

AC 2010-589: ENGINEERING ENTREPRENEURIAL INTERNSHIP PROGRAMS: PLANNING, OPERATING AND GROWING

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Engineering Entrepreneurial Internship Programs: Planning, Operating and Growing

Abstract

This paper documents the creation of the Entrepreneurial Internship Program (EIP) at Lawrence Technological University. The Office of Career Services and the College of Engineering in conjunction with the Kern Family Foundation have developed an innovative entrepreneurial experiential learning co-op program. This unique program brings together entrepreneurs and entrepreneurial minded students who want an opportunity to learn more about entrepreneurial thinking. This paper will provide an example of how to create and implement an entrepreneurial internship program. In addition, we will document the experiential learning experiences that have taken place since the launch of the new program. The challenges of bringing the right mix of employer and student together takes time and a strong commitment to making it work for all involved. In order to achieve the EIP mission of understanding the entrepreneurial mindset, the employer must be receptive to the student's need to explore and understand the key elements of strategic planning, and be exposed to the operational challenges of the company, including failures and successes. This EIP at Lawrence Tech fosters the involvement of companies founded and operated by entrepreneurial alumni. The Legends of Lawrence Tech is an organization of entrepreneurial alumni that has taken a strong interest in the EIP.

Internship Programs

At the heart of a strong internship experience is the ability to integrate concepts and theories that are taught in a classroom setting and bring those concepts to a higher level of understanding through observation and practice in an actual work environment. At Drexel University co-op activities are integrated into every student's experience. They point-out the value of this experience by stating that "Students who use their learning to solve real-world problems find they not only gain a stronger understanding of material they have studied, they are better prepared to absorb new information when they return to classes [1]. Work integrated learning experiences allow students to better understand how skills and knowledge will be most marketable in assisting them to transition into their professional fields. In addition, students with professional experience gained through these types of experiences have a competitive edge over their counterparts in the job market. This is particularly important in today's tight job market where competition for opportunities can be intense and students find themselves competing against experienced workers as well as other students.

Lawrence Technological University Commitment to Experiential Learning

In the spring of 1932, Russell Lawrence, a former Dean of the College of Engineering at the University of Detroit Mercy, had a goal to launch an educational enterprise that would allow working individuals to obtain a professional education. As great visionary, Lawrence believed there was a definite need for a technological school where working students could attend classes and complete a degree during the day, evening and weekends. Even though this was during the

midst of the Depression of 1932, Lawrence moved forward to establish this school. The first class of students was assembled in a building acquired from Ford Motor Company in Highland Park, Michigan in the fall of 1932 and so the Lawrence Institute of Technology was established. Since that time the institute has grown and in January 1989, Lawrence Institute of Technology was changed to Lawrence Technological University. Today, Lawrence Tech sits on over 100 acres of land in Southfield, Michigan, a suburb of Detroit, and serves as an educational destination for more than 4000 undergraduate and graduate students, and offering over 80 distinct academic disciplines. It continues its tradition of offering a full complement of courses in day, evening and weekend venues as well as online offerings so students have the option of working and attending school.

As Dean of Engineering at the University of Detroit, and through his exposure to co-op programs as a doctoral candidate at the University of Cincinnati, President Lawrence saw the value that experiential learning adds to a student's academic preparation. Lawrence Tech became committed early on in offering and in actively encouraging experiential learning and working programs through co-op, internship and student projects where students would not only have an understanding of why something works, but how it will work in real life situations. At the heart of the University's founding principles is the concept of theory and practice. Students are strongly encouraged to integrate hands-on work experiences, student projects and team experiences such as; the LTU Element One Vehicle Dynamics Team, the SAE Formula Car Team, a Robotics team and an Alternative Energy team.

This paper focuses on the evolution of internship and the Entrepreneurial Internship Program at Lawrence Tech. The authors have provided a framework for how this program is developing in its early stage and their thoughts regarding its progression over the next few years.

Entrepreneurial Internship Program (EIP): Background and Overview

According to Judith Cone, Vice President, Entrepreneurship for the Ewing Marion Kauffman Foundation, more than 2,000 colleges and universities in the United States, now offer courses in entrepreneurship, a smaller number offer minors and a few offer masters level degrees in entrepreneurship. The creation of entrepreneurship centers with outreach activities and entrepreneurial coaches have become a popular option as well [2]. Developing the entrepreneurial internship program at Lawrence Technological University is seen as an innovative way to create a value added experiential learning experience for engineering students. The EIP exposes the student to real life environments allowing them to observe and interact with entrepreneurs. In doing so, this provides valuable insight into the entrepreneurial mindset and helps students understand the importance of managing risks, responsibility, and the challenge of the entrepreneurial journey. In addition, it also builds leadership skills and fosters an awareness of innovation and its role developing tomorrow's leaders.

The Entrepreneurial Mindset and Engineering Education

The Entrepreneurial Mindset goes beyond creating a business venture. The foundational elements of entrepreneurship include creating an awareness of the importance of managing risk, experiencing failure and ambiguity. Entrepreneurial thinking is important for individuals who

may create a business as well as for those who will work in larger organization as “Corporate Entrepreneurs” or “Intrapreneurs.” The entrepreneurial mind creates inventive solutions to complex problems. It also recognizes the importance of identifying entrepreneurial opportunities.

With Lawrence Tech’s strong commitment to fostering the entrepreneurial mindset, The College of Engineering is taking a leadership position in implementing the University’s vision of developing students with a global view and an entrepreneurial spirit. The curriculum includes ten courses with entrepreneurial content [3]. The College of Engineering offers a Certificate in Entrepreneurial Studies. In addition, Lawrence Tech is part of the Kern Entrepreneurial Education Network (KEEN) which is funded by the Kern Family Foundation. The primary focus of KEEN is engineering entrepreneurial education and the development of the entrepreneurial mindset. This includes a focus on entrepreneurship and intrapreneurship.

As a result of the Kern Family Foundation grant, Lawrence Tech is modifying 30 courses in the College of Engineering and the College of Arts and Science over the next 5 years. We have established the Kern Implementation Team which consists of selected faculty who are developing and teaching the modified courses focusing on problem based learning, active collaborative learning and entrepreneurial learning. The Kern Grant has also brought the new Entrepreneurial Studio to Lawrence Tech. This unique facility provides space for our Entrepreneurial Teams to create their product ideas and build prototypes. Our students have an opportunity to hear from entrepreneurial alumni. Their personal entrepreneurial journey is featured in the monthly Entrepreneurial Lecture Series. Our students have access to our entrepreneurial alumni through The Legends, an organization of entrepreneurial alumni. Lawrence Tech has an active chapter of the Collegiate Entrepreneurs’ Organization where they experience the entrepreneurial mindset. The EIP component of the Kern grant allowed Lawrence Tech the opportunity to develop an entrepreneurial internship program that would give students exposure to entrepreneurs and the businesses they have created.

Entrepreneurial Internship Programs in an Engineering Curriculum

Many entrepreneurial internship programs are initiated through the College of Business or Management programs. The unique aspect of the Lawrence Tech EIP program is the emphasis on providing engineering undergraduate students with a hands-on experience from an entrepreneurial perspective. Entrepreneurs often have significant common characteristics as identified by Donald Kuratko, in his book, “Entrepreneurship, Theory, Practice and Process” notes that; “The characteristics of seeking opportunities, taking risks beyond security, and having the tenacity to push an idea through to reality combine into a special perspective that permeates entrepreneurs. [4]” Real world work environments provide concrete experiences for engineering students in an actual entrepreneurial work setting. This creates a unique opportunity to enrich their engineering. According to Blessing, Mekemson and Pistruì; “While some engineering schools are beginning to integrate entrepreneurship and business concepts into the curriculum, many ABET –accredited schools are slow to react to the needs of industry and the marketplace.” [5] The resulting exposure provides a more realistic perspective and a better understanding of the true challenges and rewards of an entrepreneurial experience.

Great leaders are often innovators willing to take the necessary risks to break new ground and take the calculated chance to create or move in a new direction. According to Steven Ballmer, former Lawrence Tech student and CEO, Microsoft Corporation, "To invest in innovation is really to invest in people.... We have some 200 employees in Michigan working out of our offices in Southfield, in the shadow of Lawrence Tech, I'm very optimistic about the technological leadership, culture of innovation, entrepreneurship, and the strong public/private partnership that is going to allow Michigan to grow stronger, its citizens more prosperous, and to have Detroit continue to grow not only as an innovative place for many, many industries but as an economic engine throughout the world [6]."

As engineering students at Lawrence Tech participate in the EIP program they are learning the concepts of engineering in an entrepreneurial environment. Regardless of whether they decide to pursue an entrepreneurial path as a result of this experience, they can incorporate the skills gained from this exposure to enhance their professional preparation to become innovative engineers of the future.

Entrepreneurial intern, Erik DeVito is a junior at Lawrence Tech majoring in Biomedical Engineering. He is participating in an entrepreneurial internship at Danmar Products in Ann Arbor, Michigan. This manufacturing facility produces has been producing protective head gear for therapeutic use for 45 years. Like many small manufacturers, Danmar has had to develop a number of new products in order to stay viable. Erik has had a firsthand opportunity to participate in developing strategies for the company to remain competitive and innovative. As an intern, DeVito has been working on a way to reduce product deficiencies, such as bubbles in the vinyl or dullness that occurs in the curing process of head gear. DeVito is using a Design of Experiments approach to improving the process outcomes. "I'm seeing what it takes for a small company to stay competitive. There is a lot to learn from their strong entrepreneurial spirit."

The Lawrence Tech Entrepreneurial Internship Program

The premise of the Lawrence Tech EIP is to give students an opportunity to explore and better understand the mindset of an entrepreneur through an on the job, paid internship. Students are connected to companies that are able to provide an exposure to an academically related experience with a wide range of elements including the entrepreneurial culture. The experience could include: how businesses manage their operations, marketing, administration, purchasing, manufacturing, budget and finance.

Potential employer opportunities are developed with small to mid size businesses or small branch operations. These employers are receptive to providing the interns with an overview of all aspects of their business operation. A decision was made to keep the emphasis on smaller companies or work environments where students would have first hand opportunities to interact with founders and/or key employees of the organizations. Therefore companies or independently identified branches of organizations that typically have a staffing size of 50 or fewer employees are targeted for this program. It is important that the focus remains on those companies that can provide an engineering experience.

Employers develop work assignments with specific expectations and time frames for completion and/or identify current roles within their existing organizations where students would have

challenging assignments that would allow them to practice and participate in a meaningful manner. Employers are given an opportunity to observe LTU students in real life work scenarios. Employers complete a written letter of agreement identifying the specific assignment and the time frames and compensation arrangements. Students have an opportunity to work alongside inspired business owners and gain valuable insight into how a business is run as well as relate their theory and knowledge to the business practices of their discipline.

This innovative program helps the local small business community to build a productive workforce. It also serves as an incentive to retain local talent in Michigan, which is a growing concern as students perceive fewer professional opportunities due to reduced workforce needs of the automotive industry. As new industries are emerging in the Michigan economy, the ability to identify and create entrepreneurial opportunities is at the heart the rebuilding the state's economy. Providing first hand experience with today's entrepreneurs can encourage students to utilize the skills they are learning and feel more optimistic about the future opportunities in Michigan. As noted by Michigan's Economic Development Corporation, Michigan has the knowledge base, the talent, and the facilities to support entrepreneurs on the cusp of the next great technology advancement. It is ranked 4th in the nation for industry investment in research and development, by Washington based Information and Technology Innovation Foundation [7].

Program Objectives:

The OCS faced the challenge of establishing both short term and long term objectives for the EIP. The objectives that were created provided the framework for developing an effective and meaningful internship experience. The objectives that have been established are a result of a cooperative interaction of University faculty, Kern committee members, as well as some of the key entrepreneurial alumni who are actively involved in the university entrepreneurial initiatives. The following short term objects were identified:

Short term:

- Link the theory of the entrepreneurial experience to the reality of the workplace environment
- Provide direct interaction and exchange with entrepreneurs
- Identify and define the experiences the EIP should provide for engineering students
- Identify the business environments that can provide an enriched, interactive entrepreneurial experience
- Create outreach and recruitment efforts that will attract the preliminary group of employers to participate in this first year of internships
- Define the criteria for student participation
- Define a preliminary assessment tool that can be developed more fully as the program evolves.
- Establish the processes and documentation for administering the program
- Establish eight to ten EIP experiences in the first year of the grant

Long Term:

As we learn from these initial internship experiences, our long term objectives will focus on how we want to grow the experiences for the students and the employers. The OCS is

committed to an ongoing review and growth of this program building upon what we have learned from our experiences. The early participants of the program have provided our basis for identifying some of those key operational issues that will need to be improved as we move forward. With this in mind, the following long term objectives have been established:

- Develop the tools that clearly identify the learning experiences for both the employers and the students.
- Utilize assessment data to assure continuous improvement of the EIP
- Create up to 10 entrepreneurial internship experiences per year for the 5 year funding
- Identify a sufficient number of employers to achieve our objective of up to 50 EIP's over the life of the grant
- Increase the involvement and participation of engineering students in the entrepreneurial programs and the certificate of Entrepreneurial Studies
- Fine tune the processes and documents utilized for administering the EIP program
- Identify exemplary employer and student participant through annual recognition awards

The Kern Family Foundation and its Role in the Program

The EIP was established with the assistance of the Kern Family Foundation. It provides the funding to supplement the compensation paid to engineering students working as interns. The mission of KEEN and the Kern Family Foundation fits well with the concept of the EIP. The funding received from Kern provides an opportunity for ten student entrepreneurial interns a year or a total of fifty in the grant. Each student can work up to 400 hours and the grant will match up to \$7.50 per hour. The EIP began operation in October 2009. Since our program is in the early stage of development we have three employers already utilizing the program with four students participating.

The Stakeholders

In considering the establishment of an internship program of this nature the University must consider the importance of the stakeholders. Key stakeholders need to be identified and on board to develop and support a successful internship program. At Lawrence Tech the Office of Career Services (OCS) has been identified as the hub of the program. This department is responsible for communicating and connecting with all of key and related parties. Lawrence Tech has established an internal Kern committee to coordinate and assure compliance to all Kern requirements. Members of this committee are also key stakeholders. The Director of the OCS is a member of this committee. Other key stakeholders are alumni with entrepreneurial interests or involvement and can serve as champions of the program. Faculty and university staff, especially the Kern Fellows, the Dean of Engineering and other key Kern committee members plays an integral role in identifying and connecting students to these real world experiences.

Employer – Identification, recruitment, operation, monitoring, assessment

Once the initial structure of the program was developed, several steps were taken to introduce the concept of this program to employers. Initial exploration was done with key Lawrence Technological entrepreneurial alumni participating in an organization known as The Legends.

These distinguished alumni participate in various education and lecture programs to educate and expand knowledge of the entrepreneurial mindset. Another early step was to develop a two page PDF professional program description that could be distributed in hard copy as well as sent electronically. Relationships with economic development organizations such as Automation Alley, the Oakland County initiative for developing an attracting new business and industry in southeastern Michigan, and Ann Arbor Spark, an economic development organization dedicated to bringing new and expanded business opportunities to southeastern Michigan. Ann Arbor is a community where many new and innovative medical and engineering industries are being developed, due to the rich base of talent coming out of numerous universities and academic research programs located in this region. This connection actually led to the first opportunities for Lawrence Tech students in the newly burgeoning biomedical engineering curriculum.

As a result of an article regarding Lawrence Tech's EIP was run in an electronic newsletter to employers in from Ann Arbor Spark, two of the initial employers were identified. One of those employers interviewed a Lawrence Tech student in a previous semester but couldn't afford to offer a position at that time, but saw this as an incentive to provide some additional financial support to their fledgling research program and offered to hire the Lawrence Tech student with the help of the entrepreneurial funding. A second employer, another firm in the Ann Arbor area that manufactures therapeutic head gear for brain injured patients, interviewed and offered two Lawrence Tech biomedical engineering majors, sequential internships to assist them in developing and reviewing their manufacturing processes to take advantage of new technology resources. Employer development continues with press releases that provide area business news outlets with information about the program.

There are several aspects of this program that seem to appeal to employers. The first of which is that the program is simple in its organizational structure and flexible for employers to utilize. Time frames are fluid and internships can be started at any time of the year and are not limited to an academic calendar. Students and employers can determine how many hours and days they wish to utilize the student and those hours can be adjusted. Employers are asked to complete a pre and post assessment of the student that can be accessed and submitted as an online document. It is quick and easy to complete. Employers are given the freedom to determine what they will have the student doing for them. Working in conjunction with the employers, the university assures that the student will receive a value added experience to the entrepreneurial nature of their business, whether it is through understanding the budgeting process for a research project, or being exposed to the changing needs of a manufacturing environment and how that business can be reengineered or adjusted to remain marketable. To guarantee the authenticity of the employer commitment, the program is structured to offer a wage incentive of up to \$7.50 per hour for a qualified student. This reimbursement is available for up to 400 hours of the student's initial hours of employment. The employer must be willing to provide at least a minimum wage (in Michigan this is currently \$7.40 per hour), for that same time frame. Thereby assuring this is a legal employment contract between an employer and employee. Employers are also asked to provide a job description or work plan for the intern, as well as a brief company profile and sign a letter of agreement regarding these terms. Employers submit a job description for an internship position to the Office of Career Services and students apply for the positions and the employer determines the most qualified candidate (s) for their opportunities.

Employee/Student – Identification, recruitment, monitoring, assessment

Student involvement is cultivated in a variety of ways. Students must be undergraduates who are in their junior or senior year of engineering studies. As opportunities are developed with employers, position descriptions are created and positions are posted on the interactive job database available for Lawrence Tech students. Those who meet the qualifications can apply for the positions through the database or they can give their resumes and cover letters to the OCS staff and they will be forwarded to the employer. In addition, faculty in the disciplines related to the position opening are contacted and asked to announce the opportunities as well as recommend potential student candidates. Once candidates have been identified and interviewed an employer will make a job offer and determine a start date for the internship. When employers provide a short employer profile and sign a letter of agreement that clarifies the start date of employment, the rate of pay and the amount of hours that the student wages will be supplemented, a student is allowed to start the internship.

Potential students are made aware of the program by reaching out to relevant organizations such as the LTU chapter of the Collegiate Entrepreneur's Organization, a group of students with an expressed interest in entrepreneurship, or student organizations such as the American Society of Civil Engineering Students, Society of Women Engineers, the National Society of Black Engineers and Theta Tau, an engineering fraternity on campus. Students who may have an employer they are interested in working with and appear to meet the EIP program requirements can work directly with an OCS staff to develop a potential employment opportunity utilizing the EIP as an incentive for the employer to consider a candidate. Students can make a direct inquiry with an employer and a letter of introduction verifying that the student is eligible to participate in the program can be added to a cover letter and resume and a handout explaining the program requirements. OCS staff work with students to identify potential employers and determine the best strategies for approaching employers who may be eligible to participate in the EIP program.

Once the student begins an EIP, they establish brief learning objectives and complete a pre assessment survey. Whenever possible, a site visit by an OCS staff member and appropriate faculty are conducted. At the end of the EIP, participating students complete a post assessment document as well as a brief report about their experiences. These requirements reinforce the lessons learned through reflective writing assignments that challenge them to review and integrate what they have learned.

University – Marketing, Operating, Monitoring, Compensation, Assessment

The EIP has been designed to be flexible and easy to administer, while remaining a meaningful experience for students. In order to assure that students would have an experience where an employer has a buy in, they provide at least a minimum wage (currently \$7.40 per hour in Michigan). Kern funds would be utilized to supplement that wage up to \$7.50 per hour, thus providing a competitive wage that would attract student talent. This wage supplement is available for up to approximately 400 hours, to result in a potential financial supplement of up to \$3000 per internship. EIP's can be started at any time during the school year and do not need to follow an academic schedule. An EIP can be full or part time and employers and students can determine a work schedule that best fits their mutual needs. Most employers are reimbursed on a

monthly basis and provide a copy of the student's hours of work during that period of time. A reimbursement check is sent directly to the employer.

Developing and building the EIP

In this first year of development of the EIP many challenges and opportunities are emerging. The initial challenges have centered on building an identity for the internship and identifying and qualifying companies to participate in the program. A key element in making this experience successful is to identify and qualify appropriate employers who are not only committed to the concept of providing, a meaningful engineering internship, but are willing and able to provide students with exposure to the business elements or their organizations.

Many companies are often in a start up stage, but must be financially stable enough to afford at least the minimum wage commitment. Some companies are not yet ready for that financial commitment. Cultivating employers often creates hurry up and wait environment. Initial exploration and development of these opportunities often takes time, and must be nurtured, particularly when working with companies who may be creating a new or first internship experience. Maintaining relationships with these employers and being able to be ready to respond when they are is a key element to success.

It is important to keep in mind that Kern funding is focused on engineering disciplines so marketing must be targeted to identify firms that have engineering experiences to offer. As marketing outreach efforts are being disseminated in public forums, not all companies have engineering roles but would be interested in a candidate in another discipline.

Working with the Team

In a program of this nature it is important to keep in mind that the best outcomes can be achieved through bringing together the diverse resources of the University. The Office of Career Services (OCS) has a staff of two professional career advisors and a Director. They are key to identifying and developing internship opportunities that meet the EIP requirements. The OCS works closely with engineering faculty, Kern Fellows and Kern committee members to explore internship opportunities and match them with Lawrence Tech engineering candidates that a potential employer can interview and hire. The OCS office strives to keep as many relevant players involved in the development of these internship opportunities and to keep them well informed about the program status and progress.

Meeting the Challenges Along the Way

As this program has continued to evolve, challenges have presented themselves. With this in mind, we have documented the lessons learned from the challenges we have faced on this journey to continuously improve our EIP. The OCS is constantly receiving feedback from employers and students. Although the EIP is operational, we continue to consider how we improve the overall program. The following identifies some of the challenges:

- Some employers who are interested are not yet able to incur the financial commitment even with the incentive of the wage match
- Small to medium sized businesses may not have been exposed to the benefits of internship programs
- Small to medium sized businesses may be reluctant to take responsibility for monitoring an intern
- Identifying, finding and selecting the employers who fit the specific criteria of the EIP is critical
- Identifying employers who share the vision of the entrepreneurial nature of this internship program
- Establishing a balance between students who have a strong interest in this type of experience versus employers who are ready and willing to provide this experience
- Maintaining a program that is both fluid and flexible
- Determining how to best provide a financial incentive that will be attractive to employers and students
- Developing and designing a meaningful assessment that will capture the value of the student learning experience regarding the entrepreneurial mindset
- Creating the process to document student wages so employers can be reimbursed in a timely manner.

Any new program faces challenges. The OCS embraced the program and faces the challenges as it moved forward to implement the EIP. Much has been learned from this journey and our team continues its' commitment to making this program even stronger.

Recommendations

Based upon the challenges and the lessons learned, the OCS has developed some specific recommendations that can be shared with those who have an interest in creating an entrepreneurial internship program. The following recommendations may or may not apply:

- Survey current University level of involvement with internship and other experiential learning programs
- Identify the key elements of a meaningful entrepreneurial internship considering the culture of your university and how this program will support it
- Identify and involve University entrepreneurial initiatives that may already be in place including curricular and student activities
- Establish an entrepreneurial internship program planning committee that represents relevant constituencies of the University and utilize their resources to develop goals for the EIP
- Determine how the EIP will be funded and how the available resources can be used to create an easy to manage financial model attractive to small and medium sized employers
- Make certain that the program is flexible and fluid and able to meet employers expectations and adapt to their needs
- Determine who will serve as the primary champion of the program and how student awareness can be maintained while you are developing a base of employers

- Make sure that key stakeholders, who will be instrumental in supporting and building the program, understand its' vision and the mission and that it fits with the Universities' strategic plan
- Meet with university advancement staff to review the objectives of the program and gain their support
- Meet with your alumni association board(s) to share and cultivate their involvement
- Work closely with your media relations area to create internal and external communication and develop effective marketing strategies and tools that will
<http://www.michiganadvantage.org/MIAdvantage/Getting-the-UpperHand/Default.aspx>
<http://www.michiganadvantage.org/MIAdvantage/Getting-the-UpperHand/Default.aspx>
 send a clear and consistent message for employers and students
- Identify external resources in your area that can help promote your program
- Assure that an appropriate assessment process is in place to measure entrepreneurial learning outcomes

Hopefully, some of these recommendations will be useful as you consider designing an entrepreneurial experience. As you move forward it is important to recognize the culture of your University and define a program that reflects that culture.

Accountability

Lawrence Tech is grateful to the Kern Family Foundation for providing the resources for this innovative EIP. Their continuous support has been extremely helpful in utilizing this to foster the entrepreneurial mindset of our engineering students. Lawrence Tech has established several steps to assure that these funds are administered appropriately. As the program stewards the OCS assumes responsibility for working directly with employers to monitor and provide wage match reimbursements. The OCS Director also sits on the Lawrence Tech University Kern Committee and provides regular updates and reports as required. The assessment instruments allow us to measure the outcomes of a student's learning experience regarding the entrepreneurial mindset.

Next Steps in the Evolution of EIP

The Lawrence Tech EIP will continue to evolve as we expand the numbers of employers and students involved. We are excited about the opportunities that lie ahead and are committed to continuous improvement. As more employers and students become involved in the program, we will document the progress of the learning experience. In addition, we will capture additional feedback from students through implementation of assessments both pre and post. Yes, there are more challenges that lie ahead; however, our team is prepared to meet and overcome these challenges. Our goal is to have ten successful internship experiences each year for the next five years. In doing so, we are confident that both employers and students will benefit greatly in their knowledge and understanding of the entrepreneurial mindset.

Professional References

1. National Commission for Co-operative Education, Drexel University: The Best of Co-op 2005-2006 p.28.
2. Cone, J., Entrepreneurship, Ewing Marion Kaufman Foundation, Teaching Entrepreneurship in Colleges and Universities: How (and Why) a New Academic Field is Being Built.
3. Lawrence Technological University, Southfield, Michigan, 2007 Strategic Plan.
4. Kuratko, Donald K., entrepreneurship – Theory, Process, Practice, South-Western, Eighth Edition.
5. Blessing, McKemson, Pistrimi, Building an Entrepreneurial Engineering Ecosystem for Future Generations: The Kern Entrepreneurship Education Network.
6. Lawrence Technological University, Southfield, Michigan, website: http://www.ltu.edu/news/they_said_it
7. Michigan Economic Development Corporation, Lansing, Michigan:
<http://www.michiganadvantage.org/MIAdvantage/Getting-the-UpperHand/Default.aspx>