

Appendix B Academic Achievement in Economics – Operational Hypotheses

Student Characteristics

Drawing on the literature to inform the development of the operational research hypotheses in relation to exam performance on the Edinburgh Business School on-line distance learning programme, the review reveals:

Ability

Researchers have found GMAT to be a key determinant of academic success for MBA students (Kuncel, Credé et al. 2007; Oh, Schmidt et al. 2008). Also, student ability is positively associated with learning performance (Nemanich, Banks et al. 2009) so it is hypothesised that:

Hypothesis 31 (H31):

there is a significant positive relationship between ability and exam performance, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Age

There is some contradiction in the literature on the effect of age on academic success but research suggests that in MBA study younger students perform better than older students (Peiperly and Trevelyan, 1997) so it is hypothesised that:

Hypothesis 32 (H32):

there is a negative relationship between age and exam performance, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Learning style

Learning style has been generally accepted as a potential source of difference in academic performance (Cassidy 2004). The effects of learning style in online graduate management programmes remain largely unexplored. It is hypothesised that:

Hypothesis 33 (H33):

there is a positive relationship between reflective learning style and performance in the Economics exam , both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 34 (H34):

there is a positive relationship between an intuitive learning style and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 35 (H35):

there is a positive relationship between verbal learning style and performance in the Economics, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 36 (H36):

there is a positive relationship between global learning style and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Region

A relationship exists between culture, learning approach and academic grade (Strang 2009a). Furthermore, international students studying at British universities face many challenges and concerns have been raised that grades are adversely affected as a result ((Grasha and Yangarber-Hicks 1999). It is hypothesised therefore that:

Hypothesis 37 (H37):

there is a negative relationship between North American region and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 38 (H38):

there is a negative relationship between Trinidad & Tobago region and performance in the Economics exam , both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 39 (H39):

there is a negative relationship between African region and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 40 (H40):

there is a negative relationship between Rest of the World region and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

First language English

English as a native language has been found to be an influence on academic performance (Yang and Lu 2001), so because the course materials are written in English and students are examined in English, it is hypothesised

Hypothesis 41 (H41):

there is a positive relationship between having English as a first language and performance in the Economics exam , both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Employment Status

On the basis that those students who are employed will be better placed to see, through their work experience, the relevance and application of what they are learning (McClure, Wells & Bowerman (1986); Adam (2000), it is hypothesised that:

Hypothesis 42 (H42):

there is a positive relationship between employment status and performance in the Economics , both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Gender

In MBA study several researchers have found no correlation between gender and performance outcomes, however some studies (Cheung 2002; Gropper 2007) suggest women perform better than men. It is hypothesised then that:

Hypothesis 43 (H43):

there is a negative relationship between male gender and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

*Whether passed Economics exam at first attempt**

Hypothesis 44 (H44):

there is a positive relationship between whether passed the Economics exam at the first attempt and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Previous Education

There has been substantial research on the relationship between previous academic achievement and academic achievement in post-graduate management programmes; in particular the use of GPA to predict academic success (Carver and King 1994; Yang and Lu 2001; Clayton and Cate 2004; Kuncel, Credé et al. 2007; Oh, Schmidt et al. 2008; Kass, Grandzol et al. 2012)

Hypothesis 45 (H45):

there is a positive relationship between holding a prior qualification at degree level and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Relevant academic background

Students with a background in business management perform better in MBA than students who lack experience (Sulaiman, 2006). Also, an under-graduate pre-requisite in Economics is a significant predictor of MBA success (Christensen, 2011).

For this research it is hypothesised supposed therefore that:

Hypothesis 46 (H46):

there is a positive relationship between previous experience in the study of Economics and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Distance Learning Context Variables

It is acknowledged that factors beyond teaching pedagogy, student intelligence and study strategy affect learning (Strang 2010) and that behavioural characteristics of students play an important role in online course effectiveness in post-graduate programmes (Arbaugh and Rau 2007).

Working on your own

Working on your own implies limited feedback and lack of interaction with instructors and fellow students, both of which have been shown to be linked to learning performance (Nemanich, Banks et al. 2009). It is hypothesised therefore that:

Hypothesis 47 (H47):

there is a significant positive relationship between an easier experience working on your own and performance in the Economics exam , both overall and by type

of question asked, on the Edinburgh Business School on-line distance learning programme.

Motivation

The level of student interest and effort is related to leaning performance (Nemanich, Banks et al. 2009) so it is hypothesised that:

Hypothesis 48 (H48):

there is a significant positive relationship between an easier experience maintaining motivation and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Time management

In the online environment students have the flexibility and convenience to studying at their own pace (Marks, Sibley et al. 2005; Kock, Verville et al. 2007) so it seems reasonable to suppose that:

Hypothesis 49 (H49):

there is a significant positive relationship between an easier experience managing time and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Sense of belonging to EBS

On the basis that participant interaction has been found to be important in online MBA courses (Arbaugh and Rau 2007), it seems reasonable to hypothesise that:

Hypothesis 50 (H50):

there is a significant positive relationship between an easier experience building a sense of belonging to Edinburgh Business School and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Instructor-student interaction

The level of instructor-student interaction has been found to have a positive effect on learning outcomes (Marks, Sibley et al. 2005; Arbaugh and Rau 2007; Peltier, Schibrowsky et al. 2007) so it hypothesised:

Hypothesis 51 (H51):

there is a significant positive relationship between an easier experience interacting with EBS faculty and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Student-student interaction

The level of student-student interaction has been found to have a positive effect on learning outcomes (Marks, Sibley et al. 2005; Arbaugh and Rau 2007; Peltier, Schibrowsky et al. 2007) so it hypothesised:

Hypothesis 52 (H52):

there is a significant positive relationship between an easier experience networking with other students and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

*Learning challenges experienced studying Economics**

With regard to the learning challenges, it is hypothesised:

Hypothesis 53 (H53):

there is a significant positive relationship between an easier experience in building up knowledge and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 54 (H54):

there is a significant positive relationship between an easier experience in understanding theory and concepts and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 55 (H55):

there is a significant positive relationship between an easier experience in understanding numerical calculations and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 56 (H56):

there is a significant positive relationship between an easier experience in applying theory to business problems and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 57 (H57):

there is a significant positive relationship between an easier experience in understanding relevance of theory to the real world and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 58 (H58):

there is a significant positive relationship between an easier experience in linking different theories together and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 59 (H59):

there is a significant positive relationship between an easier experience in applying skills to specific business problems and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.

Hypothesis 60 (H60):

there is a significant positive relationship between an easier experience in solving complex business problems and performance in the Economics exam, both overall and by type of question asked, on the Edinburgh Business School on-line distance learning programme.