The Next Step for Cooperative Education

Haider Al-Saidi, Chair
Accounting and Computer Education
Red River College

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Abstract

At the early stages of startups development they need to change. They must change and adapt to the market. As the young entrepreneurs learn more about their business, their market, and their customers they need to incorporate that knowledge into their business plan. The business plan at that stage of development in the author's opinion is a dynamic document that keeps evolving until it reaches a state of maturity. And even then there is a level of adaptation takes place based on the changes in the market, technology and other external factors like policies and regulations. On the other hand most of our funding and startups help programs assume all applicants to be at the final state of maturity (there are few programs target the early stages of development) which put young startups at a great disadvantage and they are automatically disqualified in being part of these programs. The author believes that this requirement is just a filtering process to make sure that funds are allocated to mature ideas where there is a higher probability of success. This model is working to a degree, but the question is how many good ideas are disregarded due to the lack of support or the environment to foster them. Many young startups especially in the IT field fail to continue beyond their first year due to the lack of support regardless of the idea. Young entrepreneurs will have to go back to the job search engines to start new career and abandon their ideas no matter how good they are. In this article the author will suggest a model on how post-secondary educational institutes can build that support in their programs and help new entrepreneurs reach the level of maturity to be qualified for other programs. The author will demonstrate that with an experiment conducted by the department of Accounting and Computer Education at Red River College. The author proposes the utilization of the co-op and project terms offered by many programs to help entrepreneurs' idea cross the gap between the moment of the inception of that idea and the point when they are qualified for other programs.

The Perspective of the Educational Institution

Many educational institutions now offer cooperative education as part of their curriculum and as a requirement for graduation from certain programs. Cooperative education (co-op) takes the form of one or more semesters, dedicated for the

students' employment by an internal or external organization. The purpose of co-op is to allow students to gain knowledge about how the real world works while providing an opportunity for them to connect with future employers and understand firsthand the set of skills employers are looking for. It is certainly a great way to introduce students to the working world they will be stepping into and have them experience it directly; if it is done right!

There are however, a few problems that may prevent students from gaining the full advantage of cooperative education. One of these problems is the massive number of students being placed within short periods of time and the uncertainty of how many positions that will be available for them. Of course the number of positions available also depends on the state of economy. When the economy is not doing well and many "real" jobs are being eliminated, the chance of companies offering co-op positions to students is very low.

The quality of positions is another factor that needs to be considered. Even though educational institutions try to evaluate each position and make sure it meets the established standards, it is difficult to place all students at the same time during the co-op term. It becomes a balancing issue of quality versus quantity.

The evaluation of students' progress while they are on the co-op assignment is also a parameter to be considered by the educational institute. Who does the evaluation? Is it the sole responsibility of the institution? The employer? Or both? What are the guidelines to handle the evaluation to ensure it is fair and consistent?

Often international students, especially those who don't have English as their first language, have the least chance of being chosen by co-op employers, regardless of their academic performance.

Despite all the issues, the majority of students are still receiving quality co-op positions. Educational institutions are, however, working on creating contingency plans to deal with the students who are not able to secure positions on time for the co-op term.

The Employer's Perspective

From the employers' perspective, co-op can be a golden opportunity to meet new candidates, observe them in a temporary co-op position, and evaluate their performance before potentially offering the position permanently.

Co-op can also be a time consuming process for employers and may not have a good return on investment; especially if the time spent in training (safety, technical, etc.) co-op students is considered a lost time (i.e., no productivity).

Organizations external to the educational institution may not be able to identify students learning styles and capabilities and therefore, may not be able to fairly evaluating students' performance and progress using the same methodology as the educational institution would use.

Startups versus Established Businesses

Established businesses (whether they are small or large organizations) have the potential to build a place for co-op into their business plans. In various capacities, these organizations have positions they can dedicate to co-op students. They understand that the outcomes may vary and are willing to take the risk of their objectives having not been achieved out of this experience.

On the other hand, startups face two major hurdles when it comes to taking co-op students. The first is that they don't have funding available to pay the students if that is a requirement of the educational institution. The second hurdle is that they are not established enough to be considered a partner of the educational institution in regards to co-op. Of course there are other obstacles like space, equipment, facility, labs, etc.

Speaking in general, startups at their early stage of development face these obstacles when dealing with any other program; governmental and non-governmental. It is extremely difficult for young startups to receive funding as funds are usually allocated for businesses with solid ideas and solid plans. Startups are often asked to solid business plan when applying for assistance.

Normally startups don't have their entire business plan figured out yet especially at that stage of development. They have the will and the desire but, they are struggling with lack of time, money and resources needed to focus on the products/services their company is providing. Their business plan at that stage of development is evolving and adjusting as they learn more about business and acquire knowledge about the market. A business plan that satisfies any funding program is not possible.

Large number of startups fail to continue within their first year of inception. Entrepreneurs who have left everything behind to focus on starting a business have to abandon their ideas and dreams and return to job search engines in order to find employment to sustain themselves.

This model is not helping in fostering ideas, enthusiasm, and entrepreneurship in our system. There is a deficiency in helping struggling startups whose only capital is the idea that resides in the entrepreneurs' head and the idea keeps evolving as they learn more about their future customers and market.

One possible solution is to give young startups the chance to take advantage of co-op programs which could help the entrepreneur move forward to the stage where they are qualified for more opportunities.

How Can the Co-op Evolve?

Cooperative education can be a major player in driving innovation and assisting startups, small and large organizations to achieve their goals with the help of students. It can also provide startups in their early stages of development with the chance to accomplish more by working with students on campus or outside the campus. It can also be the vehicle for companies to share experiences and research results with each other when their paths cross and they are trying to accomplish the same thing.

Large organizations can benefit from co-op by finding new ideas, demonstrating feasibility or concepts, and/or doing market research. Young startups may enjoy the same benefits with the added bonus of having help developing their product or service, thus allowing them to meet the conditions necessary to qualify for available grants.

The co-op model described in this article is designed to help overcome some of the problems mentioned earlier. Specifically it can:

1. address the needs of large and small organization in generating ideas and solutions

2. help in speeding up the process to demonstrate concepts and feasibility with relatively low cost

3. fast track the development cycle of products

4. assist small organizations and startups with finding strategies and meeting funding requirements by allowing small businesses to focus on these things while the development team is taking the product to production phase

5. put students in a situation where they can be participant in authentic projects with real responsibilities, but know there are many safety nets in place and they are in a safe environment that allows for mistakes

6. allow the faculty and staff of the educational institution to interact directly with organizations, transfer some of their knowledge and receive information about industry needs.

7. deal with the massive number of students to be placed in co-op positions by inviting startups and other larger size organization to bring their projects on campus

The model

The model we propose is based on the premise that all or some of the stakeholders of cooperative education be willing to share their space and ideas with the educational institute.

The educational institution is of course one of the major stakeholders with the interest of providing meaningful co-op experience to the students by allowing them to work with real employers on real projects or jobs. But there are also other outcomes for the educational institution like being closer to industry and knowing firsthand what industry needs. How technology or business has changed and how much their educational programs need to change based on the changes in industry. Co-op is also a great opportunity for educational institution to be innovative in suggesting new technology or new way for doing business by monitoring industry closely through co-op.

Organizations other than the educational institution are the other stakeholder. Those organization could be small or large or even young startups. Their interest in the process is first to be in touch with their future employees. Understand the graduates' capabilities and maybe select few for future positions.

Students are also stakeholders in co-op where their interest is to first learn about their industry and experience that firsthand. Students are also looking to come out of this experience well informed about the organization they worked with and know more about the opportunities available for them.

There are also the clients of the organizations and the startups, they can play a major role in this model by providing some of the resources needed like space, labs. Especially that the end product will reside within their organizations.

In addition to all of the above, and since the role of startups is emphasized previously, we view organizations which provide assistance to startups and small companies as one of the stakeholders. Their interest is to make sure that small companies and startups are successful and on the right track.

After all the stakeholders are identified by the educational institution, then the placement process will be changed from a process trying to identify positions for the students into a process of identifying the right projects that fits with the students plan of study. Projects that their outcomes can be measured and students can be fairly evaluated based on the tasks assigned to them during the course of the project.

For young startups, the projects are already there it is just that they do not have the force and the capability to pursue them due to lack of resources. With this model the resources could be available by the educational institution or one of the prospective clients of the young startups.

The advantages of the model

The model proposed has many advantages. It will resolve many of the problems and issues identified above.
Since a whole community be involved in the process and each component in this community has something to gain from it then dealing with large number of students become not an issue as students can be distributed based on their interest working in real industrial setup. Space requirement would not be a problem due to the fact that all the community is working together to accommodate the projects.

The model is economy independent. If the economic situation prevents organizations from allocating co-op positions, they are sure not lacking ideas and can work with the educational institution to have co-op students groups work on these ideas. The gain to these organizations is that even when the economy is down they will still have the advantage to pursue R&D efforts through co-op and keep the development of their products going.

The educational institution will have the chance to evaluate proposals for work and that way the quality of projects is under their control as well as the evaluation of the students.

International students will be able to work in safe environment and the language and sociocultural barriers will have less impact on the students and the projects as the educational institution will be very close to the workplace of the student and be able to offer its expertise and training if needed.

The model offers a great environment to nurture ideas and foster young startups in their early stages. The model creates an innovative environment for these startups to be able to pursue the development of their products as well as the development of their business plans and their market. Startups will be ever close to the educational institution where they can receive guidance and information to plan their future. They will also become very close with other established organization to learn from their experience and may be work together on one single project that benefits both of them.

Our Experience

The Department of Accounting and Computer Education (ACE) at Red River College offers two programs, Business Information Technology (BIT) and Business Technology Management (BTM), both of which have a co-op or project term built in their pedagogy. Both co-op and projects terms are administered by the Co-op Coordinator who constantly looks for co-op or project opportunities for students who are in term 4 of these programs.

The ACE department has strict guidelines about the eligibility of students to participate in a project or co-op placement. These guidelines have to do mostly with the academic standing of the students (their GPA as an example). ACE also developed a criterion for determining the suitability of projects or co-op positions. Eligible positions or projects must meet the academic outcomes set by the faculty of each of the two programs.

Bit Space Development (BSD), a startup company located in Winnipeg, Manitoba proposed a project to ACE which involved the development of BSD's main product, PanoPla. Their goal was to create a simulation product which could be used by the Manitoba Apprenticeship Branch. The project proposed by BSD met the ACE criteria. BSD interviewed BIT students and selected 6 in early May 2015. A Scrum Master was designated to manage the project, assign the day-to-day activities, and set the goals and milestones.

The owner of BSD was designated by Ace to be the "Entrepreneur in Residence" who's main function is to set up the goals and provide directions to the team on what the product should look like, the functionality of the PanoPla, and specific information about BSD customer requirement. The information provided to the Project Manager who in turn decimated the information to a team of 6 students in the first co-op term and another 6 students in the second term (each term is 4 months in time).

The ACE co-op Coordinator acted as the faculty advisor to the students with the main focus of ensuring they were meeting ACE's expectations in regards to attendance and engagement, and also to resolve any personality issues.

The Co-op Coordinator and the Project Manager (the Scrum Master) communicated with each other throughout the duration of the project to ensure that all issues were resolved and the students were receiving any help they needed to be able to continue. They also met regularly with the Entrepreneur in Residence.

By the end of the project, the students were able to meet all milestones and objectives discussed at the beginning of the term. All students indicated that the experience was outstanding, as they learned elements that are vital to their success. They also appreciated the fact that they were put in a situation where they are in charge, trusted to make decisions, brainstorm ideas, implement the ideas, and be part of a real team that worked in collaboration to achieve the goals. The project was fun and informative to the students. The team bonded very well and every part of the project was enjoyable to them.

From BSD's perspective, the goals were achieved in quick order. The students' work allowed BSD the much needed time to think about their next steps, strategies, market, and future goals.

ACE staff and faculty were able to monitor the progress of both the students and BSD. From an academic point of view, this was a great live experiment which allowed the staff to put their academic theories to the true test.

The co-op coordinator and the project manager were able to assess the students' progress and give them immediate feedback about their performance and allow them the time to adjust as part of their training.

In the form of tangible outcomes of the project, PanoPla was developed from just an idea to an actual product at the final stages to be marketed. All BSD client's requirements and expectations were met.

Lessons learned

The experiment with BSD and PanoPla is certainly an enjoyable experience by all measures. However, there are few things learned while going through the process. One of these lessons is that the subject of intellectual property must be studied carefully and all legal aspects of intellectual property must be laid out carefully to students, organizations, staff, and of course the educational institution. One solution to open that discussion as soon as we negotiate the terms with the organization and make sure that everyone is on board with the outcomes of these discussions.

Because this is out of the norms of co-op assignment; where students are being employed by the organization and paid for their time; the students were registered in the industry project. For this course and after successful completion students were awarded a monitory reward a recognition for their achievement and participation in this course. The fund came from an endowment fund created specifically for this purpose. Organizations participating in this project were given the option to put money in this endowment fund. The other reward for the students is to receive the credits for this course which is required for graduation.

There are few relationships created through this project. The first relationship is between the organization and its client which may be demanding certain requirement of the product to be generated. The only part of the relationship that of interest to the educational institution is the project itself and the requirement. The information could be relayed to the educational institution directly by the organization.

The second relationship is between the educational institution and the organization proposing the project. In our opinion this needs to be clarified and controlled through a well-defined terms in the form of legally binding contract.

The third relationship is the organization-students relationship which also needs to be defined through a policy created by the educational institution and this policy

mentioned clearly in the contract drafted between the institution and the organization.

We do not support the abandoning of the traditional co-op terms where students are placed at the sites of employers. We still see that there are few advantages to that approach and it should continue but instead we support the new proposal as an alternative route to be more focused on supporting ideas and innovation especially for startups. The two models can co-exist side by side and students can chose to take either route or even both if they wish.

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