

The Role of Internships in Guyana's Development

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Abstract Guyana's development is dependent upon, among other things, a well-educated workforce with the necessary skills to exploit its natural resources and to make the nation an effective global competitor. In this regard, the University of Guyana (UG) has a critical role to play by providing its graduates with the education needed to meet the demands of their potential employers. Unfortunately, many organisations have publicly lamented the deficiency of practical skills of UG's graduates. One available strategic option is for UG to consider a wider use of internships. Internships are valuable because student-interns: (i) learn to apply the theoretical knowledge to real life industrial applications, (ii) are better prepared for entry-level jobs in their field; and (iii) learn by experiencing the actual day-to-day operations of a corporation by attending meetings and participating in actual projects. The objective of this paper is to show how UG can use internships to improve the human capital stock of its graduates. We examine some best practices of internship programmes and demonstrate how internships can be beneficial to students, universities, and companies.

Keywords: Internships; Human capital; Students; Public-private partnerships

1. Introduction

Guyana is a country with abundant natural resources including minerals, arable land, and rich biodiversity of flora and fauna. However, these resources are largely underexploited because of limited financial and human capital stock. Human capital is defined as the productive capacities – knowledge, understanding, talents and skills possessed by an individual and society (Paulsen, 2001). Human capital theory posits that education increases the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability (Woodhall, 1987). Education is critical to innovations, research and development and is an input into the entrepreneurial efforts to create new technologies and products (Olaniyan and Okemakinde, 2008). Further, investments in education and training not only increase wages, salaries, and productivity but such investments also increase national income (Schultz, 1961).

It is well known that the decision by leaders of the newly industrializing economies of East Asia (such as Singapore, South Korea, Taiwan, and Hong Kong) to focus on technological development has been largely responsible for their rapid industrial success (Wignaraja, 2005). For example, South Korea's development was as a result of investment in a first rate higher education system and high educational attainment (Metcalf, 2005). Generally, education in these East Asian countries was focused on technical fields and industrial training, encouraged by subsidies to and levies on firms. Training was focused on emerging technological needs by getting industry involved in the management of training and educational institutions (Lall, 2000). Education and information overcame the uncertainty and costs associated with adopting new technology (Wozniak, 1987). In contrast, countries in the Caribbean have been slow to adopt technologies and therefore were slow to benefit from globalization (Wignaraja, 2005).

Partnerships between universities and industries are important in creating a trained workforce. Developed countries such as Austria, Germany, Luxembourg, and Switzerland have developed private-public partnerships for vocational educational training that prepare students for the labour market. Such training is provided mainly to upper and post-secondary school students and to a lesser extent tertiary level (OECD, 2013). In Finland, in anticipation of the increasing need for skills in information technology, the Finnish government financed projects in electronics, electrical, and new media industries. Finnish universities and polytechnics offered more technology programmes and increased opportunities for vocational training. The industries provided internships and encouraged their experts to participate in training at universities and polytechnics (Jonkinen, nd). In the USA, an internship is an important component of undergraduate and graduate training in many fields. Experiential learning in US colleges and universities is needed to create an educated workforce to meet the challenges of a new world economy and to function in a changing American workplace that requires people to work effectively with each other and in teams (Cantor, 1995). Internships are usually conducted during the traditional 3-month vacation/summer period or year-long. US businesses also recognize the importance of forming partnerships with colleges and universities to aid student and faculty research, product development, and internships. Apart from enhancing practical skills and providing work experience, internships can be used to encourage more participation in science and technology. For example, the Building Engineering and Science Talent (BEST) Program is aimed at diversifying America's workforce. To this end companies such as Microsoft, IBM, HP, Lockheed Martin and government agencies such as NASA provide internships to women and under-represented ethnic minority groups (BEST, 2004).

2. Internships as a Public-Private Partnership

Internships give students the opportunity to apply knowledge and skills gained through academic coursework to a professional setting as experiential learning in the field, office, factory, or laboratory. Internships prepare students for the workforce. On a broader level, extensive internship programs can help in developing a country's human capital by catering to the needs of

its businesses thus promoting sustainable economic development. Successful internship programs are beneficial to students, colleges and universities, and businesses.

Benefits to Students: When internships are well constructed, the exposure can be of considerable benefit to students. Their technical competencies are reinforced, analytical skills improved, and they experience firsthand the need for adaptability and creativity required in the “real world” (Radigan, 2009). Among the other benefits are better time management, higher levels of self-discipline, increased initiative, and improved self-image. Students also have opportunities for growth through shadowing mentors and attending meetings. Such were the observations in the study of undergraduates in science, technology, engineering, and mathematics (STEM) disciplines engaged in experiential education (Thiry, Laursen, and Hunter, 2011). In this study, it was observed that students also began to adopt behaviours and attitudes necessary to become professionals. They developed an understanding of professional practice by working independently and taking ownership of projects. Overall, students with internships often have the necessary skills to perform at entry level positions and feel better prepared for their future careers. In today’s job market, employers are looking for internship and other relevant job experience when hiring candidates so students with internships have an edge on the competition for initial employment (Cantor, 1995).

Benefits to Colleges and Universities: A vibrant internship program can be beneficial to colleges and universities in three ways: (i) they can receive important feedback from the host employer on the students’ performance; (ii) they can get feedback on their curriculum, which can be validatory or critical, with suggestions for modifications to meet the demands of industry; and (iii) internships tend to foster better relationships between the academic institution and industry. For example, in response to stakeholders’ criticisms about the mismatch between industry needs and the skill sets of US engineering undergraduates, the Accreditation Board for Engineering and Technology (ABET) changed the criteria for curricula formulations from specifications to learning outcomes and accountability. A significant component included is out-of-class experiences (including internships) and the importance of the feedback from these experiences as part of the continuous system of improving the curricula (Volkwein et al., 2007). Internships strengthen the relationship between the college/university, the organisations providing internships, and the community served by the university. Personal contacts within corporations can be potential sources of goodwill enabling the university to receive support (financial or otherwise) for its programmes and activities. For example, industry leaders can be invited as guest lecturers so that they can bring their real world experience to the classroom. In addition, many organisations may have more advanced technology than universities so personal contacts may be the vehicle of choice to get students access to such technology for hands-on application of concepts or for field trips.

Benefits to Industry Partners: Internships may be viewed by employers as a mechanism for recruiting new employees and as a means of providing these prospective employees with some of the skills needed before their official professional experience starts. Internships also help

businesses stay connected with their community. Student interns bring new perspectives that can be channeled to enhance existing projects or create new projects. In most cases, internships are conducted in the junior and senior college years, when students begin to be more serious about their careers and therefore the students' performance can be evaluated for potential employment. If interns are later employed, less time and resources will initially be needed for training them. Employers have also reported increased retention among interns who become fulltime employees. Interns are not usually paid as regular employees and therefore could provide the organisations with inexpensive but competent assistance. They may temporarily relieve employees from their positions thus allowing them to pursue more advanced assignments in the organisation (Radigan, 2009). In the USA, internships are an important component of undergraduate and graduate training in many fields. Experiential learning is needed for producing an educated workforce and citizens who can meet the challenges of a global economy and a changing American workplace that requires effective communication skills and team work (Cantor, 1995).

3. Design and Implementation of Effective Internship Programmes

In order to create effective internship programmes, colleges and universities and host organisations must have the appropriate systems in place and a sense of partnership so that the interns can have an enriching experience. A study of 15 American research institutions showed each had a central corporate relations unit responsible for establishing and maintaining relationships with industry (Prigge and Torraco, 2006). This unit is usually small in size with full-time employees. It is managed by a director or senior director operating at the same level of school deans or institution vice president. The primary goal of these units is to enhance their institution's overall resources by establishing mutually beneficial partnerships. In addition, the major academic colleges have faculty members liaising with industry, although there were not organisationally linked to the central unit, they communicate between them so that the institution can be "speaking in one voice" when dealing with industry (Prigge and Torraco, 2006).

A project conducted at the Texas A & M University in 2012 resulted in the preparation of a document titled *Increasing the Intentionality of Internships: Resource Guide*. Among the suggestions were: (1) refining hallmark characteristics and learning outcomes for the university's undergraduates, specific to internship experience; (2) create and refine assessment material and other instruments for the campus community; and (3) develop sample assignments for faculty. The guide has a recommended method for assessing internships that can be used by faculty and employers and also assist students in understanding what is expected of them from the internships. The assessment employs a 4-point scale and examines areas such as critical thinking, oral communication, written communication, personal and social responsibility, teamwork, intercultural knowledge and competence, and lifelong learning (TAMU, 2013). This assessment validates the importance of all-round experiences expected from internships.

Hiring an intern is an important decision for companies. Some companies may recognize the importance of hiring interns as a long-term strategy for having a pool of skilled individuals. However, it is often up to the university to make the initial approach and outline the benefits of hiring their students as interns. Prior to hiring an intern, companies must understand how interns fit within their goals and culture. They should have clear objectives about what the organisation hopes to achieve from the internship. Financial and other resources must be allocated. After hiring the intern, a mentor should be assigned and a meeting arranged as early as possible so that there can be agreement on objectives, procedures for achieving them, and how the deliverables will be measured. Specific projects or assignments should match the student's competencies and provide focus. The responsibilities should have structure and be meaningful and facilitate an all-round growth experience. The mentor and intern should also agree on how often they will meet. It is recommended to have an orientation meeting to develop a sense of camaraderie among interns and to make them familiar with the organisation's staff. Organisations should consider having a confidentiality agreement so that their protocols are not divulged.

The classic example of a successful US internship program is that developed by MITRE Corporation. MITRE responded proactively to the drop in enrollment in US engineering programs and the incongruity between academic experience and skills required in the workplace. MITRE established a model internship programme to correct the situation. The programme utilized a team approach consisting of seven members: (i) Resource Manager: Provides funding source and a short, specific work plan to be impacted by the intern's work; (ii) Task Leader: Assigns and oversees successful completion of tasks. Identifies additional resources needed and ensures these needs are met; (iii) Engineer Advisor (Mentor): Ensures intern's work experience is exposing him/her to the breadth of engineering activities the company supports; (iv) Faculty Advisor: Ensures balance is maintained between the intern's academic obligations and workplace responsibilities, with each reinforcing rather than negatively impacting each other; (v) Business Specialist: Facilitates hiring process. Provides financial and resource guidance to the team; (vi) Outreach Specialist: Engages the entire team to ensure the internship mutually benefits the company and the intern; and (vii) The intern who communicates his/her expectation for the internship programme and engages in the assigned responsibilities. All members of the team are given a copy of the internship package so that there is common understanding of the expectations of the internship. The student is exposed to every aspect of the engineering duties and, as much as is practicable, the duties are aligned with the student's classroom activities (Malloy, 2007).

4. Internships at UG

The University of Guyana has a small internship program that is run through the Office of Resource Mobilisation and Planning (ORMP). Each year public and private organisations are approached to determine their willingness to provide internships for students. Over the last five years, 37 organisations have responded to UG's request for interns; most of the positions were for students from the Faculties of Health Sciences, Natural Sciences, and Technology (ORMP

records). Although 160 students have benefited from internship during the last five years, this represented only about 46% of the positions available. Anecdotal evidence indicates that among the reasons for this is the extension of some courses into the traditional 3-month vacation/summer period. We found that in the 2008/2009 academic year 27 organisations hosted interns; however this figure declined to 12 in the 2012/2013 academic year. This indicates there is still some interest in participating in the internship programme. In fact some companies have taken the initiative in approaching the university with a request for interns. Given that UG's internship programme is still in a fledgling state, however, UG needs to aggressively publicize the existence and benefits of its internship programme to students and potential host organisations.

5. Conclusion

There are some challenges to having internship programmes at UG. These include not having specific structures in place to facilitate students' experience; and not having support from the university while on internships. We believe the Government of Guyana should get more involved by considering subsidies, tax breaks, or other favourable considerations to those organisations that provide internships. Policy makers should be aware of developments in science and technology that can affect Guyana's competitiveness and be prepared to make changes required to improve the Guyanese economy. Preferential market status that Guyana once enjoyed for some of its agricultural products is diminishing and business is now conducted in a globally competitive environment. As the Caribbean countries lack the capital needed to keep up with technological changes, the regional focus should be on building human capital through education and on-the-job training to improve labour productivity and to promote technological innovation and adaptation (Almendarez, 2011). This is especially true for Guyana despite its abundance of natural resources. The Government of Guyana should create a niche for certain goods and services and use its educational resources to develop a competitive advantage. Such a strategy can have a positive impact on other sectors of the Guyanese economy. We believe internships can be of great value in this endeavour.

Conflicts of Interest

The author declares no conflict of interest.

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