Finding the right fit in academia and industry collaboration

An-Najah National University

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Why IT-Bridge: Needs Assessment

SW Development Manager:
“We find great difficulty in finding talent that suits our needs. We have to interview about 50 new graduates just to find 2 or 3 qualified employees. The CV will show that they have something [qualifications], but when you give them a test, large majorities don’t pass”

2013 IT trends Needs
• Programming and Application Development
• Cloud/SaaS
• Virtualization
• Networking
• Mobile Applications and Device Management

“Most companies mentioned networking as the best source of finding talent”
Getting Real in the World

- More than social responsibility and feel-good moments.
  - More engaged in the shaping of curriculum and identifying the required skills sets for a particular industry.
  - “Now, employers are saying, this is not just about doing good and giving back, it’s about making sure our industry can thrive and has access to a talent pipeline that will ensure our competitiveness,”

- A Syndicate Model “Money is important”
  - Reinventing University Roles in a Knowledge Economy

- Promoting entrepreneurship “entrepreneurship education.”
- Promoting failure
- Try and buy: Commercializing innovations
“It goes beyond just counting degrees”

• How did that student perform in the workplace?
• Did the university help the employer reduce its time to fill positions?
• Did the recent grads function adequately from the first day of employment, or did they require extra training?
What is the current practice of the university-industry engagement related to students learning experience?

What are the factors contributing to the effectiveness of the university-industry engagement?

What are the prospects and challenges that the university-industry engagement faces?
Getting Real in the World

Balancing Act

• The university must maintain its academic freedom while at the same time acting as a good steward of the money given to it by students.

• The university should train students in fields where they can find jobs, and for that, industry input is needed.

• Applied research and practical education is the current state of the world economy.
CAP-Apprenticeship Program

BSc. Computer Apprenticeship Program (CAP)

COMMON SUBJECTS

FIRST YEAR
15

SECOND YEAR
15

CAP Tracks

THIRD YEAR
15

FOURTH YEAR
15

Stage 1
Program Pre-request Knowledge

Stage 2
2 University Courses, Internship 1

Industry

SW Engineering Track

Artificial Intelligence Track
CAP-Apprenticeship Program
10 University-Industry Courses -Track

Redesign Courses to UI Courses

- Used learning pedagogy is Project and Problem based learning
- Knowledge + Practice = Professor+ Company Mentor
- **60 working hours in Company premises /UI course**
- New Assessment
- Team Work
- Focuses on Technical Competences
- Life Skills
Training directly linked to company environment

– Creating the right match between the degree program and the needs of businesses.

– Engaging learners in authentic business environments.

– Providing personalized support.
An-Najah National University
5th conference on New Trends in Higher Education
1. **Experience**
   - the activity; perform, do it

2. **Share**
   - reactions, observations publicly

3. **Process**
   - analyze the experience

4. **Generalize**
   - to connect the experience to real-world examples

5. **Apply**
   - what was learned to a similar or different situation; practice

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Do

Apply

Reflect

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SKETCHNOTING FOR EXPERIENTIAL LEARNERS

LEARNING FROM YOUR OWN EXPERIENCES

CONCRETE EXPERIENCE

ACTIVE EXPERIMENTATION

ABSTRACT CONCEPTUALIZATION

REFLECTIVE OBSERVATION

COMMON LEARNING ENVIRONMENTS

BOOKS

LIVE EVENTS

VIDEO & AUDIO

LEARNING FROM OTHERS

THE MULTIPLIERS

ABC

TEXT

LAYOUT

IMAGERY

COLOR

SKETCHNOTING

THE BENEFITS OF EXPERIENTIAL LEARNING

DEEPER INSIGHTS

LONG-LASTING LEARNING

Verbal to Visual Video with Doug Neill

Sketching then Carry Out
PBL Process Diagram
practical advice

other options

More options

More you can do

let them talk to you - listen

emotional help

different perspective

people

Cross Middle First

Track Error

Target

with others - jointly agree

Elected that

by the use of methods - forum, panel, meeting, etc

Oz Yezri

Paul Franklin

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Design Thinking Process

1. **Empathize**
   - Learn About Your Audience

2. **Define**
   - Construct Point of View Based on User Needs

3. **Ideate**
   - Brainstorm and Come up with Creative Solutions

4. **Prototype**
   - Build Representation of Your Ideas

5. **Test**
   - Test Your Ideas
Coaching

100%

Education
Motivation
Support

Potential

Training
Mentor
Skill
Development

Knowledge
Internship

- Skills
- Personal Development
- Goal
- Opportunities
- Mentor
- Training
- Experiences
Internship Objectives

Objectives for years 1 & 2

• Discovering IT Industry in Palestine
• Preparation for job requirements (CV, motivation letter)
• Becoming familiar with the industry culture and various types of professional practices

Objectives for years 2 & 3

• Understanding the company and its technical modes of operation
• Developing the skills and applying knowledge to solve practical problems
• Demonstrating the skills of a junior employee in IT industry
• Working in a project mode
• Spending a period of pre-employment for companies
Multi-faceted Relationships

- Student Oriented Engagement
- Involvement with Centers of Expertise
- Economic Development
- Involvement with Researches
- Access to Resources
memorandum of understanding

Level 1
Transaction

Level 2
Collaboration

Level 3
Alliance
Examples: IT-Apprenticeship MOU

**Level 1: Transaction**
- Career Fairs
- Job Interviews
- company seminars on career options
- student organizations/club sponsorships
- student poster sessions
- innovation challenge/competition

**Level 2: Collaboration**
- course teaching, class projects
- curriculum Development / accreditation support
- Internships

**Level 3: Alliance**
- student consultancy
- student mentorships by company employees
- co-ops
- research topic sponsorships
Examples: IT-Apprenticeship MOU

- Level 1: Transaction
- Level 2: Collaboration
- Level 3: Alliance
Intellectual Property Policy

Technology Transfer, SPIN OFFS

New Policies & Guidelines

Professional Internship Program

Specialist Lecturer
Inspire Change & improve the quality of learning

Thank you