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Sustainable Research in Industries through Universities

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Abstract

World over, business companies look for *impact*, i.e., how a university-industry (U-I) collaboration can contribute to the company's performance. Given that industries finance university research projects, they would look for a return on investment. Being a developing nation, in Bangladesh, the large industries are generally set up with the support of foreign industry collaboration. Any subsequent support needed is then usually provided by the foreign collaborating partners. Private universities, in Bangladesh, on the other hand, are relatively young, i.e., they have started coming into being since the Private University Act (1992) of the government. There are various attempts being made, such as the Innovation Fund (IF) provided by the World Bank through the University Grants Commission (UGC) to build collaboration between industry and the universities, however, given the existing foreign collaborative support and the young age of the private universities, fruitful collaboration between industry and local universities is yet to see the light of day. In fact, in Bangladesh, universities are not aware of the needs of the industry; neither does industry know the kind of support that universities can provide. How can this gap be addressed? This paper proposes a virtual forum where both university and industry can meet for mutually beneficial purposes. In the forum, industry will post small jobs that they need done, e.g., a market survey, developing a marketing strategy, product use feedback, a software, i.e., small jobs that can be completed in 2 to 3 months time for which the company does not want to create a full-time position. From the universities, interested students would submit proposals demonstrating *expression of interest* (EOI) against matching jobs. The advertising industry would then award the small job to the best EOI. This way a student will be able to do a fruitful internship under the joint supervision of a university supervisor and an industry counterpart. The industry will also get a job done without much cost. The paper includes screen shots of the prototype demonstrating how the virtual forum would work. It is hoped that, slowly but surely, beneficial collaborations would result given the networking generated by the forum.

Keywords: *collaboration, networking, research collaboration, research funding, university-industry collaboration, university-industry partnership*

1 Introduction

In developed countries like the United States, universities are often looked upon as innovation drivers for the industry (National Academies Press, 2013). So much so, that often "Technology-intensive companies commonly locate their operations near the best universities in particular fields of science and engineering in order to enable their internal research departments to work with "star" scientists and to recruit promising students." Not only can universities support research initiatives, they are also a source of potential employees. For industry, however, getting what they want and need from universities has not been straight forward. As pointed out in the 3-year study done by Pertuze et al (2010) that companies look for "how the new knowledge, derived from the collaboration can contribute to the company's performance.", i.e., profit driven companies look for impact – more so because the research is funded by the industry. For academics, publication of research as well as finding funding for research may be more important. To bridge the "Outcome-Impact Gap" as they call it, Pertuze et al (2010) recommend seven strategic steps. Among these steps they place emphasis on *long-term relationships, clear strategic goals and strong communication methodologies* not only among the partnering teams but the company at large and the university as a whole.

Similarly, to build understanding of the gap and interactions required, Fuentes & Dutrénit (2010) break down the interactions between industry and university into three main stages,

1. the engagement in collaboration (e.g., drivers),
2. the knowledge transfer during collaboration (e.g., channels of interaction), and
3. the benefits perceived from collaboration (e.g., benefits).

It is important to understand these three stages as both sides differ in terms of the incentives to collaborate and the behaviors they adopt during these three stages. Fuentes & Dutrénit (2010) conducted a systematic mathematical analysis of each stage. For the first stage, i.e., drivers that promote engagement in collaboration, Fuentes & Dutrénit (2010) study different variables that affect the *probability* of linking between industry and a university. Overall, their highly mathematical analysis suggests that once collaboration has started, different flows of knowledge occur through the four channels of interaction. It is how to engage in interaction and collaboration, i.e., launch the first stage of university-industry collaboration, a forum where both parties can meet for mutual benefit, in a developing country like Bangladesh, is the subject of this paper. Fuentes & Dutrénit (2010) recommend,

"To promote and strengthen innovative linkages, policymakers should put emphasis on promoting activities related to different forms of interaction looking for the best articulation of knowledge supply and demand. Alignment of incentives for both firms and researchers, and the design of creative policies encouraging the mutual reinforcement of interaction between these two agents are required." (Fuentes & Dutrénit, 2010, p.28)

2 The scenario in Bangladesh

Being a developing nation, in Bangladesh, the large industries are popularly set up with the support of foreign industry collaboration. Foreign aid agencies (e.g., NORAD, 2009) are also involved in investing and reaping the benefits (despite the risks, Dhaka Chamber, n.d.) given the market of almost 160 million people. Any subsequent support needed is then usually provided by the foreign collaborating partners, as they continue to reap the benefits. Private universities, in Bangladesh, on the other hand, are relatively young, i.e., they have started coming into being since the Private University Act (1992) of the government. There are various attempts being made, such as the Innovation Fund (IF) provided by the World Bank through the University Grants Commission (UGC) to build collaboration between industry and the universities, however, given the existing foreign collaborative support that industry is enjoying and the young age of the private universities, fruitful collaboration between industry and local universities is yet to see the light of day. In fact, in Bangladesh, universities are not aware of the needs of the industry; neither does industry know the kind of support that universities can provide. Having studied this scenario in Bangladesh, Islam, Mohajan & Datta (2012) propose a five-stage organizational taxonomy model to help develop university-industry collaborations:

- i) ad hoc collaboration at an individual level
- ii) development of internal support structures
- iii) creation of autonomous support structures
- iv) setting up of individual enterprises and
- v) national and transnational networking

While collaboration is at stage I in Bangladesh, Islam, Mohajan & Datta (2012) propose the following isolated events to launch stage 2. The proposed joint collaboration events are:

- designing and updating business course curriculum,
- summer internship project,
- consultancy
- seminars, workshops and conferences

In fact, these events do take place at the initiatives of well meaning individuals; events which are basically one off and are not designed for sustained long term relationships between a university and industry as advocated by Pertuze et al (2010). This paper picks up on b) summer internship project and c) consultancy as suggested by Islam, Mohajan & Datta (2012) and proposes how a more sustained effort can be created through a structured virtual forum or meeting place for industry and university.

3 A sustained meeting place to promote networking

Internships for university students are offered and publicized by organizations such as BRAC, UniLever, UNICEF, SGS, UNDP as a simple Google search with the string, *Internships in Bangladesh* will reveal. While the internships with these organizations generally offer exposure to their programs and projects, they do not have specific deliverables expected from the intern. There is a website Expat Blog (2015) that allows interested foreigners to find out about temporary jobs in Bangladesh while bdjobs.com offers an e-Recruitment service for organizations (e.g., HSBC) who wish to hire interns. So we see that a need for interns exists in the industry. On the other hand, universities view internships as something to do over the summer (Islam, Mohajan & Datta, 2010). The nature of internship reports are such that they can also be made available to other students at a nominal price (e.g., internshipreportbd.blogspot.com)

3.1 A more professional view of internship

This paper proposes a more professional approach to internships. We propose that temporary jobs for which a company, firm, organization or industry does not want to create a full-time position be offered as internships. To do so, the "job" would have to be defined in terms of type of job, when required by, the outputs expected, data to be collected, work to be done, etc. The job could be things like a brief market survey, developing a marketing strategy, product user feedback, a software, i.e., specific temporary jobs that can be completed in 2 to 3 months time. Instead of putting an advertisement in the paper, the job could be offered as an internship to university students.

The temporary job would be posted in an internship portal, just as would a full-time job in a job portal, with the exception that a work specification with time duration would be given. Figure 1 shows a screenshot from a prototype developed for the purpose.

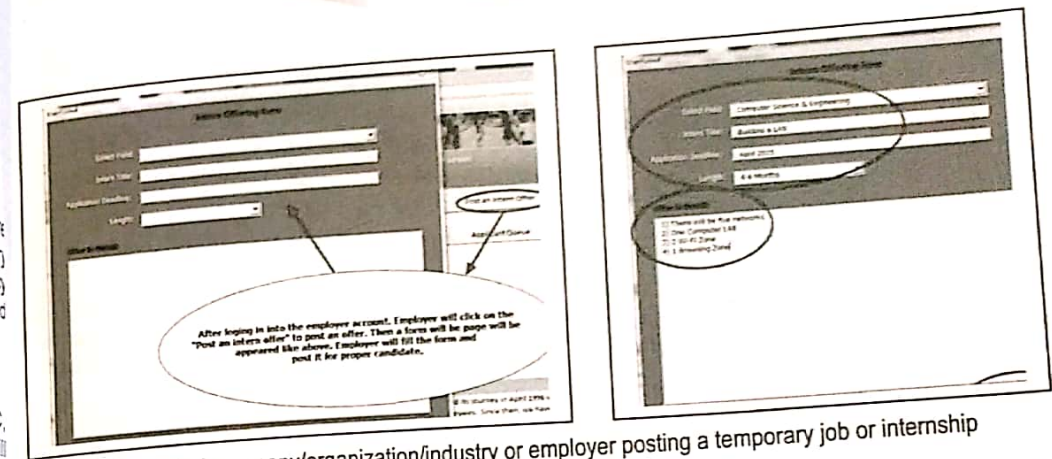


Figure 1 A company/organization/industry or employer posting a temporary job or internship

In the left screenshot, an already registered company/organization/industry or employer clicks on *Post an Intern Offer*. Once the appropriate screen appears, details of the job are entered as shown on the right. The *Intern Title* is a drop-down menu in the *Select Field* shows the employer subjects available at universities. *Intern Title* is a brief title for the job. The allowed length of job and the *Offer in Detail* is entered. The offer details need not be too detailed, as discussed next.

3.2 Bidding for Internships

Just as the employer has to take a more professional view of the job that needs to be done, the university and students seeking internships have to be more professional. All students who have registered for *Computer Science and Engineering* (CSE) internships would be not only be informed by mail, but also be able to see all available offers in CSE in their *inbox* in the portal.

Once the student has identified an internship that he/she would like to apply for, he/she has to *bid* along with other students for the same job. The bidding process would involve an *Expression of Interest* (EOI) documenting how he/she would tackle the job, e.g., steps to be taken, skills required for each step, time line for each step and for completing the entire job. To complete the EOI or *Student Application for Internship*, the student would have to consult his/her university supervisor as shown in Figure 2.

Student Application for Internship

Internship Title: Building a LAN
Offered by: Taj Knitting Industries Ltd
Duration: 4-6 Months

Supervisor's Name:
Associated Institute:
Designation:
E-mail Address (To Acknowledge Him/Her):
Phone:

Applicant would send this application by filling up this form

Intern Proposal

Figure 2 All students wishing to do the same internship would have to apply in the form shown above.

As can be seen in the form in Figure 2, the university supervisor's name, designation and institution along with the email address has to be entered. This has to be done with the consent of the supervisor, as an automatic email copy will go to him/her when the application is posted. If necessary, the employer may get in touch with the supervisor to find out about an individual student. Given the nature of the job or internship, the university may decide to treat the job as a final year project or an internship as per rules allowed by the university.

3.3 Evaluating bids

After the closing date, the employer will be able to view all the bids, award marks and make a short list or selection based on the *Intern Proposals* submitted.

Application Name: ...
Award Marks: ...
Status: ...

Send Invitation

Figure 3 Bid evaluation and invitations sent out

It is open to the employer how he/she wishes to further the selection process. He/she may wish to hire multiple interns or physically interview the applicants before finally selecting. It is only when invited that the student knows which company he/she has applied for.

3.4 Evaluation upon completion of work

Upon completion of the internship, the work done by the intern may be evaluated. This is a very important step for the student as it will give the student a reference based on actual work in industry. For the company or employer, this is also important, as it would force him/her to decide on quality of both the student and the university supervision.

3.5 Connecting for future work

For future work, work that may involve post-graduate students or university teachers themselves, e.g., for consultancy work, the company may consider contacting the supervisor, since a connection has already been made, at least for information on what can be done. Continued networking and support would help ensure long term relationships.

4. Benefits, conclusions and a way forward

The screen shots shown in the paper are from a prototype developed by a student in the department of Computer Science and Engineering at Daffodil International University as part of his course requirements for Systems Analysis and Design. Development of prototypes can also be a service offered to the industry. The prototype was developed in MS-Excel using Visual Basic for Applications (VBA) for writing the programs behind the buttons in the screen shots shown. When prototypes are used by stakeholders, they (industry people) are in a better position to evaluate the design of software and give valuable feedback for the requirement gathering process in the software development life cycle.

In the case of the *Internship Portal* proposed by this paper, benefits exist for all the stakeholders involved.

- For the industry:
 - Organizations, businesses, firms, industry can get temporary jobs done at little or no cost.
 - They will be able to evaluate both universities and students for their quality of work and commitment.
 - They will come to realize availability of local resources and knowledge.
 - If the students and universities prove themselves, initial contacts may turn out into consultancies and bigger projects.
- For the student:
 - Students will get the opportunity to do real work for the industry and learn the pressure of deadlines.
 - Students would be working against exact specifications and outputs required.
 - They will have the satisfaction of having completed a real job and being evaluated by industry people.
 - Testimonials given by the industry would be advantageous when applying for jobs upon graduation.
 - They would have a chance of being offered a job by the same employer if their performance is satisfactory.
 - Given the rules of the university, students would be, at the same time, be awarded credits for project or internship work.
- For the university and teachers involved:
 - The teachers would get connected with industry counterparts.
 - They would begin to see the kind of work and support needed by the industry.

- The teacher together with the industry counterpart may identify further avenues collaboration, cooperation or consultancy.

Jobsbd, a sister concern of Daffodil International University is now in the process of developing the software for the Internship Portal.

4. Acknowledgements

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5. References

- Dhaka Chamber. (n.d.). Economic Policy Paper on Foreign Investment Protection Policies and Anti-Expropriation Measures. Retrieved March 15, 2015 from http://www.dhakachamber.com/economic_policy/Foreign_Investment_protec.pdf
- Expat Blog. (2015). Internships in Bangladesh. Website: http://www.expat-blog.com/en/jobs/asia/bangladesh/internship_.html
- Fuentes, C.D., and Dutrénit, G. (2010). A three-stage model of the Academy Industry linking process: the perspective of both agents. Lund University Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE). Working paper no. 2010/06. Retrieved March 15, 2015 from http://www.circle.lu.se/upload/CIRCLE/workingpapers/201006_De_Fuentes_Dutrenit.pdf
- Islam, J.N., Mohajan, H.K. & Datta, R. (2012). Organizational Models in University-Industry Collaboration: International Perspective. International Journal of Economic Research, Vol 3, No.5. Retrieved March 15, 2015 from <http://www.slideshare.net/rajibdatta587/organizational-models-in-universityindustry-collaboration-international-perspective>
- National Academies Press. (2013). Universities as Innovation Drivers. Chapter 3. *Best Practices in State and Regional Innovation Initiatives: Competing in the 21st Century*. Retrieved March 15, 2015 from <http://www.ncbi.nlm.nih.gov/books/NBK158819/>.
- NORAD (2009). Private Sector Development Program in Bangladesh: Assessment of Business Conditions and Sector Potentials. NORAD Report. Retrieved March 15 from http://www.norway.org.bd/PageFiles/366025/NORAD_report_BMMP.pdf?epslanguage=en
- Pertuze, J.A., Calder, E.S., Greitzer, E.M., and Lucas, W.A. (2010). Best Practices for Industry-University Collaboration. *MIT Sloan Management Review*. Vol.51. No.4. Retrieved March 15, 2015 from <http://osp.mit.edu/sites/osp/files/u8/bestpractices.pdf>



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