

2016-12

The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education

Wilkins, S

<http://hdl.handle.net/10026.1/3936>

10.1080/03075079.2015.1034258

Studies in Higher Education

Informa UK Limited

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education

Stephen Wilkins^{a*}, Muhammad Mohsin Butt^b, Daniel Kratochvil^c
and Melodena Stephens Balakrishnan^d

^a*Graduate School of Management, Plymouth University*

^b*Business School, University of Nottingham Malaysia Campus*

^c*Office of Planning and Performance, University of Wollongong in Dubai*

^d*Faculty of Business, University of Wollongong in Dubai*

The purpose of this research is to investigate the effects of social and organizational identification on student commitment, achievement and satisfaction in higher education. The sample comprised 437 students enrolled in an undergraduate or postgraduate programme in business or management. A model was developed and tested using structural equation modelling. It was found that organizational identification is a stronger predictor of student commitment, achievement and satisfaction than social identification. Although organizational identification was a strong predictor of student satisfaction, student commitment was better at explaining student achievement. The implications for higher education institutions are discussed. To our knowledge, this is the first study to examine the effects of organizational identification on student commitment, achievement and satisfaction. The key contribution of the research is in providing support for the hypothesis that organizational identification can influence the attitudes and behaviour of higher education students, as it has been shown to do with employees and consumers.

Keywords: social identification; organizational identification; student commitment; student achievement; student satisfaction; structural equation modelling

Introduction

Educationalists and researchers have long been interested in identifying the factors that influence student commitment, achievement and satisfaction. Levels of commitment affect a student's approach to learning which, in turn, influences academic attainment. Students who achieve their academic goals are more likely to be satisfied with their programme and institution (Wilkins and Epps 2011). Hence, student commitment, achievement and satisfaction are generally interlinked. There exists a vast, multidisciplinary literature that explores the factors influencing student learning (Dean and Jolly 2012). Much of this research has focused on individual differences and factors related to the learning environment, as well as the interaction between these differences and factors (Smyth et al. 2015). Palincsar (1998) argues that learning is both individual and social while Bliuc et al. (2011a) suggest that research adopting a social identity perspective offers promising possibilities for understanding how a student's social identity is related to their university learning.

The social identity perspective incorporates both social identity theory (Tajfel and Turner 1979) and self-categorization theory (Turner et al. 1987). The term social identity refers to an individual's self-concept in relation to their membership of social groups (Tajfel and Turner 1979). Individuals self-classify into any number of social groups or categories (Dean and Jolly 2012), which could include labels such as 'management student' or 'future captains of industry' (See e.g. Zambo et al. 2015). Classification enables people to order the social environment and to locate themselves in it (Kim et al. 2010), which is a relational and comparative process that results in an individual's recognition of both in and out-groups (Allen et al. 1983; Jungert 2013).

Managers who choose to take a management programme might perceive themselves as belonging to a select group who are motivated and committed to excellence and optimal performance in their work roles. Social identification leads to greater homogeneity among in-group members (Ashforth and Mael 1989), which can strengthen social relationships within the group and – we hypothesize – promote a student's commitment to study, academic performance and satisfaction with their programme and institution.

Organizational identification is a form of social identification whereby an individual perceives a sense of belonging and oneness with an organization, its activities, and members (Ashforth and Mael 1989). Previous research has demonstrated that the more an individual identifies with an organization, the more likely they are to support the organization and perform behaviours that benefit the organization. For example, employees who identify with their organization may be more committed to staying with the organization (Benkhoff 1997; O'Reilly and Chatman 1986), more likely to perform their work above and beyond the call of duty (Mowday et al. 1982), and more likely to work effectively in teams and demonstrate positive organizational citizenship behaviours (Liu et al. 2011). Bhattacharya and Sen (2003) claim that consumers as well as employees can identify with organizations, which would suggest that students might also identify with colleges and universities.

The purpose of this research is to investigate the possible effects of social and organizational identification on student commitment, achievement, and satisfaction. We hypothesize that both social and organizational identification have an impact on the attitudes and behaviours of management students in higher education, as they have been shown to do among employees and consumers. Although other studies have examined the effects of social identification on student learning and performance (e.g., Bliuc et al. 2011a; Bliuc et al. 2011b; Wortham 2004), no such research has been conducted in a business school setting and, to our knowledge, this is the first study to examine the effects of organizational identification on student commitment, achievement and satisfaction. For reasons that we explain later, we hypothesize that student commitment, achievement and satisfaction are influenced by both social and organizational identification.

In the following two sections, we provide brief overviews of the literature on social and organizational identification, focusing where possible on research findings in higher education. We then present our conceptual model and hypotheses before describing and explaining our methodology. Then, we present and analyze our results, which are the product of structural equation modelling. We conclude by summarizing and explaining our theoretical and empirical contributions, in particular considering the implications of our findings for the educators of management students.

Social identification

Learning is intertwined with social identification because learning is an experience of identity that transforms a person and what they can do (Wenger 1998, 215). Social identification exists when a person exhibits a common characteristic or behaviour with other individuals of the in-group. Students arrive at university with an academic self-concept, which is their perception of their own academic competence. Undergraduate students who enter business schools with high grade point averages from their high school education will have a positive academic self-construct, which is associated with high goal setting, academic engagement, and academic outcomes (Bliuc et al. 2011b; Bong and Skaalvik 2003). Bornholt (2001) found that high school students' intentions to continue studying were based on self-perception rather than actual academic performance.

Postgraduate management students are often career oriented, competitive and highly committed to achieving their goals. These students might be motivated to perform well on their programme in order to enrich their social identities and preserve their status in the high ability in-group. Students entering postgraduate programmes with work experience also bring common aspects of their social identity with them; for example, a successful track record as a junior or middle manager (Wortham 2004). Thinking of themselves as an 'already proven' or 'good manager' can be a salient aspect of identity that shapes how an individual behaves and interacts with other students, and also with professors.

Markus and Nurius (1986, 954) employed the term 'possible selves' to describe representations of the self in the future that combine endured goals, aspirations, motives, fears, and threats. Individuals adopt behaviours that encourage positive possible selves and discourage negative possible selves. Dean and Jolly (2012) suggest that student engagement occurs when students accept a level of identity-based risk and are willing to experience the emotional outcomes associated with learning, which might be both positive and negative. Experiencing delight or pride, or frustration or fear, requires emotional energy and students will therefore undertake a risk versus reward assessment when making decisions about learning and engagement. Ultimately, it is the student's sense of identity (Dean and Jolly 2012) and their desired possible self (Markus and Nurius 1986) that determines their level of commitment and willingness to engage with a given learning opportunity.

Students on postgraduate programmes who already have employment experience – as is common on Master of Business Administration (MBA) programmes – typically share their ideas and experiences in different work contexts both in and out of the classroom and this can provide valuable informal learning for other students (Sambrook and Willmott 2014). Students can also offer empathy and emotional support to each other, as they often share similar problems and issues in their working lives (Hay 2014). Furthermore, the group projects that are now standard in management programmes often lead to close relationships among group members as they meet and communicate regularly outside of lessons. Shared values and group norms develop (Smyth et al. 2015), and the interpersonal relationships between students can become stronger over time and for an individual lead to identification with the group and its other members (Sluss and Ashforth 2007).

Working in teams provides a support mechanism for individuals and has the potential to encourage individual commitment and achievement, as well leading to increased student satisfaction with programmes. The shared identity that strengthens over time through group work encourages homogenous behaviours among group members as individuals behave in the way they perceive the other in-group members behave and how they believe

group members should behave (Haslam et al. 2002; Turner 1991). Dissonance occurs when groups members behave differently or if the group norms are not clear (Smyth et al. 2015).

The value of management programmes would be considered by Bourdieu (1986) to lie not only in learning, which would be considered the acquisition of cultural capital embodied in the student and institutionalized through formal recognition by a university degree, but also the social capital consisting of networks. Encompassing fellow students, university staff and other individuals encountered during a management programme, these networks can add significant value to an individual's career (Sturges et al. 2003; Vaara and Fäy 2011). Baruch and Leeming (2001) found that networking was the pre-enrolment aim of MBA students that was most fulfilled after studies were completed. Even during their studies, students perceived that they were fulfilling their networking aims more than their personal/managerial development or career development aims. Mixing with bright, able and competitive individuals who might be used for future networking can be inspiring and motivating, improving a student's commitment, academic achievement and satisfaction.

Studies that explored the concept of social identification in higher education have found that levels of social identification are clearly associated with an individual's self-esteem and satisfaction with life in general (Bliuc et al. 2011b; Cameron 1999). In this study we consider social identification in broad terms, assuming that individuals identify with both the identity of a 'business/management student' and with other students who share this identity. We acknowledge that in an educational context, multiple layers of social identification are in fact possible, for example with subject discipline groups and with sports/social groups. Although social identity is a powerful concept, we believe that when analysing factors influencing student commitment, learning and achievement in a higher education context, organizational identification should also be considered as this has many similarities with student social identification. Although organizational identification is conceptually similar to social identification, we hypothesize that the two constructs are quite distinct and that they operate independently. For example, busy executives studying in part-time mode might feel that they have insufficient time to develop meaningful social relationships, but they might feel a connection with the institution if they perceive that the institution's identity reflects or promotes their own social identity.

Organizational identification

Organizational identification refers to the psychological attachment of an individual to an organization (O'Reilly and Chatman 1986). Ashforth and Mael (1989) claim that organizational identification can result if an individual perceives that an organization's distinctive and salient characteristics are self-defining, self-referential and enriching to their own social identity. It follows, therefore, that the more attractive an individual perceives an organization's identity, the stronger their identification with the organization will be and the more likely that the individual will engage in behaviours that benefit the organization (Dutton et al. 1994). In their quest for social identity enhancement and to fulfil self-definitional needs such as belongingness, individuals are more likely to apply to programmes at prestigious or reputable business schools (Ahearne et al. 2005).

Many studies have demonstrated that organizational identification can have significant influences on employee attitudes and behavioural outcomes, such as job satisfaction, commitment to an organization, and extra role performance (Liu et al. 2011). Mael and Ashforth (1995) found that employees who identified with their organization were more

highly motivated, with superior work performance and job satisfaction. Similarly, Van Dick (2001) concluded that employees who identified with their organization gave more time and effort to their work and tended to have longer tenures at their firms.

Organizational identification is often measured in terms of shared values and goals between an individual and organization (Reade 2001). Since campus-based education is achieved through the combined efforts of the student and the professor/college, it follows that organizational identification might help align the goals of students, professors and institution. Ouchi (1980) states that individuals who identify with an organization are assumed to work instinctively to benefit the organization. We hypothesize that organizational identification might also work to drive students to achieve superior work performance for their own self-benefit.

A meta-analysis of 96 papers on the topic organizational identification by Riketta (2005) found only one paper related to a higher education context, which was by Mael and Ashforth (1992). The few studies that have been published after 2005 highlight the importance of the topic. For example, Stephenson and Bell (2014) found that if the level of identification with a university increases, the expected number of donations would also increase. Halbesleben and Wheeler (2009) observed that student identification with business education models impact student satisfaction and likelihood to donate, while Di Battista et al. (2014) found that student identification with a university moderated the relationship between sense of justice and extra-role behaviours. Hence, it is clear that social identification has an impact on student satisfaction and the engagement of students with their university, but previous studies have not explored the influence of organizational identification on student commitment to learning and academic achievement.

Conceptual framework

The conceptual model presented in Figure 1 summarizes the relationships investigated in the study.

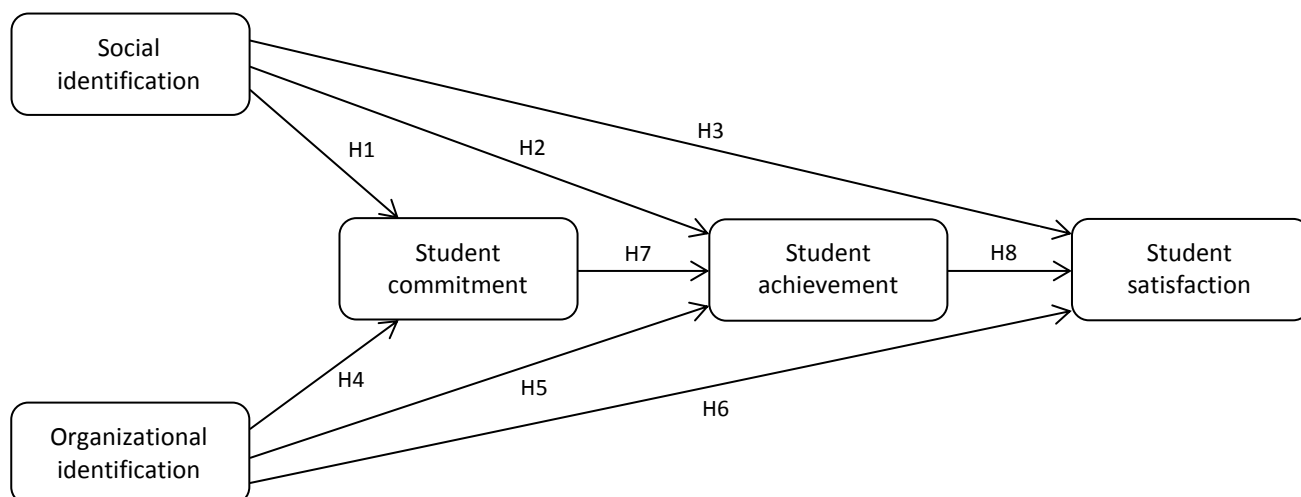


Figure 1. Conceptual model.

In a work setting, van Knippenberg and van Schie (2000) found that social (employee) identification was more strongly related to job motivation than organizational identification. In an educational context, research by Platow et al. (2013) concluded that students who identify strongly as a student in their discipline area are more likely to develop an intrinsic interest in their subject and programme, and that they will seek to share the interests they perceive to be held by other students in their discipline, influencing their commitment and approach to learning. Hence, we propose:

Hypothesis 1: Social identification is positively related to student commitment.

Student learning is influenced by three sets of structures and processes: the person structures and processes; the activity structures and processes (which involve other participants in the activity); and the situational structures and processes (Lave 1993). Wortham (2004) observed that social identification and learning can intertwine in the classroom through the personalizing of discourse. Bliuc et al. (2011b) found a relationship between student social identity and academic achievement that is mediated by deep approaches to learning. Deep approaches to learning involve students actually understanding and engaging with subjects, which contrasts with surface approaches where the students simply aim to reproduce material through rote learning, i.e., through simply memorizing information. Students with high levels of social identification are more likely to adopt a deep learning approach, which in turn leads to better academic outcomes. The level of a student's achievement clearly has many determinants, but these likely include the level of identification between the student and his/her peers. Thus, we propose:

Hypothesis 2: Social identification is positively related to student achievement.

In an organizational context, van Knippenberg and van Schie (2000) concluded that social (employee) identification is more strongly related to job satisfaction than organizational identification. Also, in a higher education context, a survey of students in Poland conducted by Sojkin et al. (2012) found that social conditions (and therefore implicitly social relationships) were a key determinant of student satisfaction. Hence, the following hypothesis is specified:

Hypothesis 3: Social identification is positively related to student satisfaction.

Despite the finding of van Knippenberg and van Schie (2000) that social (employee) identification is more strongly related to job motivation than organizational identification, other studies have found that organizational identification does influence employee motivation/commitment (e.g., Ashforth and Saks 1996; Riketta 2005). Employees who identify strongly with an organization attach much importance to their organizational membership and these individuals are motivated and willing to perform the tasks required by the organization (Liu et al. 2011). We posit that if students identify with their institution then the student and institution will have shared objectives, such as the achievement of high academic attainment, which will lead students to being more committed to their study. Thus:

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

Hypothesis 4: Organizational identification is positively related to student commitment.

In an organizational context, Liu et al. (2011) found that organizational identification is positively related to an individual's work performance. Earlier research also concluded that a link exists between organizational identification and employee performance (e.g., Ashforth et al. 2008; Riketta 2005; van Dick et al. 2006). Hence, we expect that organizational identification influences student performance as it affects employee performance, and we hypothesize the following:

Hypothesis 5: Organizational identification is positively related to student achievement.

Several studies have found that organizational identification is positively associated with job satisfaction (e.g., Ashforth and Saks 1996; Lee 1971; Riketta 2005). A study by Wilkins and Huisman (2013) suggests a link between student-university identification and student satisfaction, because students who were satisfied were found to engage in various behaviours that benefited the institution, such as choosing to study at that institution, engaging in supportive behaviours that promote or serve the institution, or simply by positively interacting or involving themselves with the institution. Thus, we expect:

Hypothesis 6: Organizational identification is positively related to student satisfaction.

Effective learning requires time and effort from students (Wilkins et al. 2010); thus, the more motivated a student, the more time and effort they will devote to their study, and this *might* lead to superior academic attainment. A study by Curry (1984) found that the level of student commitment influences student task behaviours as well as school (and therefore also implicitly student) achievement. Therefore:

Hypothesis 7: Student commitment is positively related to student achievement.

Students' levels of satisfaction with programmes and institutions are affected by a wide range of factors, which include the student's level of academic attainment, because students who fail or achieve low grades are rarely satisfied (Wilkins and Epps 2011). Earlier research also indicates that a link exists between student achievement and student satisfaction (e.g., Bean and Bradley 1986; Pike 1991), although it is not universally agreed whether achievement causes satisfaction or whether satisfaction causes achievement. We argue that achievement is one of the factors that determine satisfaction, hence we hypothesize:

Hypothesis 8: Student achievement is positively related to student satisfaction.

Wilkins (2013) found that in international schools in the United Arab Emirates (UAE), particularly in those where students achieve higher examination grades, it is the norm for students who are motivated by education quality and institutional prestige to seek entry into universities outside the UAE, mainly in the United States (US) and United Kingdom (UK). This happens even though the UAE has more international branch campuses (campuses owned or operated by foreign universities) offering transnational higher education than any

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

other country in the world (Wilkins and Balakrishnan 2013). The term 'transnational education' refers to programmes in which learners are located in a country other than the one in which the awarding institution is based (McBurnie and Ziguras 2007).

Altbach (2010) has noted that the total product offerings of international branch campuses rarely come close to the 'home' campus products in terms of breadth of curriculum, quality of academic staff, physical environment, learning resources and social facilities. It is clear that studying at New York University in America is not the same as studying at New York University Abu Dhabi (NYUAD) in the UAE. Waters and Leung (2013) argue that students in transnational education do not develop their social capital to the extent they would have had they gone to a country such as the UK for their higher education.

Given that organizational identification is promoted when an individual perceives an organization as attractive or prestigious (Ahearne et al. 2005; Dutton et al. 1994), this research seeks to discover whether organizational identification among students at international branch campuses is lower than at home country campuses, as well as the resulting effects on student commitment, achievement and satisfaction. Interestingly, Wilkins and Huisman (2013) discovered that high school students in the UAE are able to identify with universities in the UAE (including international branch campuses) even when they have no or minimal previous interaction or experience with those universities.

Moderating variables can change the relationships between other variables depending on the level or strength of the moderating variable (Hair et al. 2010).

Hypothesis 9a: Type of institution (home country campus or international branch campus) moderates the relationships between social and organizational identification with student commitment, achievement and satisfaction.

Sheard (2009) found significant differences in commitment and achievement among male and female students, while other research has suggested that gender has a significant effect on student satisfaction (e.g., Parahoo et al. 2013; Tessema et al. 2012). Hannassab and Tidwell (2002) found that females and undergraduate students had a greater need for campus services than males and postgraduate students. The extent to which students perceive their individual needs are being met likely has an impact on the students' identification and general level of satisfaction with their institution. Wilkins and Balakrishnan (2013) concluded that undergraduates and postgraduates studying in transnational higher education have significant differences in satisfaction. Identity distinctiveness – achieved for example through membership in a well-recognized MBA programme – can help individuals satisfy self-distinctiveness needs (Ashforth and Mael 1989) while identity similarity can satisfy the need for self-continuity (Pratt, 1998).

Hypothesis 9b: Gender moderates the relationships between social and organizational identification with student commitment, achievement and satisfaction.

Hypothesis 9c: Level of programme (undergraduate or postgraduate) moderates the relationships between social and organizational identification with student commitment, achievement and satisfaction.

In summary, we test whether type of institution (home country campus versus international branch campus), gender, and level of programme (undergraduate versus postgraduate) moderate the relationships between social and organizational identification with student commitment, achievement and satisfaction.

Methodology

Sample and data collection

Using a convenience sampling approach, 600 hard copy questionnaires were distributed and completed during lectures to students enrolled in business/management programmes at two business schools. A total of 437 usable questionnaires were returned, representing a response rate of 72.8%; 325 were studying at an international branch campus in the UAE and 112 were at a home country campus in the UK. Both samples have mixes of domestic/international students that are representative for the type of institution in its respective country. All of the UK students were studying full-time whereas just over a third of the UAE sample were studying part-time. Although we planned to treat the two samples from the two institutions as separate groups, as we found that the type of institution did not have a moderating effect on any of the relationships in our model we decided to treat the two samples as one in our analysis. Each of the two country samples were representative of the business/management student population in each institution.

Of the 437 respondents, 46.9% were male and 53.1% were female, and 62.2% were undergraduates while 37.8% were postgraduate students. We hypothesized that although undergraduate and postgraduate students have different motivations and experiences, they are both influenced by social *and* organizational identification. Although we obtained unequal sample sizes for type of institution and level of study, which can affect the homogeneity of variance and covariance assumption and increase the probability of type II errors, the moderation tests conducted on the basis of institution type and study level indicated no significant differences. Therefore, the unequal sample sizes were not a source of bias in our results.

The survey questionnaire was divided into five sections, with the items in each section relating to one of the study's five constructs. Respondents used a 7-point Likert scale for all items, where 1=strongly disagree and 7=strongly agree, to indicate their feelings and attitudes about their relationships with other students in their programme and with their university; their motivation and commitment to study; their academic achievement; and their satisfaction with their programme and university.

Measures

Our conceptual model involves two exogenous (independent) variables – *Social identification* and *Organizational identification* – and three endogenous (dependent) variables: *Commitment*, *Achievement* and *Satisfaction*. The measures for *Social identification* were adapted from the scale developed by Leach et al. (2008). The final scale, consisting of five items, had a Cronbach's alpha value of .88, indicating strong internal consistency. Examples of items include: 'I feel a bond with the other students in my degree programme' and 'Fellow students are a source of future networking for me'.

The measures for *Organizational identification* were adapted from the scale used by Abrams et al. (1998). The final scale, with four items, had a Cronbach's alpha value of .87. Examples of items include: 'I feel proud to be a student at my university' and 'I feel a strong

sense of belonging with my university'. The scales for *Commitment* (4 items; Cronbach's alpha = .81) and *Achievement* (5 items; Cronbach's alpha = .83) were developed by the authors to ensure that they were specific to the requirements of this research. Examples of items for *Commitment* include: 'I complete all coursework in good time to meet deadlines' and 'I do the extra reading/research/activities recommended by lecturers'. Examples of items for *Achievement* include: 'I am currently performing to the best of my ability' and 'My grades likely put me in the top 25% of students in my degree programme'. The five item scale for *Satisfaction* (Cronbach's alpha = .89) was based on Wilkins et al. (2012). Based on the .70 cut-value proposed by Nunnally (1978), the Cronbach's alpha tests indicate that all of the scales have strong internal reliability.

A draft version of the questionnaire was subjected to a pretest that involved 14 undergraduate and postgraduate business/management students at a UK university. Students participating in the pretest also took part in semi-structured face-to-face individual interviews, which each lasted about 15-20 minutes. The interviews were used to gain useful contextual background information and to ensure that the scales contained the most appropriate items. Examples of questions asked include: 'Do you consider yourself to be a typical business/management student? Please explain your answer', 'Apart from the formal learning, what other benefits do you derive from being a student in your degree programme?' and 'How would you describe your relationship with this university?'. Other than the minor rephrasing of two items to make them more easily understood by students, the pretest did not reveal any particular issues that needed addressing and all items seemed to work well. The items used in the final survey questionnaire are shown in Appendix 1.

Preliminary analysis and measurement model

To examine common method bias, we performed Harman's one-factor test for common method variance (CMV) (Podsakoff et al. 2003). Exploratory factor analysis (EFA) on one fixed factor revealed that this factor only explained 33.4% of variance of the initial 30 variables as compared to the seven factor solution that explains more than 66% of the variance, which indicates the non-existence of CMV bias (Hair et al. 2010). Furthermore, the proposed model is quite complex in its nature and thus inherently potential common method bias is reduced.

Confirmatory factor analysis (CFA) was run to establish the convergent and discriminant validity of the scales. The items with non significant loading, or the items which failed to yield a standard loading of more than 0.45 were removed from the measurement model. This resulted in the removal of two indicators from the social identification scale and two items from the organizational identification scale. Similarly, we dropped one item from the commitment, achievement, and satisfaction scales respectively. For all the remaining indicators, item loadings were on their respective scale and were statistically significant.

Table 1 reports the composite reliability (CR) and average variance extracted (AVE) for each construct in our research model. All the variables yielded acceptable values for construct reliability (>.70) and AVE (>.45), thus establishing convergent reliability (Said et al. 2011; Yap and Khong 2006). The measurement model fit indices indicate that the data fits well with the hypothesized model: $\chi^2(241)=614.01$, $p<.001$; $\chi^2/df=2.55$; CFI=.932; RMSEA=.060.

Table 1. Construct reliability and average variance extracted.

Construct	Construct reliability (CR)	Average variance extracted (AVE)
Social identification	.84	.50
Organizational identification	.86	.62
Commitment	.82	.48
Achievement	.83	.50
Satisfaction	.88	.61

To establish discriminant validity, the approach suggested by Fornell and Larcker (1981) was adopted. Fornell and Larcker (1981, 45-46) indicate that for any two constructs, A and B, the AVE for A and the AVE for B both need to be larger than the shared variance (i.e., square of the correlation) between A and B; that is, both AVE estimates have to be greater than the shared variance estimate. For example, the AVE for organizational identification is .62 and for satisfaction it is .60; both these values are greater than the square of the correlation (.53) between these two constructs. Thus, it can be concluded that the constructs in this proposed research framework (Figure 1) are valid, reliable and distinct from each other (Yap and Khong 2006). Table 2 reports the correlations between the five constructs.

Table 2. Construct correlations.

	Social identification	Organizational identification	Commitment	Achievement
Social identification	1			
Organizational identification	.507**	1		
Commitment	.300**	.408**	1	
Achievement	.341**	.435**	.644**	1
Satisfaction	.413**	.730**	.429**	.517**

** Correlation significant at the .01 level (2-tailed).

Based on the acceptable results for the measurement model, we proceed with the full structural equation modelling (SEM) procedure using AMOS (Version 18.0) to test the causal model and related hypotheses.

Results

The results of the SEM indicate that the data were a good fit to the proposed model: $\chi^2(221) = 656.76$, $p < .001$; $\chi^2/df = 2.92$; CFI = .916; RMSEA = .068. Table 3 presents the results of proposed hypotheses. All associations are significant ($p < 0.05$) except for hypothesis H3, indicating that social identification has no direct effect on student satisfaction.

While applying SEM techniques, estimating mediation using the bootstrapping procedure is considered suitable due to its ability to analyse mediation of complex latent constructs (Shrout and Bolger 2002). The mediation results are based on the extraction of 2000 bootstrap samples with 95% bias-corrected confidence intervals. To assess the mediating effect of commitment on the relationship between social identification and achievement, as well as on organizational identification and achievement, we examine the relevant

significance of direct and indirect effects. The results indicate that effect size of the direct relationship for social identification on achievement was significant but the indirect effect was non significant. This suggests that there is no mediating effect of commitment on the relationship between social identification and achievement. The direct and indirect effect sizes of organizational identification on achievement were both significant, thus indicating that the relationship between organizational identification and achievement is partially mediated through commitment.

Table 3. Standardized estimates.

Hypothesis	Standardized estimate	Standard error	Critical ratio	Result
H1 Social identification to commitment	.135	.060	2.468*	Supported
H2 Social identification to achievement	.105	.044	2.523*	Supported
H3 Social identification to satisfaction	-.005	.037	.128	Not supported
H4 Organizational identification to commitment	.344	.076	5.722***	Supported
H5 Organizational identification to achievement	.158	.055	3.594***	Supported
H6 Organizational identification to satisfaction	.738	.091	9.220***	Supported
H7 Commitment to achievement	.754	.057	12.553***	Supported
H8 Achievement to satisfaction	.167	.041	3.783***	Supported

Note: * $p < .05$; *** $p < .001$

To test the mediating effect of achievement on the relationship between social identification and satisfaction, as well as on organizational identification with satisfaction, we again examine the direct and indirect effect sizes along with their significance. The direct effect size of social identification on satisfaction was not significant, and the indirect effect size was significant, thus indicating that the relationship is fully mediated through achievement. On the other hand, direct and indirect effect sizes of organizational identification on satisfaction were both significant, thus indicating that the relationship between organizational identification and satisfaction is partially mediated through achievement. Table 4 presents the results of the bootstrapping mediation tests.

Table 4. Mediation test results.

Direct relationship	Mediator	Direct effect	Indirect effect	Mediation
Social identification on achievement	Commitment	.105*	.102	None
Organizational identification on achievement	Commitment	.158**	.259***	Partial
Social identification on satisfaction	Achievement	-.005	-.035**	Full
Organizational identification on satisfaction	Achievement	.633***	.070***	Partial

Note: * $p < .05$; ** $p < .01$; *** $p < .001$

Using the original model as a baseline, we conducted groupwise moderation analysis to investigate the moderating role of type of institution, gender and programme level. Table 5 presents the fit statistics of the baseline and moderated models.

Table 5. Fit statistics for baseline and moderated models.

Fit measure	Baseline	Institution type	Gender	Programme level
χ^2	656.760***	968.270***	946.031***	929.500***
χ^2/df	2.972	2.191	2.140	2.103
CFI	.917	.903	.906	.897
RMSEA	.068	.053	.052	.054

*** $p < .001$

To test for moderating effects, we examined the significance of the difference for each path coefficient after the moderating variable was added to the model. A critical ratio (C.R.) larger than 1.96 indicates the existence of a moderating effect. Table 6 provides the results of moderation analysis. The results indicate that institution type and programme level do not moderate any of the causal relationships in our theoretical model. However, in the case of gender as a moderating variable, a significant difference was found for the path from organizational identification to commitment. The beta values indicate that a positive moderating effect is present for males. Nonetheless, by looking at the overall results of the moderation analysis, it can be concluded that no meaningful moderating variables exist in our proposed model.

Table 6. Moderation tests for institution type, gender and programme level

Hypothesis	Institution type			Gender			Programme level		
	Home campus	International branch campus	Critical ratio	Male	Female	Critical ratio	UG	PG	Critical ratio
H1 Social identification to commitment	.045	.201*	-1.043	.127*	.158*	.142	.114	.045	-.458
H2 Social identification to achievement	.171*	.072	1.304	.152*	.066	-1.322	.097	.171*	.976
H3 Social identification to satisfaction	.055	-.045	1.194	-.034	.020	.693	.027	.055	.279
H4 Organizational identification to commitment	.073	.422*	-1.346	.488*	.263*	-2.240 ^a	.307*	.073	-.979
H5 Organizational identification to achievement	.137	.137*	.821	.198*	.129*	-1.400	.196*	.137	.276
H6 Organizational identification to satisfaction	.636*	.775*	.580	.696*	.760*	.139	.728*	.636*	.553
H7 Commitment to achievement	.744*	.767*	.733	.691*	.798*	.025	.756*	.744*	.342
H8 Achievement to satisfaction	.262*	.146*	.426	.205*	.134*	-.041	.159*	.262*	.520

Notes: * $p < .05$; ^aTwo groups differ significantly and a critical ratio value of more than 1.96 indicates a moderating effect.

Discussion

The prime objective of this study was to investigate how different aspects of identification relate to university students' educational commitment, achievement, and subsequent satisfaction with their programme and institution. We empirically tested the effects of social and organizational identification as two relevant proxies of identification in a management education context. It is interesting to note that social identification appears to be a weaker

predictor of student commitment, achievement, and satisfaction compared with organizational identification. In fact, only two of the three proposed hypotheses predicting a direct relationship between social identification and student commitment, achievement, and satisfaction were supported. Furthermore, the two statistically significant relationships have very low beta values ($<.30$) indicating that no meaningful inferences can be drawn from them. On the other hand, organizational identification appears to be a very strong predictor of student satisfaction, followed by commitment and achievement. Positive relationships between commitment and achievement, and achievement and satisfaction, were also supported by our research model. However, it is interesting to note that while commitment strongly predicts achievement, the achievement construct is not as strong a predictor of satisfaction as organizational identification.

There can be several reasons why social identification was a weak predictor of students' educational commitment, achievement, and satisfaction. In general terms, demographic diversity or, in the case of postgraduate programmes, differences in employment experiences could hamper the development of social identification. If perceived by the students as outweighing the academic bond, group projects could create situations that reduce rather than increase social identification. Considering the nature of group assignments in business/management studies, if a student feels that he/she is not welcomed in the social group, or the membership of a social group is more costly than the benefits it offers, one can assume that it will weaken the relationship between social identification and student educational commitment. Furthermore, a student can blame his/her low educational performance on the lack of group support, which might be reflected in a weaker relationship between social identification and educational achievement, and subsequently satisfaction, as suggested by our empirical findings. Finally, the importance of social networks might not be as obvious to students in the earlier stages of their programmes, thus explaining the lower levels of social identification among some respondents.

On the other hand, compared with social identification, organizational identification with a university (or business school) is more enduring and extremely important for a student's future success. Universities and business schools are brands and many employers use school affiliation as a heuristic while considering applicants' suitability for their organization. Other things being equal, students who graduate from well-reputed universities always have a better chance of attaining a job offer as compared to those students from less reputed universities. Thus, the more an institution is reputable, the greater will be the expectation from students to perform and deliver as compared to their competitors, which ultimately requires their strong educational commitment. Similarly, the role of organizational identification in student employability prospects is also reflected in the student's overall satisfaction with the university, as students are generally aware of the role that a university's brand name and reputation plays in gaining the attention of prospective employers.

Although organizational identification was a strong predictor of student satisfaction, it is interesting to note that organizational identification was not as strong a predictor of student achievement than commitment, which had a strong positive relationship with student achievement. This might be due to the fact that most students will attribute their academic achievement to internal rather than external explanations. This argument is based on the fact that high achieving students typically have a history of solid academic performance,

which is usually the product of hard work and commitment, and so it is unlikely that these students would attribute their current academic performance to their institution.

Implications for practice

The apparent results present a paradox. Universities in general, and business schools in particular, put a strong emphasis on effective teamwork while encouraging students to build and maintain social networks. Nonetheless, our results indicate that such efforts are not fully reflected in students' perceptions. The results suggest that perceptions of social identification failed to meaningfully predict their educational commitment or satisfaction with the institution. Perhaps it needs a more rigorous effort from universities to highlight the importance of these soft skills. It is important for students to understand that their university's brand reputation might help them gain employment but it is their ability to work in teams and cultivate their social capital that will ultimately determine their success or failure in the labour market. Thus, universities should build new mechanisms to enhance the team spirit by specifically focusing on this exercise beyond the academic environment, where there will be less pressure and more space to successfully progress through team building stages.

On the other hand, one should not ignore the importance of organizational identification. The results indicate that student organizational identification perceptions are strongly linked with student commitment and satisfaction. As well as influencing student commitment and satisfaction, Hong and Yang (2009) have shown how student-organizational identification can lead to other benefits for institutions, such as positive word of mouth. Hence, the task of building the organizational brand will remain pivotal in the education industry. Wilkins and Huisman (2013) suggest that institutions would benefit from articulating and communicating their identities clearly, coherently and in a persuasive manner, emphasising those aspects of the university's identity that students will perceive as prestigious and similar to their own identities. In other words, managers should focus on implementing communication strategies that emphasise and enhance the institution's reputation and brand quality.

Finally, while alumni offices at universities put increasing efforts into attempting to reap the benefits of student-university identification, many universities put insufficient attention into building the identification in the first place. Organizational identification develops and grows over time (Einwiller et al. 2006), so universities should actively attempt to build student-university identification as soon as students start their programmes of study. Developing and promoting the institution's brand is one way that universities can build prestigious, distinctive and admired identities with which students will want to identify, but universities can also offer a wide range of facilities and activities that might promote organizational identification, such as high quality academic support and extra-curricular activities.

Conclusion

The key contribution of this study is in providing support for the hypothesis that organizational identification can influence the attitudes and behaviour of higher education students, as it has been shown to do with employees and consumers. Although students – particularly fee-paying students – may be regarded as consumers, unlike most other types of consumers, students must contribute in partnership with their institution to the process

that will result in academic achievement, which is a recognised prerequisite for student satisfaction. The student contribution to the learning process requires commitment, which is essentially no different to the commitment demonstrated by employees who identify with their organization. Thus, it can be seen that our conceptual model has drawn upon and developed aspects of identification from both the marketing and organizational behaviour literatures, and institutional actions taken in response to our findings have the potential to benefit both students and the institution.

Although this paper advances our understanding of the influences of social and organizational identification on student commitment, achievement and satisfaction, this research is not without limitations. Our research relied on cross-sectional survey data, but given that both social and organizational identification change and develop over time (see e.g. Jungert 2013), we were unable to capture or represent this process. At the UAE university, the undergraduate classes do not move in synchronized cohorts and this might prevent early social bonding. The results reflect the perceptions of business school students only and therefore the results cannot be generalized for students in other faculties or disciplines. Furthermore, the research relied on the self-reported data of students and it was beyond the scope of this study to assess the extent to which the students' perceptions reflect reality. Cultures and social norms vary in different parts of the world, which influences an individual's attitudes and behaviours, so it is likely that student perceptions will vary according to local contexts.

Future studies can use more diverse samples to overcome these limitations. In the future, it would also be interesting to investigate how social and organizational identification predict students' advocacy behaviour. We tended in this study to focus on the positive aspects of social and organizational identification, and of teamwork, but future research could consider students with lower aspirations, lower capabilities and those negatively influenced through dis-identification. Future research could also consider the influences of identification among professors and the institution's managers.

References

- Abrams, D., K. Ando, and S. Hinkle. 1998. Psychological attachment to the group: Cross-cultural differences in organizational identification and subjective norms as predictors of workers' turnover intentions. *Personality and Social Psychology Bulletin* 24, no. 10: 1027-39.
- Ahearne, M., C.B. Bhattacharya, and T. Gruen. 2005. Antecedents and consequences of customer-company identification: Expanding the role of relationship marketing. *Journal of Applied Psychology* 90, no. 3: 574-85.
- Allen, V.L., D.A. Wilder, and M.L. Atkinson. 1983. Multiple group membership and social identity. In *Studies in social identity*, eds. T.R. Sarbin and K.E. Scheibe, 92-115. New York: Praeger.
- Altbach, P.G. 2010. Why branch campuses may be unsustainable. *International Higher Education*, no. 58, Winter 2010: 2-3.
- Ashforth, B.E., S.H. Harrison, and K.G. Corley. 2008. Identification in organizations: An examination of four fundamental questions. *Journal of Management* 34, no. 3: 325-74.
- Ashforth, B.E., and F. Mael. 1989. Social identity theory and the organization. *Academy of Management Review* 14, no. 1: 20-39.

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

- Ashforth, B.E., and A.M. Saks. 1996. Socialization tactics: Longitudinal effects on newcomer adjustment. *Academy of Management Journal* 39, no. 1: 149-78.
- Baruch, Y., and A. Leeming. 2001. The added value of MBA studies – Graduates' perceptions. *Personnel Review* 30, no. 5: 589-601.
- Bean, J.P., and R.K. Bradley. 1986. Untangling the satisfaction-performance relationship for college students. *Journal of Higher Education* 57, no. 4: 393-412.
- Benkhoff, B. 1997. Better performance through organizational identification: A test of outcomes and antecedents based on social identity theory. In *The search for competitiveness and its implications for employment*, ed. J. Wickham, 159-79. Dublin: Oak Tree Press.
- Bhattacharya, C.B., and S. Sen. 2003. Consumer-company identification: A framework for understanding consumers' relationships with companies. *Journal of Marketing* 67, no. 2: 76-88.
- Bliuc, A.M., R.A. Ellis, P. Goodyear, and D.M. Hendres. 2011a. Understanding student learning in context: Relationships between university students' social identity, approaches to learning, and academic performance. *European Journal of Psychology of Education* 26, no. 3: 417-33.
- Bliuc, A.M., R.A. Ellis, P. Goodyear, and D.M. Hendres. 2011b. The role of social identification as university student in learning: Relationships between students' social identity, approaches to learning, and academic achievement. *Educational Psychology* 31, no. 5: 559-74.
- Bong, M., and E.M. Skaalvik. 2003. Academic self-concept and self-efficacy: How different are they really? *Educational Psychology Review* 15, no. 1: 1-40.
- Bornholt, L.J. 2001. Self-concepts, usefulness and behavioural intentions in the social context of schooling. *Educational Psychology* 21, no. 1: 67-78.
- Bourdieu, P. 1986. The forms of capital. In *Handbook of theory and research for the sociology of education*, ed. J.G. Richardson, 241-58, Westport, CT: Greenwood.
- Cameron, J. 1999. Social identity and the pursuit of possible selves: Implications for the psychological well-being of university students. *Group Dynamics: Theory, Research, and Practice* 3, no. 3: 179-89.
- Chen, A., N. Doherty, and S. Vinnicombe. 2012. The perceived value of networking through an EMBA: A study of Taiwanese women. *Career Development International* 17, no. 7: 646-62.
- Curry, L. 1984. Student commitment and school organization in relation to on-task behaviour and achievement. *Contemporary Educational Psychology* 9, no. 2: 171-84.
- Dean, K.L., and J.P. Jolly. 2012. Student identity, disengagement, and learning. *Academy of Management Learning and Education* 11, no. 2: 228-43.
- Di Battista, S., M. Pivetti, and C. Berti. 2014. Engagement in the university context: exploring the role of sense of justice and social identification. *Social Psychology of Education* 17, no. 3: 471-90.
- Dutton, J.E., J.M. Dukerich, and C.V. Harquail. 1994. Organizational images and member identification. *Administrative Science Quarterly* 39, no. 2: 239-63.
- Einwiller, S.A., A. Fedorikhin, A.R. Johnson, and M.A. Kamins. 2006. Enough is enough! When identification no longer prevents negative corporate associations. *Journal of the Academy of Marketing Science* 34, no. 2: 185-94.

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

- Fornell, C., and D.F. Larcker. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18, no. 1: 39-50.
- Hair, J.F., W.C. Black, B.J. Babin, R. Anderson, and R.L. Tatham. 2010. *Multivariate data analysis*, 7th Edition. Upper Saddle River, NJ: Prentice Hall.
- Halbesleben, J.R.B., and A.R. Wheeler. 2009. Student identification with business education models: measurement and relationship to educational outcomes. *Journal of Management Education* 33, no. 2: 166-95.
- Hanassab, S., and R. Tidwell. 2002. International students in higher education: Identification of needs and implications for policy and practice, *Journal of Studies in International Education* 6, no. 4: 305-22.
- Haslam, S.A., J.C. Turner, P.J. Oakes, K. Reynolds, and B. Doosje. 2002. From personal pictures in the head to collective tools in the world: How shared stereotypes allow groups to represent and change social reality. In *Stereotypes as explanations: The formation of meaningful beliefs about social groups*, eds. C. McGarty, V.Y. Yzerbyt and R. Spears, 157-85. Cambridge: Cambridge University Press.
- Hay, A. 2014. 'I don't know what I am doing!': Surfacing struggles of managerial identity work. *Management Learning* 45, no. 5: 509-24.
- Hong, S.Y., and S.U. Yang. 2009. Effects of reputation, relational satisfaction, and customer-company identification on positive word-of-mouth intentions. *Journal of Public Relations Research* 21, no. 4: 381-403.
- Jungert, T. 2013. Social identities among engineering students and through their transition to work: A longitudinal study. *Studies in Higher Education* 38, no. 1: 39-52.
- Kim, T., K. Chang, and Y.J. Ko. 2010. Determinants of organisational identification and supportive intentions. *Journal of Marketing Management* 26, no. 5/6: 413-27.
- Lave, J. 1993. The practice of learning. In *Understanding practice: Perspectives on activity and context*, eds. S. Chaikin and J. Lave, 3-34. Cambridge: Cambridge University Press.
- Leach, C.W., M. van Zomeren, S. Zebel, M.L.W. Vliek, S.F. Pennekamp, B. Doosje, J.W. Ouwerkerk, and R. Spears. 2008. Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology* 95, no. 1: 144-65.
- Lee, S.M. 1971. An empirical analysis of organizational identification. *Academy of Management Journal* 14, no. 2: 213-26.
- Liu, Y., R. Loi, and L.W. Lam. 2011. Linking organizational identification and employee performance in teams: The moderating role of team-member exchange. *International Journal of Human Resource Management* 22, no. 15: 3187-3201.
- Mael, F.A., and B.E. Ashforth. 1992. Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior* 13, no. 2: 103-23.
- Mael, F.A., and B.E. Ashforth. 1995. Loyal from day one: Biodata, organizational identification, and turnover among newcomers. *Personnel Psychology* 48, no. 2: 309-33.
- Markus, H., and P. Nurius. 1986. Possible selves. *American Psychologist* 41, no. 9: 954-69.
- McBurnie, G., and C. Ziguas. 2007. *Transnational education: Issues and trends in offshore higher education*. Abingdon: Routledge.
- Mowday, R.T., L.W. Porter, and R.M. Steers. 1982. *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.
- Nunnally, J.C. 1978. *Psychometric theory*, 2nd edition. New York: McGraw-Hill.

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

- O'Reilly III, C., and J. Chatman. 1986. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behaviour. *Journal of Applied Psychology* 71, no. 3: 492-99.
- Ouchi, W.G. 1980. Markets, bureaucracies, and clans. *Administrative Science Quarterly* 25, no. 1: 129-41.
- Palincsar, A.S. 1998. Social constructivist perspectives on teaching and learning. *Annual Review of Psychology* 49: 345-375.
- Parahoo, S.K., H.L. Harvey, and R.M. Tamim. 2013. Factors influencing student satisfaction in universities in the Gulf region: Does gender of students matter? *Journal of Marketing for Higher Education* 23, no. 2: 135-54.
- Pike, G.R. 1991. The effects of background, coursework, and involvement on students' grades and satisfaction. *Research in Higher Education* 32, no. 1: 15-30.
- Platow, M.J., K.I. Mavor, and D.M. Grace. 2013. On the role of discipline-related self-concept in deep and surface approaches to learning among university students. *Instructional Science* 41, no. 2: 271-85.
- Podsakoff, P.M., S.B. MacKenzie, J.Y. Lee, and N.P. Podsakoff. 2003. Common method biases in behavioural research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88, no. 5: 879-903.
- Pratt, M.G. 1998. To be or not to be: Central questions in organizational identification. In *Identity in organizations: Building theory through conversations*, eds. D.A. Whetten and P.C. Godfrey, 33-47. Monterey, CA: Brooks-Cole.
- Reade, C. 2001. Antecedents of organizational identification in multinational corporations: Fostering psychological attachment to the local subsidiary and the global organization. *International Journal of Human Resource Management* 12, no. 8: 1269-91.
- Ricketta, M. 2005. Organizational identification: A meta-analysis. *Journal of Vocational Behaviour* 66, no. 2: 358-84.
- Said, H., B.B. Badru, and M. Shahid. 2011. Confirmatory factor analysis (CFA) for testing validity and reliability instrument in the study of education. *Australian Journal of Basic and Applied Sciences* 5, no. 12: 1098-1103.
- Sambrook, S., and H. Willmott. 2014. The rigor of management education and the relevance of human resource development: Natural partners or uneasy bedfellows in management practice? *Management Learning* 45, no. 1: 39-56.
- Sheard, M. 2009. Hardiness commitment, gender, and age differentiate university academic performance. *British Journal of Educational Psychology* 79, no. 1: 189-204.
- Shrout, P.E., and N. Bolger. 2002. Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods* 7, no. 4: 422-45.
- Sluss, D.M., and B.E. Ashforth. 2007. Relational identity and identification: Defining ourselves through work relationships. *Academy of Management Review* 32, no. 1: 9-32.
- Smyth, L., K.I. Mavor, M.J. Platow, D.M. Grace, and K.J. Reynolds. 2015. Discipline social identification, study norms and learning approach in university students. *Educational Psychology* 35, no. 1: 53-72.
- Sojkin, B., P. Bartkowiak, and A. Skuza. 2012. Determinants of higher education choices and student satisfaction: The case of Poland. *Higher Education* 63, no. 5: 565-81.
- Stephenson, A.L., and N. Bell. 2014. Motivation for alumni donations: A social identity perspective on branding in higher education. *International Journal of Nonprofit and Voluntary Sector Marketing* 19, no. 3: 176-86.

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

- Sturges, J., R. Simpson, and Y. Altman. 2003. Capitalising on learning: An exploration of the MBA as a vehicle for developing career competencies. *International Journal of Training and Development* 7, no. 1: 53-66.
- Tajfel, H., and J.C. Turner. 1979. An integrative theory of inter-group conflict. In *The social psychology of intergroup relations*, eds. W.G. Austin and S. Worchel, 33-47. Monterey, CA: Brooks-Cole.
- Tessema, M., K. Ready, and C. Malone. 2012. Effect of gender on students' satisfaction and achievement: The case of a midsized Midwestern public university. *International Journal of Business and Social Science* 3, no. 10: 1-11.
- Turner, J. 1991. *Social influence*. Milton Keynes: Open University Press.
- Turner, J.C., M.A. Hogg, P.J. Oakes, S. Reicher, and M.S. Wetherell. 1987. *Rediscovering the social group: A self-categorization theory*. Oxford: Basil Blackwell.
- Vaara, E., and E. Fay. 2011. How can a Bourdieusian perspective aid analysis of MBA education? *Academy of Management Learning and Education* 10, no. 1: 27-39.
- Van Dick, R. 2001. Identification in organisational contexts: Linking theory and research from social and organisational psychology. *International Journal of Management Reviews* 3, no. 4: 265-83.
- Van Dick, R., M.W. Grojean, O. Christ, and J. Wieseke. 2006. Identity and the extra mile: Relationships between organizational identification and organizational citizenship behaviour. *British Journal of Management* 17, no. 4: 283-301.
- Van Knippenberg, D. and E.C.M. van Schie. 2000. Foci and correlates of organizational identification. *Journal of Occupational and Organizational Psychology* 73, no. 2: 137-47.
- Waters, J. and M. Leung. 2013. A colourful university life? Transnational higher education and the spatial dimensions of institutional social capital in Hong Kong. *Population, Space and Place* 19, no. 2: 155-67.
- Wenger, E. 1998. *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.
- Wilkins, S. 2013. 'Home' or away? The higher education choices of expatriate children in the United Arab Emirates. *Journal of Research in International Education* 12, no. 1: 33-48.
- Wilkins, S., and M.S. Balakrishnan. 2013. Assessing student satisfaction in transnational higher education. *International Journal of Educational Management* 27, no. 2: 143-56.
- Wilkins, S., M.S. Balakrishnan, and J. Huisman. 2012. Student satisfaction and student perceptions of quality at international branch campuses in the United Arab Emirates. *Journal of Higher Education Policy and Management* 34, no. 5: 543-56.
- Wilkins, S., and A. Epps. 2011. Student evaluation web sites as potential sources of consumer information in the United Arab Emirates. *International Journal of Educational Management* 25, no. 5: 410-22.
- Wilkins, S., and J. Huisman. 2013. The components of student-university identification and their impacts on the behavioural intentions of prospective students. *Journal of Higher Education Policy and Management* 35, no. 6: 586-98.
- Wilkins, S., S. Martin, and I. Walker. 2010. Exploring the impacts of accelerated delivery on student learning, achievement and satisfaction. *Research in Post-Compulsory Education* 15, no. 4: 455-72.
- Wortham, S. 2004. The interdependence of social identification and learning. *American Educational Research Journal* 41, no. 3: 715-50.

Wilkins, S., Butt, M.M., Kratochvil, D., and Balakrishnan, M.S. (2015), The effects of social identification and organizational identification on student commitment, achievement and satisfaction in higher education. *Studies in Higher Education*, published online 20th April 2015, DOI: 10.1080/03075079.2015.1034258.

Yap, B.W., and K.W. Khong. 2006. Examining the effects of customer service management (CSM) on perceived business performance via structural equation modeling. *Applied Stochastic Models in Business and Industry* 22, no. 5/6: 587-605.

Zambo, D., R.R. Buss, and R. Zambo. 2015. Uncovering the identities of students and graduates in a CPED-influenced EdD program. *Studies in Higher Education* 40, no. 2: 233-52.

Appendix 1. Scale items.

Social identification (Cronbach's $\alpha = .88$)

- I feel a bond with the other students in my degree program
- It is pleasant to be a member of the student cohort in my degree program
- Being a member of the student cohort in my degree program gives me a good feeling
- Fellow students are a source of friendship for me
- Fellow students are a source of future networking for me

Organizational identification (Cronbach's $\alpha = .87$)

- I feel strong ties with my university
- I feel proud to be a student at my university
- I feel a strong sense of belonging with my university
- I am glad to be a student at this university

Student commitment (Cronbach's $\alpha = .81$)

- I complete all coursework in time to meet deadlines
- I do the extra reading/research/activities recommended by lecturers
- I spend sufficient time on my coursework to achieve the best of my ability
- I prepare carefully for examinations

Student achievement (Cronbach's $\alpha = .83$)

- I am achieving the learning objectives expected by my university
- I am currently performing to the best of my ability
- My grades likely put me in the top 25% of students on my degree program
- I understand all of the topics taught in my degree program
- My performance in the degree program is meeting the expectations of my parents/employer

Student satisfaction (Cronbach's $\alpha = .89$)

- So far, my degree program has met all of my expectations
 - I am very satisfied with my degree program and would definitely choose it again
 - I am very satisfied with my university and would definitely choose it again
 - My choice of university was a wise decision
 - I would recommend my university to friends
-