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First year transition experiences and effects on student learning outcomes

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Hong Kong's educational system is undergoing a major reform, and in higher education an additional year will be added to the existing structure. This unique situation creates opportunities to rethink the curriculum to develop one that provides better first year transition experiences to promote better student outcomes. Research findings indicated freshmen often experience adjustment issues in academic study and social and psychological well-being. In this study, we developed indicators of students' perceptions of academic transition, induction to disciplinary knowledge, and integration into the university community for first year undergraduates in Hong Kong. Data were collected from 458 undergraduates across disciplines at the end of their first year of study. Regression models were estimated to examine the relationships between student perceptions of these three areas of transition into first year and student learning outcomes. Findings revealed that better induction into the discipline and integration into the university were more likely to predict positive student outcomes. The findings of this study would be used to inform the design of new first year curriculum.

Keywords: first year experience, transition, student outcomes

Background

Hong Kong's economic well being depends heavily upon its ability to become a knowledge-based economy. "The higher education sector is a key source of impetus for social development and human capital is the single most important asset of Hong Kong" (University Grants Committee, 2004, p. 4). Whether young people can face up to the challenges of a changing world depends significantly on the learning experiences through formal education. The Hong Kong government has initiated a major and bold curriculum reform for secondary and higher education sector. The most significant differences include one less year of senior secondary and an additional year in undergraduate education. Recognised as a major issue for the new 4-Year Undergraduate Curriculum will be the experiences during the first year. Universities in Hong Kong have a unique opportunity to work on developing a curriculum which promotes more positive and productive first year student outcomes.

Existing research on first year experience (FYE) at universities suggests that first year students' integration into the academic and social communities at university impacts greatly on their persistence in their undergraduate programme as well as their intellectual, social and emotional well-being (Tinto, 1987; Tinto & Goodsell-Love, 1993). Latham and Green (1997) viewed the first year as a significant episode in which many changes are encountered while the student moves from a familiar environment to an unknown one. First year experience

research portrays this initial year of university as a critical stage of adjustment and substantial intellectual development (Harvey, Drew, & Smith, 2006; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; McInnis, 2001; Tinto, 1987; Tinto & Goodsell-Love, 1993). The difficulties in transition and adjustment coupled with the high withdrawal rate in some countries (particularly Australia, the US and the UK) have attracted large amounts of research (Harvey et al., 2006; Hurtado, Carter, & Spuler, 1996; Tinto, 1987; Tinto & Goodsell-Love, 1993; Yorke & Longden, 2007). Many efforts to improve the experience of the first year undergraduate were focused on issues of academic transition, having to shift from old study habits and style of learning to those demanded by university (Krause, Hartley, James, & McInnis, 2005; Lam & Kwan, 1999; McInnis, James, & McNaught, 1995; Yorke & Longden, 2007). In their surveys of a sample of first year students, Lowe and Cook (2003) found many students reported having struggled with academic demands, their workload and the need for more independent learning styles. From interviews, Asmar and associates (2000) identified transitional difficulties in relation to intrinsic: taking greater personal responsibilities for work, adjusting to different teaching styles, coping with the workload, adjusting to large classes and having language difficulties. Extrinsic included the lack of feedback on assessment, timetabling and the lack of access and availability of lecturers and tutors. As reported by Krause and colleagues (2005) on findings from their decade-long study in Australia, systematic approaches to orienting new students led to consistent positive impact on their first year experience and as a result, retention was improved.

Although higher education institutions in Hong Kong do not have attrition problems, there is still a concern, particularly with students coming into university a year younger. It is important that in the upcoming undergraduate reform first year experience can be improved and better student outcomes can be achieved. It is recognised that more traditional issues of academic transition, concentrated on issues of transiting from secondary education to tertiary education should be addressed with Hong Kong undergraduates; however, initial pilot work conducted in Hong Kong indicates that a focus on areas such as transition in relation to induction to academic discipline and integration into the university community are more likely to promote better learning strategies, better learning outcomes and a sense of achievement. Of particular importance to the Hong Kong community is the achievement of graduate attributes, being able to demonstrate leadership, think critically, solve ill-defined problems and work collaboratively. In developing a new curriculum how to promote student attainment of such attributes is one priority. Studies related to academic orientation are normally not concerned with how first year students are getting inducted into their academic discipline in terms of the extent to which they have acquired the academic discourse and gained understanding of the key concepts of the discipline or concerned with the development of generic attributes. Acknowledging that the first year experiences can influence experiences in subsequent years however, we need to consider how to promote the development of these in the first year.

The need to better understand student learning experiences and the influences on learning outcomes for Hong Kong undergraduates as we prepare to develop a new curriculum best suited to fostering positive student outcomes, the following conceptual model (Figure 1) is tested.

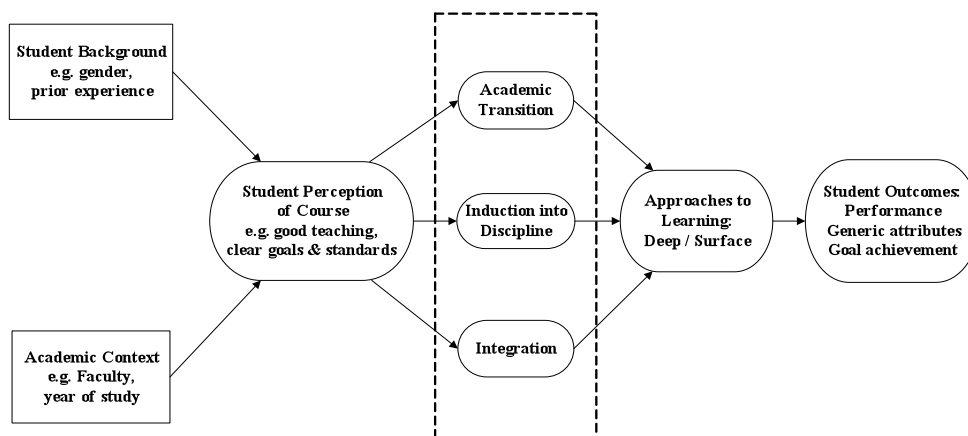


Figure 1: Transition influences on undergraduate student learning and student outcomes

Methods

The data were collected from 458 undergraduate students who completed a student experience questionnaire at the end of their first year in the 2008 academic year. Students came from all faculties and included both the humanities- and science-related disciplines. The questionnaire included the well known dimensions of the Course Experience Questionnaire (Wilson, Lizzio, & Ramsden, 1997) and the Study Process Questionnaire (Biggs, 1987).

In addition, three new dimensions related to first year experience were included. These items were developed and tested previously. Yang and colleagues (2008) found no cross-disciplinary variation among first year undergraduates in Hong Kong but suggested with effective teaching, assessment and facilitative support in the learning environment, deep learning approach would be promoted. Subsequently, the researchers developed and piloted a survey on initially 200 students and then on a larger sample (N=1092) sample focusing on teaching strategies, achievement goals and elements of a cooperative learning environment in relation to academic induction (Webster & Yang, 2009). The scales were found to be reliable and valid in this population. Students were asked respond to the following items on a 5-point scale, from 1=strongly disagree to 5=strongly agree. For the Transition and Induction items, students were asked to indicate the extent of difficulty they had experienced in each of the aspect, whereas for the Integration items they were asked to indicate their agreement.

Academic Transition

- The approach to teaching (lectures, tutorials, problem based learning, etc)
- Amount of information to cope with in their studies
- The mode of learning (learning in groups, self-study, etc)
- Types of assignments
- Relationship (and/or interaction) with teachers
- Depth of understanding required in my studies
- Student participation expected/required in class

Induction to discipline

- The discipline I choose to study
- The content studied in the first year of my degree curriculum
- The key concepts/theories in my area of study

- How my first year studies relate to the overall programme
- The type of employment opportunities that would be available for me after studying this the programme I have chosen
- Skills necessary for studying in my programme of study

Integration into University

- I have fitted into university life well
- My first year experience has opened up an exciting future for me
- I am satisfied with the programme area of study that I have chosen
- I feel positive about being a student of HKU
- I feel a sense of belonging to my Faculty
- I find my interaction with my peers intellectually stimulating
- I find my interaction with my teachers intellectually stimulating

Three student outcome indicators were also used. The first was student perception of goal achievement (“I have achieved my academic goals for my first year” and “I have achieved my personal goals for my first year”). A performance indicator, the Grade Point Average (GPA), was also used. Graduate attributes were measured using indicators developed specifically for the Universities’ institutional wide learning outcomes (e.g. critical thinking, problem solving, communication, leadership). Correlations between the three new dimensions and learning strategies and outcomes were examined. Relationships between the perceptions of course experience, first year experience and learning outcomes were estimated by regression models.

Results

It is well known that there are positive correlations between the student experience of the course in relation to good teaching, clear goals and standards and assessment (Gow & Kember, 1990; Prosser & Trigwell, 1999; Ramsden, 1991, 2003) and that positive perceptions of these is related to students’ approaches to study (Biggs & Tang, 2007; Wilson & Fowler, 2005). This phenomenon was also evident in the data collected from these 458 students. Students who perceived the teaching to be good and the goals and standards to be clear were also those who adopted deeper strategies to their learning. Students who felt the assessment was just measuring rote learning were also those who adopted surface strategies. All relationships were significant at the .001 level of significance.

The table below reports the estimates of how academic transition, induction to discipline and integration into university were related to deep learning strategies and student performance outcomes, graduate attributes and achievement of goals.

Table 1: Correlations between student experiences and student outcomes

Dimension	Academic transition	Induction to discipline	Integration into University
Deep approaches	<i>.123</i>	<i>.378</i>	<i>.439</i>
GPA	<i>.000</i>	<i>.209</i>	<i>.136</i>
Graduate attributes	<i>.180</i>	<i>.486</i>	<i>.604</i>
Goals	<i>.057</i>	<i>.428</i>	<i>.530</i>

Note: Estimates in italics are significant at $p < .01$

It is clear that for these students, issues of induction and integration were more significant in relation to achievement of student outcomes than were transition difficulties. Correlations of .3 and greater are considered worthy of note and although smaller correlations might be statistically significant they did not demonstrate an educationally substantive relationship.

The strongest relationships with student performance outcomes, graduate attributes and goal achievement, were student perception of integration into the university and induction to the academic discipline. Although students indicated difficulty with academic transition such as differences in teaching and learning approaches and assessments, the relationship of these with student outcomes was not substantive.

To test the predictive relationships between the three first year dimensions and learning outcome variables, three regression models were estimated (Figure 2). The results clearly indicated that the more common concerns of transition such as differences in teaching and learning styles, workload and assessments were not the strongest predictors of student outcomes.

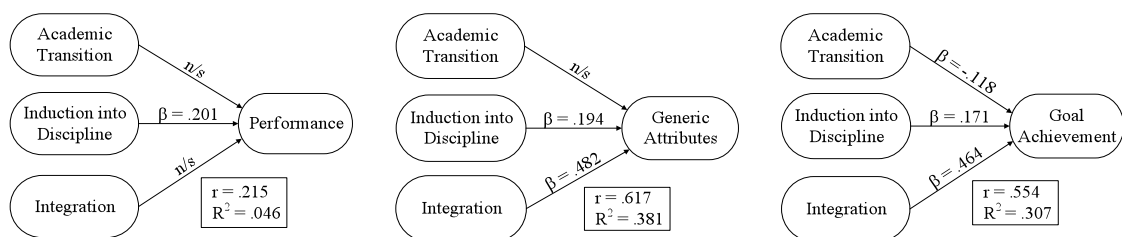


Figure 2: Regression models of student first year experiences and student outcomes

The best predictor of performance for this sample was student perception of induction into the discipline ($\beta = .201$). The commonly concerned effects of academic transition and the perception of integration were not significantly related to academic performance. Integration ($\beta = .482$) and induction ($\beta = .194$) were both significant predictors of generic attributes. The effect of academic transition was not significant. Integration ($\beta = .464$) and induction ($\beta = .171$) were both significant predictors of achievement of goals. The effect of academic transition was negative ($\beta = -.118$).

Discussion

From the data analysis, a few initial conclusions could be drawn. Although difficulties in teaching and learning practices were not very much about the use of deep learning, these difficulties were related to a lower self-perception of academic and personal achievement. On the other hand the feelings of being sufficiently inducted and integrated were significantly and substantively related to deep learning and student outcomes. This suggests that in developing the first year curriculum, emphasis should be put on these areas. For example, work-study programmes and career talks throughout the course of study and a collaborative learning community could help students relate their studies to practical implications and result in better learning outcomes.

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