Work-Based Learning as Good Practice in Becoming an Entrepreneur

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ARTICLE INFO	ABSTRACT
Corresponding Author: **Abdul Murad bin Ahmad** East West International College A-3-1, Jalan Dataran Sentral 1 Dataran Sentral 70200,Seremban Negeri Sembilan Malaysia	Learning entrepreneurship in a real world environment can bridge the gap between traditional classroom instruction and idea driven product and service development. It's a business effective approach that achieves measurable results. Traditional education, typified by mastery of facts and evaluation by testing, can morph into creative, research inspired solutions that fulfill public and private organizational needs. Success is irrefutable, measured by tangible results. In work based learning, students can use industry standard technologies and collaborate with mentors, clients and customers. They can work as individuals and in teams, with their entrepreneurial education beginning as early as elementary school. In the process, students learn to be motivated by their own achievements rather than grades. They learn to engage in creative problem solving based upon current data, and to measure their ability to deal with challenge and failure through an iterative process of problem solving. Two case studies are provided that demonstrates how entrepreneurial education serves to strengthen economies and improve communities.

KEYWORDS*: Work based learning, WBL and Entrepreneurship, entrepreneurship education*

1. INTRODUCTION

Learning entrepreneurship in a real-world environment can bridge the gap between traditional classroom instruction and an idea-driven product and service development model that's been proven effective in businesses, and which achieves measurable results. Traditional education, typified by learning facts evaluated by testing, can segue into creative solutions drawn from research, fulfilling and filling public and private organizational needs whose success is measured by results. During the process, students can use industry standard technologies and collaborate with mentors, clients and customers. They can work as individuals and in teams. This entrepreneurial educational process can begin as early as elementary school. In the process, students learn to be motivated by their own achievements rather than grades. They learn to use creative problem solving based on current data, and can evaluate their ability to deal with challenge and failure in an iterative, collaborative process of problem solving.

Classroom education is often negligent in

providing the tools for success or even the thinking processes necessary to employ critical and creative thinking, including accurate perception of context. Because of this, students with no work experience often lack the critical thinking processes they need to become successful innovators. Yet these skills and are being provided in some schools today, notably in elementary and high schools offering entrepreneurial education.

Two examples of entrepreneurial training in action are provided by a Welsh elementary school and a high school entrepreneurship program in the United States. According to the government of Wales, these skills can be taught to children starting at age five. A third grade class in Wales uses animation software to create a video production of a frog's life. They market their science video to members of their community and sell tickets to their presentation. Using their own ideas and learning new skills, they create a product that is both educational and valuable. A byproduct is self confidence they gain from knowing they've made a significant achievement.

Seniors enrolled in an entrepreneurial program at a US high school use modern marketing tools and technologies to analyze the customer base of a mobile product startup, marketing to college bound students. Based on their own customer research, they provide a revamped design for their mobile based user interface.

Work based learning (WBL) as a process is on the same page as entrepreneurship when it comes to innovation and methodology. Ultimately, work based learning can be a driving force of economic development and technological innovation. WBL and entrepreneurship share qualities of self direction, creativity, innovation and awareness. These characteristics are all instrumental in creating an entrepreneurial perception and skill set.

Work-based learning programs enable students to learn skills while working. Such skills extend beyond mere technical knowledge and should

include enhancing their ability to teach themselves. WBL can lead to high value careers and to entrepreneurships. Educational courses integrated with institutional curriculum combine to form a highly functional educational paradigm. WBL merges the practical with the theoretical. Learning becomes more than just acquiring new skills; it becomes a platform for the creation of new knowledge (Raelin, 2012). The ability to create new knowledge is a key component of successful entrepreneurships. Good attributes of learning entrepreneurship can be observed in children: They are motivated to learn, have many different interests and are insightful in asking questions. These qualities enable them to creatively drive their own learning process (Löbler, 2007).

1.1 Dynamic Knowledge View Shared By Entrepreneurs WBL

Work based learning supports dynamic views of knowledge rather than static fact collection. Facts or concepts are not accepted until tested in a well defined context. Learning becomes a spontaneous process occurring during problem solving. Part of this process is filling a need by providing a service or product previously lacking, a core entrepreneurial skill (Raelin, 2013). A well known example is that of the Levi Strauss Company, established in California during the gold   rush. Hard working miners needed rugged pants, so the company responded with the creation of a new product. In 1873 they patented riveted pants which became the first blue jeans. One hundred and forty three years later, the company's earnings were over $4 billion (Levi Strauss). This is an example of dynamic work based learning, employing problem solving skills that coalesced into an exceptional entrepreneurial outcome. Levi Strauss called this spontaneous improvisation "employing creative resourcefulness" (Levi Strauss).

Characteristics of Work Based Learning are:

- Creativity
- Self-direction
- Self-learning
- Expressiveness
- Emotional commitment
- Real time perception
- Continuous engagement
- Awareness

(Raelin, 2013)

These characteristics are all instrumental in building entrepreneurial perception and skills.

There are benefits for all participants of work based programs, employers and students alike. Employers' acquire talented and skilled workers, and students are challenged by real world problem solving capabilities that can help them gain entrepreneurial skills. WBL boosts the career development potential of learners.

Students learning in a work based environment are more likely to view their work positively and to become motivatedlearners. Traditional learning environments often increase the chances of poor performance and downward career drift, especially for those not benefiting from traditional teaching methods. A study by Anderson et al. (2011) established a connection between vocational training in a work based environment

offering voluntary learning opportunities. From this success, it can be seen that many students disenfranchised by traditional schooling can become motivated, proficient self-learners.

Promising models are emergingthat can connect formal vocational education and apprenticeship training. Improved critical thinking skills, problem solving and self-learning all help drive a high skill economy. Work based training systems provide the skills necessary for economic development in a world of face-paced technological growth. (Ball & Cohen, 2012).

1.2 Strategies

Learning institutions should work in partnership with businesses and organizations of all sizes to adopt strategies for functional and flexible WBL programs, wherein students can obtain an education driven by their interests. In this mutually beneficial relationship, employers and students realize direct and indirect benefits. For employers, these include helping build a highly skilled workforce that benefits themselves and the economy. Students are afforded the opportunity to not only learn but to earn, almost always a strong incentive. The table below summarizes helpful strategies for entrepreneurial education partnerships.

WBL Entrepreneurial Strategies	Description
Engage in complex real world assignments.	Students are assigned complex real-world projects. They are expected to provide practical solutions.
Stakeholders expect results.	Achievement is measured by success. This motivates students far more than grades. They have responsibility to their entrepreneurial partners.
Address skill gaps.	Mentoring, expert and individual skill training can bridge gaps.
Students learn by solving problems.	Students solve real world problems like creating an interface design for a mobile marketing entrepreneur.
Reward solutions ignore errors is the attitude for success.	Just the opposite of a typical school environment, errors are ignored and solutions are rewarded. Iteration on an optimal solution is a healthy entrepreneurial approach.
Collaborate. Curriculum joint industry-education effort	Curriculum, students and industry are partners in professional development. Collaboration takes place between entrepreneurs, communities, students, mentors and industry experts.

Explore a dynamic view of knowledge.	Real data is constantly changing. Successful solutions come from understanding this and maintaining a dynamic view.
Schedules support concurrent enrolment.	Schedules are designed to encompass opportunities for concurrent college enrolment and participation in for-credit programs. Block scheduling allows students to take more courses within a school year.
WBL are goals set by stakeholders.	Successful WBL entrepreneurial programs include goals for students, employers and entrepreneurs in both academic and industry-related context.
Accountability through assessments	Assessments enforce accountability for all stakeholders including students, employers and instructors. Performance-based assessments allow students to demonstrate in depth understanding. These assessments occur throughout the year.
Continuous Communication	Continuous communication between students, teachers and entrepreneurial partners includes comprehensive progress tracking.
Post-secondary partnerships	Strong partnerships between secondary and post-secondary schools lead to better qualifying test scores and admission possibilities.

1.3 Options

Not all on the job training provides valuable skills and knowledge to the participants. This means that WBL program design must be formally evaluated to avoid creating low value learning opportunities. Business strategists and course instructors can increase the value of learning within a work environment. Mentors are a key to an improved learning process. They can play an important role in encouraging people to reflect on their experiences and learn from their mistakes. Experienced workers and specialists can guide learners and act as role models. Show-and-tell training by both learners and teachers can help inspire a cooperative learning strategy that engages participants.

WBL trainers should regularly provide problems for workers to solve. These problem-solving challenges should become an intrinsic part of the work based learning experience.

Many researchers are interested in the role of employee supervisors and how they understand the importance of improving the worker's skills, experience, and knowledge. In regions where this does not form part of corporate culture, it is difficult to develop and implement work-based learning (Andersen et al., 2011). Organizations often require a more structured intervention to develop learning islands, quality circles, and other techniques for developing learning-rich work environments.

Inter-organizational agreements for broad based learning are a resource efficient way to create more valuable work based learning programs. The opportunity for wider knowledge acquisition and enhanced skill development can easily exceed the potential provided in a formal training setting.

Work-based learning experiences and career preparation nurture the formation of aspirations and informed decision making. Educators at all levels, including college level, can provide valuable work based learning opportunities which broaden students' abilities through collaborative experience.

1.4 Good Practices and Experience

The development of high-quality programs for WBL demands relevant and integrated curricula. Educational programs spanning both tradional subject matter as well as work based learning are needed. De Graaf & Kolmos (2013) argue that pairing students without mentors or enrolling them in internship programs is not enough. For the learning programs to be successful, the instructors must set goals for both the employers and students. Furthermore, they should provide

exhaustive instructions for organizational authorities and academicians.

Work-based programs help students explore their potential careers and to become active learners. Consequently, the educational department should integrate career related activities into all aspects of curriculum design. Career awareness is unattainable unless teachers introduce students to diverse career opportunities. Students can be inspired and enabled to explore and refine areas of interest.

Regular assessments for both learners and their trainers are essential. Such assessments can support short and long term quality management by identifying problems in a timely way. For learners, WBL assessments demonstrate their understanding and newly gained experience. Another advantage of regular assessments is their ability in the identification of students who are struggling with certain concepts. The implementation process prompts learning institutions to set explicit goals endorsed by business partners, teachers, and students.

The organization that hosts trainees may eventually promote them into managerial roles. However, the learners are not the only group that benefits from the program. Mentors gain useful skills and knowledge by consistently training new recruits; young people are creative, enthusiastic and can inject fresh thoughts and ideas into the business. Eventually, enterprises will be rejuvenated as their staff sharpen their know-how and solve fresh challenges.

Given that successful trainees are more likely to stay after program termination, labor turnover is significantly reduced by a successful an apprenticeship project. This is very much a beneficial outcome for Malaysian corporations, where the processes driving key organizational objectives (such as employee retention, work structure, and wage platform) interact for a better overall outcome. Top-level management can help catalyze and improve relationships between their employees and their supervisors by the development and of corporate ethos and codified values.

According to Raelin (2013), one of the most fundamental practices, especially for the employer, is to address the skills gap. Undeniably, work-based learning is an important tool for small and medium enterprises with limited operational resources. It reacts in an efficient, resourceful, and flexible manner to meet the company's demand through development and implementation of tailored programs for addressing unique skill gaps.

2. CASE STUDIES

2.1 Entrepreneurship and economy in the US and Wales

In recent times, established businesses have been doing better than new ones, at least in the realm of large, well-funded businesses. Despite this, in the past it has been the newer companies that play a major role in driving technological innovation. To be most effective in terms of stimulating the economy, what's best might simply be increasing the number of startups, as they've proven to be the most effective in creating new jobs and sparking technological innovation. A stable, robust economy needs a mix of both startups and established companies (Surowiecki, 2016).

2.2 Work based entrepreneurship in Wales

Wales has placed an emphasis on combining education with entrepreneurship since 2010. Their national objective to support entrepreneurial skills in education is demonstrated nationwide in both elementary and highs school education programs. They seek to foster and achieve student entrepreneurship competency through a progressive process of leadership and teaching. This begins by including work based entrepreneurship as an educational goal in a school or college development plan. As the plan matures, specific measurable objectives are embedded within department or subject

objectives. Part of the goal includes staff awareness and commitment to entrepreneurship through the educational organization as well as within the community. Continuing professional development for staff enriches their ability to evaluate both entrepreneurial learning and teaching. Entrepreneurial teaching at the elementary, high school and college level supports entrepreneurship education.

Case Study: Monmouth shire

In this entrepreneurial project, third grade students organized, designed and monetized a science event by creating a film about the life of a frog. The students learned filmmaking skills, animation techniques, and how to use the medium of commercial filmmaking to teach scientific concepts to an audience.

The third-grade students decided what to do, and were pleased with their results. So much so that they decided to share what they learned with others. They monetized this process by creating a premiere film presentation event and charged an admission fee to cover costs. They also decided to earn a profit by selling popcorn. Their entrepreneurial event was planned as a 3-phase project. During phase 1 they obtained funding from a bank to cover the costs of the project. The loan was used to pay for the materials they needed. They called the second phase Popcorn for Profit. During this phase, they engaged in product development. They considered reselling precooked popcorn but finally decided that cooking their own popcorn was a superior choice because it was less expensive and tasted better.

They considered what needed to be done in terms of actual manufacturing. They set up a test and production process that included creating and testing an array of popcorn types. They considered flavors from the mundane to the extraordinary. After serious consideration, they made a decision based on maximizing profit. During the event organization phase they defined their marketing

strategy: advertising the event, printing tickets, organizing the "theatre" and setting up the equipment.

Because of their efforts, they succeeded in making a profit while learning to enjoy a creative learning process in which they saw a successful result from turning their ideas into a science presentation enjoyed by many people in their community. More than new skills and profit were achieved here. There is nothing more powerful than conveying to students that learning is a fun process, one in which they're motivated to participate. They also learn how to conceive of something, plan how to do it, cooperate with others and ultimately participate in their own success story. This is a fine way to build self-esteem through success, driven by well-executed entrepreneurial projects. Students engaging in this type of work based, entrepreneurial effort will find they have far more skills than those from traditional classroom learning. These same students will feel confident in building their own entrepreneurial careers.

2.3 Work Based Entrepreneurship at US High School

An educational research project funded by the National Science Foundation asked the question, "Can students in K-12 handle an experiential entrepreneurship class?" Senior students at The Hawken School in Ohio participated in a 12-week course in Entrepreneurial studies. During this program, they engaged in a real-world marketing project. The primary objective was to get students to think like entrepreneurs. Ideation, the creation of new ideas, was a major objective. Customer development was a process in which they tested the validity of ideas, answering questions about having the right product for the right customer at the right price and connecting with the right channels. The project sought to clarify that an idea is not a company and that most initial ideas are wrong. To avoid selecting the wrong idea,

students took someone else's idea and worked on the customer discovery process. In the second half of the course, they used the customer discovery process to conceptualize their own product.

Real world clients' two start-up companies that lacked the funding, the human resources and the time to solve the problems they outsourced to the students. Students applied customer development methodologies, used Lean Launch pad and the business model canvas to support their research (Blank, 2014).

One of the companies was three years old and was marketing a physical product. They needed assistance in streamlining their market and channel. The second company was just one year old. The company had failed to complete its own customer validation process in marketing mobile based products to college bound teens. The student teams conducted more than 100 detailed interviews for each client to answer their marketing questions (Blank, 2014).

2.4 How did students experience this challenge?

Students felt a great deal of responsibility to produce results because real companies were relying upon them. They quickly discovered that the answers they needed weren't in textbooks. They had to rely upon their own ingenuity to succeed. For the first time in their lives, they learned how to actively collaborate. And in the process, they learned about themselves. Part of this included coping with failure and evaluating their own strengths and weaknesses. The students became self-motivated and came to care about the processes of learning, creating, thinking and producing, rather than working for a grade (Blank, 2014). Students experienced a creatively disruptive movement away from traditional classroom learning. They learned to articulate their expectations and mold their creative processes utilizing breaking technology, entrepreneurial mentoring and their own collaborative thinking into their envisioned real

world outcome.

2.5 The deliverable

In just three weeks, students had to create a solution and present their findings. One major problem was the user interface which they needed to redesign. To address this, students with no previous programming experience applied Lean UX strategies and tools. They also relied upon a professional UX mentor. He advised them that after they had collected the facts, developed an archetype and narratives based on evidence from 100 interviews per client, they needed to propose disruptive solutions to solve customer problems (Blank, 2014).

2.6 Tools and methodologies

Each of four teams had a mentor. Launch Pad Central was used as a management and repository for data. Lean UX supports the User Experience in a way that is more focused on design and less focused on deliverables. It requires greater collaboration and utilizes feedback as early as possible. This iterative and cyclic process enables better decisions achieved in a flexible fostering quick but viable solution (Iterative Design Foundation, 2016).

3. CONCLUSION

WBL is a powerful platform for learning that can be utilized to obtain comprehensive working incorporating the ability to think critically, while and enabling participants to learn how to learn. WBL participants can prepare for specific job competencies while also learning the skills necessary to become entrepreneurs. Failing and disengaged learners can be motivated by driving their own learning process, creatively acquiring problem solving skills and being innovative. Through work based learning, students can acquire the knowledge and skills necessary to become successful entrepreneurs.

Entrepreneurship and WBL boost labor market

results. To make good use of these effective learning skills a true goal, government should support the establishment of institutions having extensive high-quality WBL systems. Such a process can drive improved coordination between learning institutions and corporations. It can also create a population with better problem solving skills. The net result should be improved solutions to labor market challenges on a national level and an education system that improves perception, collaboration and individual opportunity.

While classroom education is often negligent in providing the tools for success or even the thinking process necessary to employ critical and creative thinking, entrepreneurial education implemented as education programs provide a better solution. Students with no work experience lack the thinking process they need to become successful innovators. These skills can and are being provided in some schools today at both elementary and high schools level.

Two examples of entrepreneurial training in action are provided by a Welsh elementary school and a high school entrepreneurship program in the United States. According to the government of Wales, these skills can be taught to children starting at age five. A third-grade class in Wales uses animation software to create a video production of a frog's life. They market their science video to members of their community and sell tickets to their presentation. Using their own ideas and learning new skills, they enable themselves to produce a product that is both educational and valuable. A byproduct is student self- confidence, a lasting achievement.

Seniors enrolled in an entrepreneurial program at a US high school use modern marketing tools and technologies to analyze the customer base of a mobile product startup, marketing to college bound students. Based on their own customer research, they provide a revamped design for their mobile based user interface.

We have seen how individual effectiveness can be driven by entrepreneurship programs at the elementary, high school and college levels. Such programs fill a gap between the static way learning takes place in the classroom, where so much is driven by testing and grades, and in the real world, where individuals and companies are dependent on the work we do. The classroom is generally a controlled environment, but the real world is constantly changing, always offering us new problems that must be dynamically solved. Entrepreneurial work based learning brings reality and responsibility into learning. It also students with the opportunity to understand how they can drive their own careers and compete, transitioning from school to work with a record of achievement, and the confidence of knowing that they can teach themselves, collaborate as valued member of a team, and be successful at many things.

In the future, it would be ideal if entrepreneurial learning were implemented in all schools at both the elementary and high school levels. This kind of program is an enabler for young members of the community to become better thinkers and developers of innovative processes and products. This can only serve to strengthen economies and improve communities and better lives.

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