

Post-Graduate CS and IS Students' Career Awareness

Extended Abstract

SACLA 2019

© The Authors/SACLA

Amanda Esterhuysen¹, Andre P. Calitz²[0000-0002-2555-9041] and
Margaret Cullen³[0000-0003-4225-4191]

^{1,2} Nelson Mandela University, Department of Computing Sciences, Port Elizabeth, S.A.

³ Nelson Mandela University, Business School, Port Elizabeth, S. A.

{¹Amanda.Esterhuysen,²Andre.Calitz,³Margaret.Cullen}
@Mandela.ac.za

Abstract. The Information Technology (IT) industry is constantly creating new job positions and job titles. IT students should be familiar with new IT positions and IT job titles available in industry in order to select the appropriate IT career after completing their studies. In this study, the IT career awareness of students completing their post-graduate Computer Science (CS) or Information Systems (IS) qualification were evaluated. The CS and IS students had to self-evaluate their understanding of 10 IT job titles and then define the IT job titles and relevant job descriptions. The results of the study indicate that the students were generally not familiar with IT job titles, job descriptions and career opportunities available in industry.

Keywords: IT Career Choice, IT Job Titles, IT Career Awareness.

1. Introduction

Academic departments at Higher Education Institutions (HEIs) are increasingly engaging with students regarding career choices and IT job titles available in industry. The IT job titles found in industry include Programmers, Systems Analysts, Project Managers and Business Analysts. New IT job titles recently introduced include App Developers, Social Media Specialists, Lead Application Developers and Cloud Developers. Career awareness is an understanding of the various long-term employment possibilities and having the knowledge necessary to begin work in a specific career [3]. Recruiters however, are not aware that the graduates do not always have a clear understanding of the IT job titles, IT positions and career paths available in industry.

2. The Research Problem and Research Design

The research problem investigated in this study is that CS and IS students do not have a clear understanding of IT job titles and positions advertised in industry. A graduate IT career awareness questionnaire (GITCAS) was compiled for this study using a similar questionnaire based on a previous study evaluating the career awareness of undergraduate students [2]. The aim of this study was to evaluate the IT career awareness of post-graduate CS and IS students.

3. Literature Review

3.1 Career Decision Theories

Every person has a unique set of skills and interests, different personalities and a different context. As a result, career guidance has developed into a comprehensive system based on theories [1]. Lent, Brown and Hackett [5] anchored their Social Cognitive Career Theory in Bandura's Social Cognitive Theory. They proposed a mutually influencing relationship between people and their context or environment. Alvin Leung [5] notes that the time has come for indigenous theories to be developed as most of the career decision theories emanate from the USA.

3.2 Under-Graduate Student Career Awareness Surveys

Post-graduate students do not have a realistic understanding and lack in-depth knowledge of the job titles and the additional career knowledge of what IT tasks are performed in the various IT positions [6]. Businesses advertise various IT positions and students are expected to be familiar with the IT job titles and the tasks that are generally performed by people in these IT job positions. In a study conducted on under-graduate CS and IS students' career awareness, the results indicate that a limited number of students who participated in the survey have made a definite career choice and could not define or explain IT job titles [2]. The under-graduate students indicated in certain cases that they understood the job descriptions of IT job titles, however when requested to explain the job titles, they were not knowledgeable and lacked IT career awareness. The results obtained in the Calitz et al. [2] study, confirm similar research study results that indicate that students are uninformed or misinformed about the job descriptions of a computing professional [4, 6].

4. Post-Graduate Career Awareness Survey Results

The post-graduate career survey was completed by 16 post-graduate students, a 52% response rate and included 3 females and 13 males. Nine students indicated that they have made an IT career choice, which included software developer/programmer (n=4), business analysts (n=3) and the other careers included software engineer and IT consultant. The post-graduate students were required to rate their understanding of the 10

IT positions on a 5-point Likert scale and then define and explain the 10 IT positions. Fig. 1 shows the post-graduate students' self-evaluations and their written definitions are provided. The mean scores for the 10 IT positions self-evaluation understanding of IT job titles were $\mu=4.4$ and for the written component $\mu= 2.0$.

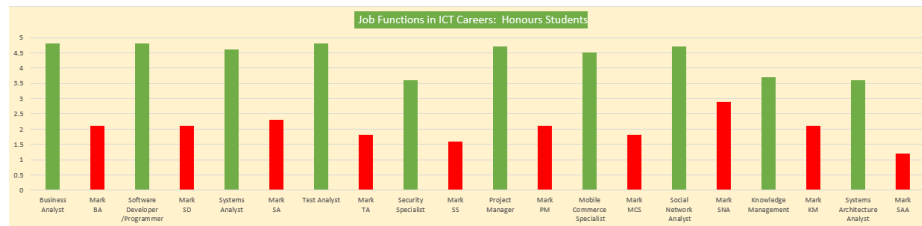


Fig. 1. IT Job Title results for post-graduate students.

5. Conclusion

Research has indicated that university students generally are not aware of IT career opportunities, IT career paths, IT job descriptions and career tracks [2, 6]. Academic departments are also required by accreditation bodies to provide career guidance to students. The students indicated in all cases that they understood the job descriptions of IT job titles, however when requested to define the job titles, they were not knowledgeable and lacked IT career awareness. This exploratory study has provided the foundation for further research into students' IT career awareness. Future research will focus on implementing an IT career awareness programme in the CS/IS department.

References

1. Alvin Leung, S.: The Big Five Career Theories in International Handbook of Career Guidance, 115. J.A. Athanasou, J.A. R. Van Esbroeck, R. (eds.) (2008).
2. Calitz, A.P., Greyling, J. & Cullen, M.: ICT Career Track Awareness amongst ICT Graduates. SAICSIT 2011. Cape Town, South Africa. 3-5 Oct (2011).
3. Hendriks, B.: Building career awareness. <https://study.com/academy/lesson/what-is-career-awareness.html>, last accessed 2019/03/13.
4. Koorsse, M., Calitz, A.P. & Cilliers, C.B.: Programming in South African Schools: The Inside Story. SACLA'10 Conference, Pretoria, South Africa (2010).
5. Lent, R. W., Brown, S. D. & Hackett, G.: Social cognitive career theory. In D. Brown & Associate (Eds.), Career choice and development (4th ed., pp. 255–311). San Francisco, CA: Jossey-Bass (2002).
6. Steed, S.: Too many graduates are mismatched to their jobs. <https://www.theguardian.com/higher-education-network/2018/jan/25/too-many-graduates-are-mismatched-to-their-jobs-whats-going-wrong>, last accessed 2019/05/14 (2018).