

CAREER ASPIRATIONS AND SKILLS EXPECTATIONS OF UNDERGRADUATE IT STUDENTS: ARE THEY REALISTIC?

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IT DISCIPLINE



- “There is no unified definition of the Information Communication Technologies (ICT) discipline and the employment opportunities it offers” (Koppi & Naghdy, 2009)
- Various course guidelines/ frameworks, emphasising employability
 - ACM/IEEE (Association for Computing Machinery and Institute for Electronic and Electrical Engineers)
 - ACS (Australian Computer Society)
- IT Professional skills: cognitive, technical and communication



THE PROBLEM



- IT students in demand! But...
- Complex industry, and students...
 - Lack adequate skills or career maturity (AIIA, 2016; Graduate Careers Australia, 2016)
 - Unrealistic expectations about employment prospects (Graduate Careers Australia, 2015)
- Bridge the gap between university curricula and student expectations



CAREER DEVELOPMENT

- Preparing graduates to decide upon their career path
 - Career competencies
- University students: career building
 - Demonstrating skills for employability: portfolio
- Combination of curriculum, learning activities and assessment building readiness for career
 - Activities that develop career competencies



CAREER DEVELOPMENT MODELS

- Career decision making (Harren, 1979)
- Career development
 - Matching personal traits to occupations (Parsons, 1909)
 - Aligning personality types to the work environment (Holland, 1985)
 - The development of skills appropriate for different developmental phases (Crites, 1978; Super, 1980)
 - Developing career and life agentic (self-directed) skills informed by social-cognitive processes (Bandura, 1986; Hackett & Betz, 1981; Lent et al., 1994).
- Social Cognitive Career Theory (Lent 1994)
 - Combination impacts career choice: self-efficacy, outcome expectations, interest

<http://www.graduate-careers.org/2016/03/21/dots-model/>



RESEARCH QUESTIONS

1. What are the short-term and long-term career aspirations of undergraduate IT students?
2. What are the criteria which students use to assess whether they have achieved these aspirations?
3. What are students' perceived barriers in relation to achieving their career aspirations?
4. What skills do students perceive are required to achieve these career aspirations?



METHODOLOGY



Two stage: Exploratory Mixed Method

Setting: undergraduate IT students at an Australian University

Phase 1: 2014

- Career goals and action plan: qualitative survey
 - Class on career development and professional skills
 - Reported on their career aspirations and skills expectations
 - 306 2nd year undergraduate students' career goals and aspirations

Phase 2: 2015

- Career and employability: Quantitative survey
 - Across the degree/program, not a particular class
 - Reported on their career aspirations and skills expectations using the same questions as in phase one.
 - 159 undergraduate students



RESULTS



- Sample and demographic
 - Used Fisher’s exact test to compute difference
 - 2014: No significant difference found (n = 306) out of a class enrolment of 375
 - 2015: Significant difference found (n = 159) out of a class enrolment of 1153
 - Treat phase two with more caution

RESULTS

Example: qualitative aspirations and coding

“To be a highly skilled software designer with skills in various programming languages and produce professionally made programs for clients while earning a living from my work.”

Induced coding category: short-term – ‘Developer or programmer’.

“My long term career goal is to become a professional software developer, working for an established organisation.”

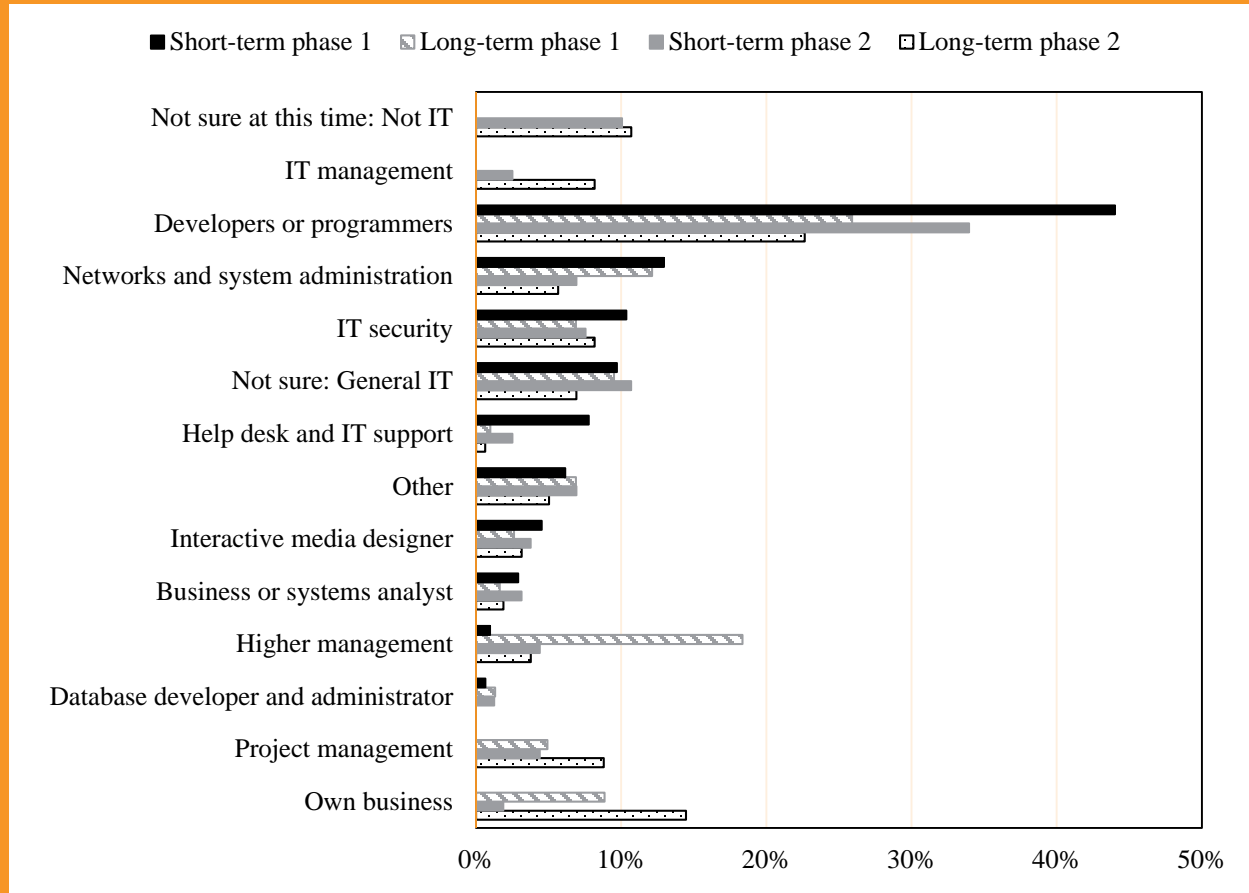
Induced coding category: long-term – ‘Developer or programmer’.

“My goal when I complete my degree is to get in a graduate program for a larger company that requires IT experts to gain relative experience after which I would go for a consulting or managing position.”

Induced coding category: short-term – ‘Not sure: general IT’

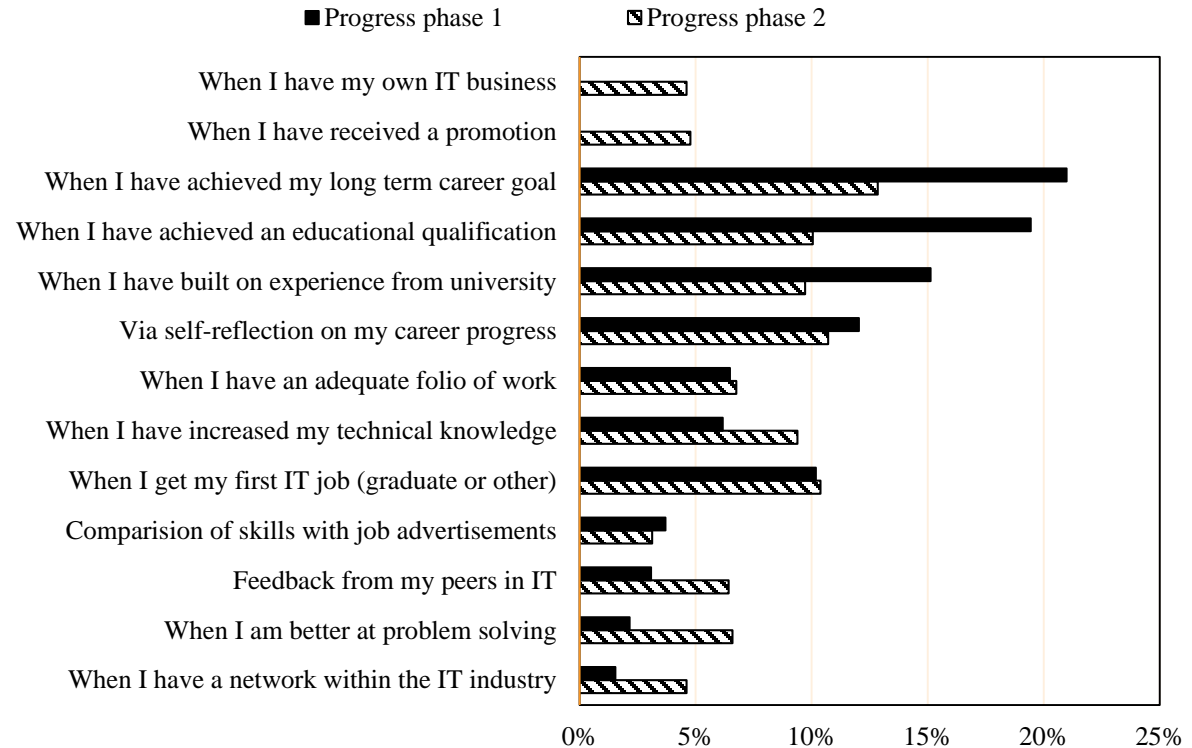
RESULTS

- What job do I want to get once I finish my degree?
- What is my career goal - long term?



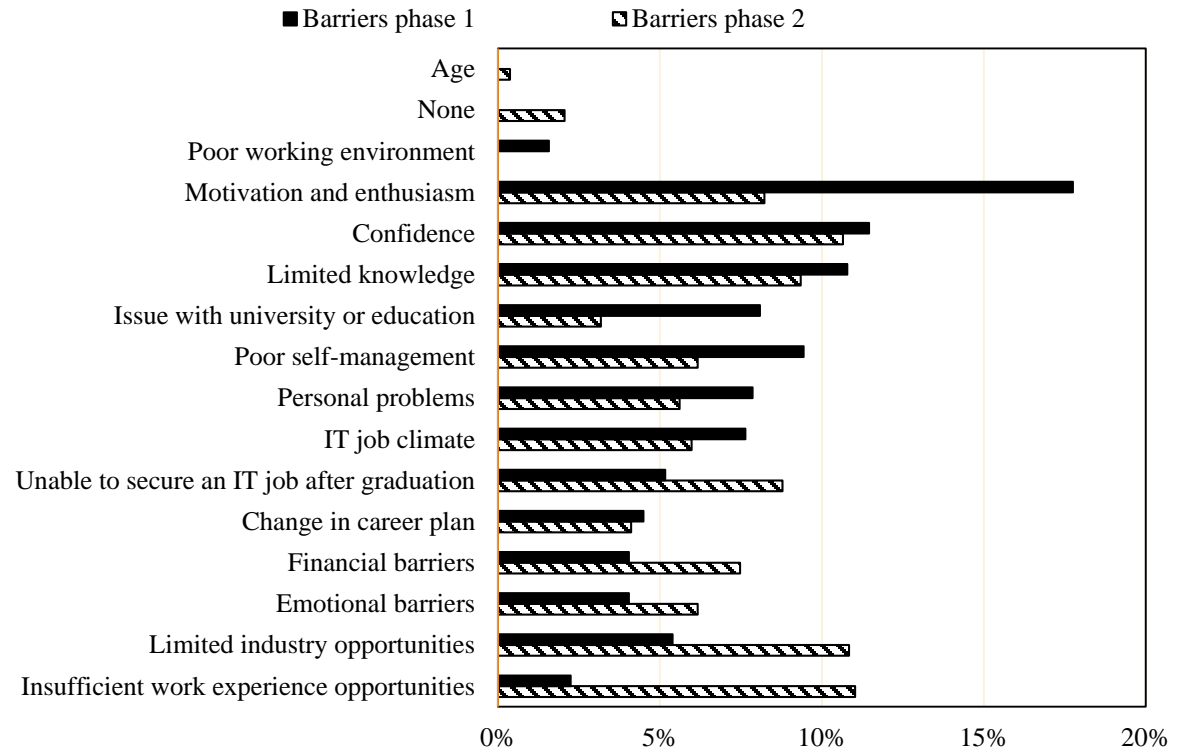
RESULTS

How will I know when I have succeeded towards my career goal?



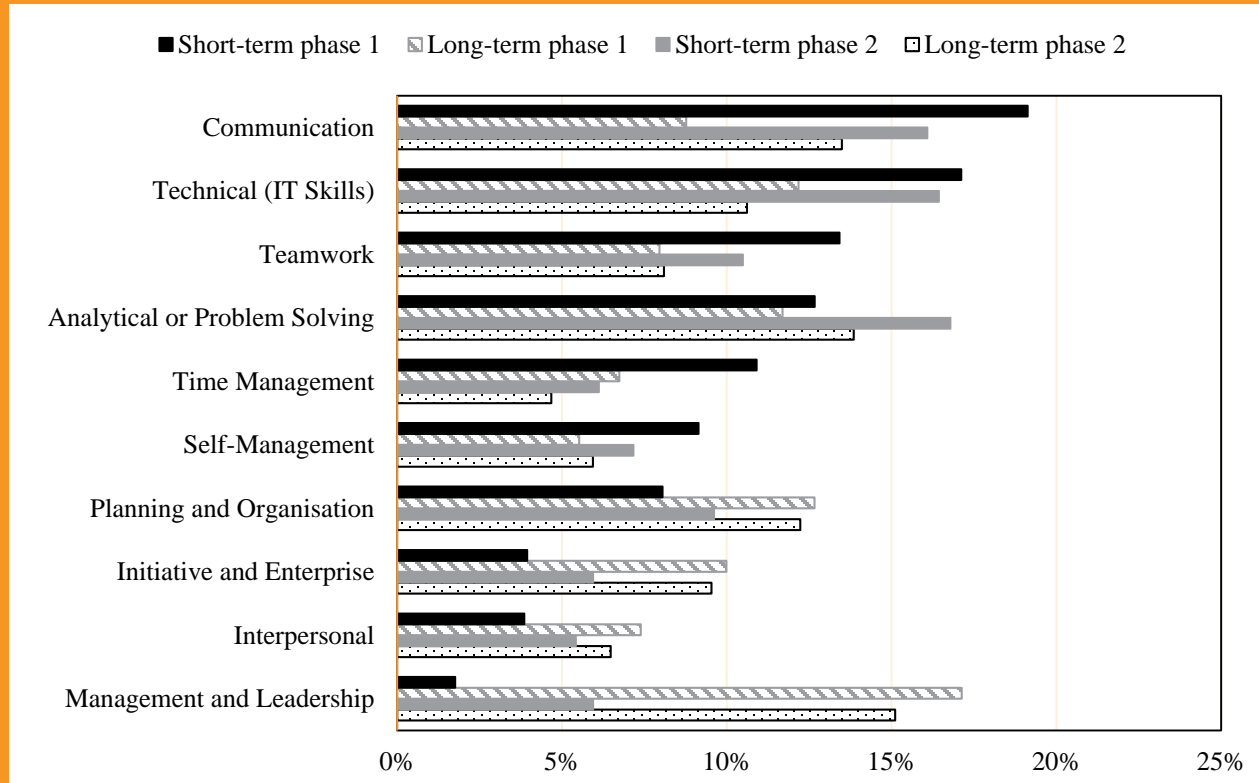
RESULTS

What may stop me from successfully achieving my goal?



RESULTS

- What are the top four skills I need in the short-term which are important for my first job post-graduation?
- What are the top four skills I need in the longer term which are important for me to achieve my career goal?



CONCLUSION

- Students have varied career aspirations and interest and, while realistic, they have no clear strategies for achievement of their career goals.
- Exhibit a lack of confidence; self-efficacy
- Students are reasonably aware of employer expectations, but need to adjust their outcome expectations regarding skill development to better align with long-term career goals.

IMPLICATIONS FOR CAREER DEVELOPMENT

- Understanding of our career decision-maker
- Better understanding of developmental and environmental factors that impacts on career development of IT students
 - Expectations on discipline skills
 - Need for scaffolded career activities that build students' self-efficacy
 - Develop opportunities for experiential learning through all stages undergraduate education
- Helping students bridge the gap (Carbone, Hamilton & Jolliffe, 2015)

QUESTIONS?



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