina, USA, to those international communities such as southern Rwanda, East Africa.

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## Metamorphosis Stage 2: Year Two of a Student-Run Public Relations Agency Experience

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*In the second year of a student-run public relations agency, the instructors discovered a need for improved client and student feedback. Using student end-of-course reflections and survey questions posed by Hon and Grunig (1999) in the Institute for Public Relations booklet, "Guidelines for Measuring Relationships in Public Relations," clients and enrolled student responses were analyzed to determine their satisfaction with the agency/practicum experience. Mid-year significant follow up measures were enacted to address emerging client service problems. Using the lens of action research, the survey results and subsequent managerial actions were extremely positive and encouraging for the future of the student agency.*

Entering the second full year of a student-run public relations (PR) agency, the instructors discovered a need for improved client and student feedback. Each of the two PR instructors had years of professional and academic experience, met regularly with their students, and communicated extensively with the agency's clients. Yet, that was simply not enough. Paralleling the general belief "that the fundamental goal of public relations is to build and then to enhance on-going or long-term relationships with an organization's key constituencies" (Hon & Grunig, 1999, p. 2) the instructors initiated a survey of the agency's clients as well as students enrolled in the practicum courses.

Shadinger and Gruenwald (2013) detailed the 2012 experiences of PRomo, a student-run public relations agency at a medium sized, mid-western public university, noting challenges and suggesting revisions to the experience. Starting in the fall of 2013 a new instructor assumed