

Can a Focus on Study Outcomes make Glee^{ful} Students?
Examining Study Outcomes' Mediating Effects on Student Experience and Satisfaction

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Abstract

Global demand for higher education has been growing. Insight into study outcomes may hold the key to finding out what exactly students hope to take away from their university experience and how they may be satisfied. This paper's aim is to understand the mediating effects study outcomes have on student experience and satisfaction. Findings suggest study outcomes such as personal development and career development mediate the relationships between student experience (image, teaching, learning, student services and technology) and student satisfaction.

Keywords: Student experience, academic, personal and career development, satisfaction

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Introduction

Global demand for higher education has been growing by 2.7% per year and is estimated to increase from 2.17 million in 2005 to 3.72 million in 2025, accounting for a 70% rise over the 20 years (Bank, Olsen and Pearce, 2007). Growth in demand is attributed to three factors. First, 1.1% annual global population growth (CIA World Factbook, 2006) has resulted in higher global demand for places at universities (Duderstadt, 2000). Second, the workplace requires more sophisticated education from its workforce. Universities are expected to assist students in developing skills that enhance employment prospects (McIlveen and Pensiero, 2008). Lastly, higher education is seen as a key to quality of life since education can increase personal economic well-being (Duderstadt, 2000). Several factors present as challenges. First, competition for the student dollar has increased with growth in global demand for higher education (Mavondo, Tsarenko and Gabbott, 2004). Second, universities have increasingly become self-funding as government support becomes more limited (Brown and Mazzarol, 2009). Today, universities are more akin to profit-making organisations that are market-driven and customer-focused (Clemes, Gan and Kao, 2007), giving the student voice more power than ever before.

Extensive literature identifies university attributes that contribute toward the student experience (e.g. Mavondo, Tsarenko and Gabbott, 2004) and student satisfaction with their university (e.g. Elliott and Healy, 2001). However, research on study outcomes and their impact on student satisfaction remains limited (e.g. Clemes, Gan and Kao, 2007). Insight into study outcomes may hold the key to finding out what exactly students hope to take away from their university experience and how they may be satisfied, thus, giving universities better opportunity for attracting prospective students. This study aims to understand how expectations of the student experience and study outcomes impact on students' satisfaction with their current university.

Literature Review

Any service encounter has the potential to enhance overall satisfaction (Athiyaman, 2001). In an educational context, a service encounter involves student experiences with a university's image, teaching, learning, student services, facilities and technology (Mavondo, Tsarenko and Gabbott, 2004). These six factors are considered to be antecedents of study outcomes.

Image is an overall impression which consumers have of an organisation (Alves and Raposo, 2010). Students go through various experiences and promotional information they receive from a university to draw personal and emotional impressions of the university (Kuo and Ye, 2009). While image is often the first criterion for assessing a university (Kotler and Fox, 1995), is it also a key factor in shaping students' expectations of study outcomes and subsequent satisfaction?

Teaching is a core service of the educational institution and is considered an institution's capability (Athiyaman, 2001). Since for students, the quality of teaching is part of the quality of their education (Hill, Lomas and MacGregor, 2003), teaching is central to their satisfaction (Clemes, Gan and Kao, 2007). If universities are pressured to conform to a producer-consumer relationship (Blackmore, 2009), to what extent will students' expectations about teaching shape curriculum and impact on subsequent satisfaction?

Learning results in an enduring change in a person and consequently, how that person perceives the world and responds to it (Alexander, Schallert and Reynolds, 2009). Learning involves coproduction between students and academic staff (Mavondo, Tsarenko and Gabbott, 2004). Is the current learning environment capable of meeting students' expectations of study outcomes and ensuring subsequent satisfaction? Do any cultural differences exist in learning expectations?

Student services provide career guidance, counseling and financial assistance and are particularly important for international students who may require more support in adapting to new environments (Russell, 2005). Can student services help students achieve expected study outcomes and subsequent satisfaction? Again, do such expectations differ between local and international students (Mavondo, Tsarenko and Gabbott, 2004; Russell, 2005), and if so, how?

Facilities are physical evidence that add value to the student experience (Paswan and Ganesh, 2009). The library, self-study areas, classrooms, car parks, layout, food outlets, recreational amenities and health services are key criteria in influencing student satisfaction with their university (Douglas, Douglas and Barnes, 2006). It would be interesting to examine whether students have conscious expectations or simply take for granted the facilities that help to deliver their study outcomes.

Technology provides another service augmentation that embellishes the core services of teaching and learning, contributing to the student experience (Sinkovics, Haghirian and Yu, 2009). While studies support the link between technology and academic development (e.g., Webster and Hackley, 1997), does technology also impact on students' expectations of other study outcomes and subsequent satisfaction?

Since study outcomes are goals that students set out to achieve from their education, students need to perform their roles effectively in order to achieve desired outcomes (Telford and Masson, 2005). Students who are more involved in academic work, extra-curricular activities and interaction with staff tend to achieve higher study outcomes (Astin, 1999). Three study outcomes including academic development, personal development and career opportunities (McIlveen and Pensiero, 2008) are considered to be antecedents of student satisfaction.

Academic development is a result of the teaching and learning process (Clemes, Gan and Kao, 2007) where discipline-specific knowledge is acquired (Vermeulen and Schmidt, 2008). Academic qualitative outcomes are students' understanding and achievement of the aims of their study, while academic quantitative outcomes are reflected in assessment results (Lizzio, Wilson and Simons, 2002). Clemes, Gan and Kao (2007) observe that students in New Zealand rank academic development as the most important study outcome in shaping student satisfaction. It would be interesting to see if this finding is also a key criterion in an Australian context.

Personal development relates to the improvement of a student as a person (Clemes, Gan and Kao, 2007). While generic skills are best developed through formal learning environments, involvement in extra-curricular activities can also assist in developing communication, interpersonal and cognitive skills (Huang and Chang, 2004). Hill, Lomas and MacGregor (2003) note that students in the UK do not simply value academic outcomes, but also attempt to broaden their horizontal knowledge skills by working as team players in a group. How crucial is this non-academic factor in contributing to student satisfaction in an Australian university?

Career development refers to a development of lifelong learning (McIlveen and Pensiero, 2008) and pathways for progressing careers (Clemes, Gan and Kao, 2007). Students expect to develop competencies for the workplace while studying at university and receive information about career opportunities and employability upon graduation (Joseph and Joseph, 1997). How highly students rank career development and how this factor correlates with the teaching and learning experience requires some exploration.

Finally, student satisfaction refers to an attitude that results from students' evaluation of the educational experience they receive from services provided by their university (Elliott and Healy, 2001). Satisfaction occurs at a particular time including after consumption, after choice or after accumulative experience (Mavondo, Tsarenko and Gabbott, 2004). This paper examines whether expectations of the student experience and study outcomes have direct or indirect effects on student satisfaction with their current university.

Proposed Model: Justification and Hypotheses

Students' expect the experience with their university's image, teaching, learning, student services, facilities and technology (Mavondo, Tsarenko and Gabbott, 2004) to be positively related to their expectations of study outcomes such as academic development, personal development and career development (Clemes, Gan and Kao, 2007). Subsequently, it is likely these study outcomes will positively affect student satisfaction with their university (Lizzio, Wilson and Simons, 2002). Thus, it is expected that study outcomes will moderate the student experience–student satisfaction relationship:

- H1 Academic development will mediate the influence between student experience and student satisfaction*
- H2 Personal development will mediate the influence between student experience and student satisfaction*
- H3 Career development will mediate the influence between student experience and student satisfaction*

Methodology

The research instrument constituted a 15-minute self-administered pen and paper survey to a convenience sample of students at a major university in Western Australia. The survey was distributed at classes where prior approval had been granted and on campus in public areas such

as the library, cafeteria and computer labs. The survey's items were adapted from existing scales by Clemes, Gan and Kao (2007), Paswan and Ganesh (2009) and Russell (2005) for their reliability and relevance to the context. Fifty one items measured the six factors representing expectations of the student experience, 23 items, the three factors representing students' expectations of study outcomes and six items, measured student satisfaction.

Results

In total, 400 completed surveys were collected. There was an equal distribution of males (46%) and females (53%) as well as local and international students. The majority was single and between 20 to 29 years, representing 62.5% of local students and 89% of international students. Independent groups t-tests suggested local students had significantly higher expectations of their university's image but were more satisfied with their university ($p \leq 0.01$). Since most local students are likely to gain employment in Australia after graduation, this may explain the higher expectations they hold of their university's image. On the other hand, international students had significantly higher expectations of their university's student services, facilities and opportunities for personal development ($p \leq 0.01$). Presumably, since international students may be more unfamiliar with their environment, they may rely more on the support of student services and facilities for their personal welfare.

First, exploratory factor analysis using a VARIMAX rotation examined the dimensionality of the survey's 80 items. The final solution, which explained 64% of the variance, identified clear factor structures for all six dimensions of the student experience (i.e. image, teaching, learning, student services, facilities and technology). However, only two of the three dimensions for study outcomes were identified (i.e. personal development and career development). Since academic development showed some multicollinearity with career development, another study outcome, this meant that the construct could not be investigated further and H1 was not tested. Cronbach Alpha for all factors was above 0.70, suggesting reliability (Hair, Babin and Anderson, 2010).

Table 1: Mediating effects of study outcomes on student experience and student satisfaction

Hypothesis	Mediated Relationship	Test Statistic	p-value	Hypothesised Relationship
H2a	Image-Personal Development-Satisfaction	3.95	0.001	Partial mediation
H2b	Teaching-Personal Development-Satisfaction	3.77	0.001	Partial mediation
H2c	Learning-Personal Development-Satisfaction	4.14	0.001	Partial mediation
H2d	Student Services-Personal Development-Satisfaction	4.38	0.001	Partial mediation
H2e	Facilities-Personal Development-Satisfaction			Not supported
H2f	Technology-Personal Development-Satisfaction	4.10	0.001	Partial mediation
H3a	Image-Career Development-Satisfaction	5.17	ns	Full mediation
H3b	Teaching-Career Development-Satisfaction	5.30	ns	Full mediation
H3c	Learning-Career Development-Satisfaction	5.13	ns	Full mediation
H3d	Student Services-Career Development-Satisfaction	5.41	ns	Full mediation
H3e	Facilities-Career Development-Satisfaction			Not supported
H3f	Technology-Career Development-Satisfaction	5.17	ns	Full mediation

Next, multiple regression analysis, supported by the Sobel Test, examined the mediating effects personal development and career development had on each of the six respective student experience-student satisfaction relationships. As can be seen in Table 1, personal development partially mediated the relationships between image, teaching, learning, student services and technology with student satisfaction, supporting H2. On the other hand, career development fully mediated the relationships between image, teaching, learning, student services and technology with student satisfaction, supporting H3. No mediating effects were observed for the relationship between facilities and student satisfaction since facilities had no initial significant and direct effect on student satisfaction.

Discussion, Limitations and Conclusions

Clearly, study outcomes play a crucial role in bridging the gap between what universities can provide (image, teaching, learning, student services and technology) and what keeps students satisfied. Of the two study outcomes, career development demonstrates a stronger impact, fully mediating the student experience-student satisfaction relationships. This suggests that students pursue a university education for the career opportunities it presents. It would be in the best interest of universities to cultivate and build networks with their alumni and relevant industry bodies that can open doors to careers for graduating students. On the other hand, personal development partially mediated the student experience-student satisfaction relationships. This suggests that graduating students may be actively looking to develop personal attributes and skills that can give them some differentiation in the workplace. Universities should be looking at creating more environments and activities such as Glee Clubs that encourage skills involving social interaction, problem-solving, leadership, initiative and teamwork.

Sampling was a key limitation of the study. The sample was drawn from one university in Western Australia where unique factors specific to the location may have impacted on generalisability. Multiple regression analysis was initially used to test the individual hypotheses and the results presented in this paper. However, further analysis of the current and subsequent samples will be conducted with structural equation modelling to observe the simultaneous effects of all relationships. Another limitation was the inability of the study to explore academic development since it had some multicollinearity with career development. This suggested a closer relationship between the two constructs than first envisaged. Educators may be well advised to review their academic curriculum to include client-focused projects that cultivate networking and enhance career advancement opportunities.

Subsequent research may require including objective study outcomes such as grade point average and awards won by students. Also, a decision-making model related to student behaviour will need to consider the financial, performance, psychological, social, physical and convenience risks (Mieres, Martín and Gutierrez, 2006) for their impacts on university choice, the student experience, expected study outcomes and subsequent satisfaction. Finally, cross-cultural studies that examine and make comparisons of students' different geographics and psychographics could help to further insight in the area.

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