

# Antecedent of Brand Trust in Online Tertiary Education: A Malaysian and Singapore Perspective

Kim-Choy Chung

Department of Marketing, University of Otago, P O Box 56, Dunedin 9054, New Zealand

Tel: +64 3 479 8967 E-mail: kchung@business.otago.ac.nz

## Abstract

Trust decreases the perceived risk of using a service. Since online learners have no direct contact with the education providers, trust plays an important role in an online tertiary setting. However, there is a void of study of trust within the context of consumer-brand relation in tertiary education. In a review of the literature, hypotheses are developed that suggest that the antecedent of brand trust, operating as quality cues in online tertiary education are related to institutional and courseware design assurance factors, site (Web) quality and public awareness. A conceptual model summarizing the hypotheses is subsequently validated in an empirical study reported here.

**Keywords:** Online tertiary education, Quality cues, Brand trust

## 1. Introduction

Online tertiary education has not attracted as many students as had been expected in Singapore (Chung & Ellis 2003; Tan & Lambe 2002) and Malaysia (Alhabshi 2002). The main reason for the lack of enthusiasm in online learning in these two countries is the much preferred method of face-to-face teaching and learning. Although distance education has already taken root in both countries (as shown by the wide popularity of offshore degrees and twinning programs), the quality of education via the electronic mode is in doubt. There is still a lack of confidence among students, parents and educators that education online could be an effective medium for imparting knowledge/skills.

In addition, the dramatic globalisation of the world economy over the last two decades has an impact on higher education. Where once universities competed for students, faculty and funds within a national context, today they compete internationally. The overall effect of this competition is an increasing variety of niche-oriented, multidisciplinary programs which are as attractive as possible to prospective students to increase enrolments (Stensaker 2005). Further, for many students today, their undergraduate degree is an investment that requires them or their families to incur debt before graduating (Moore 2004). With financial stakes increasing, even more importance is placed on the choice of university and transforms student from a passive participant to an active consumer who is paying for quality education that promises a better career prospect after graduation. However, there are varying degrees of attitude as to what actually constitutes quality in higher education by different groups of people (Barnett 1992; Bennett 2001).

Intrinsic and extrinsic cues are used to develop personal beliefs about a product's quality, and these beliefs in turn affect evaluation and choice (Kirmani & Zeithaml 1993). Intrinsic cues are inherent properties of the product and cannot be changed without altering the nature of the product itself (Zeithaml 1988). Within the context of online tertiary education, intrinsic cues would refer to the course programs characteristics or course contents. Extrinsic cues are product related but not part of the physical product (Kirmani & Zeithaml 1993). Price, brand name, level of advertising and warranty are examples of extrinsic cues to quality.

Despite the plethora of studies about tertiary education in the online mode, there is a void of study of trust as a quality cue within the context of consumer-brand relationship. This study addresses this void and aims to discover the antecedents of brand trust (operating as quality cues) in online tertiary education. Online tertiary education is defined as university's undergraduate and post-graduate education via the Web.

## 2. Conceptual model

Brand is commonly referred to as the name, term, design, symbol, or any other feature that identifies one seller's good/service as distinct from those of other sellers (Aaker 1996). Studies by Morgan and Hunt (1994), Fournier (1995) and Gurviez (1996) illustrate the importance of trust in developing a positive and favourable attitude, resulting in commitment to a certain brand in successful consumer-brand relationships. Consumer's trust in a brand contributes to a reduction of uncertainty in consumer purchases (Garbarino & Mark 1999; Gommans et al. 2001) and is believed to increase customer loyalty (Fullerton 2003; Narayandas & Rangan 2004). Since online learners have no direct contact with their education providers, trust plays an important role in this online tertiary setting.

Despite its importance, the concept of 'brand trust' has seldom been explicitly examined in education and consumer-brand literature. This is because diverse views in studying trust across difference disciplines have resulted

in various definitions, contributing to the lack of measurement consensus of the trust construct (Kramer 1999; Gefen et al. 2003; Delgado-Ballester & Munuera-Aleman 2001). For instance, economists view trust as either calculative (Williamson 1993) or institutional (Zucker 1986) while sociologists assess trust in terms of social relationships and social institutions (Granovetter 1985; Lewis & Weigert 1985). Psychologists define trust in terms of trustors and trustees and focus upon internal cognition (Deutsch 1962; Rotter 1967). Social psychologists consider trust as an expectation that is specific to a transaction and the person with whom one is transacting (Drawbaugh 2001; Johnson-George & Swap 1982). On the other hand, management and marketing strongly connote trust with the competence dimension of a relationship, that focuses on the belief that the partner has the required expertise to perform his/her activities, carry out his/her obligations or accomplish his/her promises (Mayer et al. 1995; Morgan & Hunt 1994). McKnight et al. (2002) argue that trust forms because of one's disposition to trust, one's institution-based trust, and cognitive processes of trusting intention and trusting beliefs. "Disposition to trust" refers to a tendency to be willing to depend on others. "Institution-based trust" means that one believes impersonal structures support one's likelihood for success in a given situation.

In the marketing literature, the term 'brand trust' is variously defined as the willingness of consumers (implies a propensity) to rely on the ability of the brand to perform its stated function (Chaudhuri & Holbrook 2001); as the confident expectations of the brand's reliability and intentions in situations entailing risk to the consumer (Delgado-Ballester & Munuera-Aleman 2001; Delgado-Ballester 2004) or simply described in terms of reliability and dependability (Dawar & Pillutla 2000). These definitions of brand trust suggest that an individual's propensity (a cognitive conscious inclination) to trust a brand's qualities or attributes is critical in consumer-brand relationships. This paper conceptualizes brand trust as an individual's propensity to place one's confidence in a brand's qualities or attributes in situations entailing risk to the consumer, and the following hypothesis is proposed:

*Hypothesis 1: Brand trust as a quality cue in online tertiary education is related to risk aversion, contingent on institutional assurance and courseware design factors.*

That is, the purchase of online tertiary education can be a risky venture because it involves costs and time to complete the course; the uncertainty that the course contents may not meet the skills/knowledge requirement of the student/society; and the lack of physical or human contact between the online learners and the education providers.

### *2.1 Institutional assurance factors*

Regular faculty evaluation and government recognition of online degrees (Chung & Ellis 2003) and course accreditation (Philips 2007) ensure the quality of online courses. This paper proposes that instructor quality (relevant qualification and motivated), and government recognition of online tertiary providers act as the institutional assurance attributes. Here, a motivated online instructor mean one having strong empathy with online learners (time-pressed, computing skills, sense of isolation). Given that strong research outputs are a common criteria for generating worldwide university ranking (Stensaker 2005), it is included as a institutional assurance factor as well.

### *2.2 Courseware design factors*

Lack of a minimum study period, low entry requirements and unspecified study materials are some of the characteristics of a 'certificate mill' (Philips 2007). A 'certificate mill' refers to the provision of education degrees for a fee. Previous academic records are deemed irrelevant by the 'certificate mill' and they promise a certificate (based on work experience) within 30 days after entry. In order to maintain trust in the online tertiary education system, this study proposes that courseware developed for online tertiary education must have certain minimum periods of study, and the same entry requirements and study materials as comparable classroom study.

*Hypothesis 2: Brand trust as a quality cue in online tertiary education is influenced by knowledge acquired through direct brand experience (website quality) and indirect brand experience (public awareness).*

According to Kania (2001), familiarity with a company or brand generates higher trust, unless a person has a negative perception of a brand. Similarly, a study undertaken by Cheskin Research & Studio Archetype (1999) also indicates a strong correlation between familiarity and trust. Brand familiarity is defined by Alba (1987) as the variable that reflects consumer's level of direct and indirect experiences with a product. Given that online tertiary education is a form of invisible purchase (no face-to-face contact with the providers) where the outcome of the purchase (satisfaction) can only be assessed after course completion, a users' positive experience (direct and indirect) with the brand is key in maintaining trust in this form of learning. This proposition is consistent with the argument that brand trust summarizes both the consumers' knowledge and experiences with the brand (Delgado-Ballester & Munuera-Aleman 2005; Garbarino & Johnson 1999).

### *2.3 Web site quality (direct brand experience)*

A brand experience is an individual's experience as she or he interacts with a brand (Landa 2006). Every interaction a person has with a brand contributes to his/her overall perception of the brand. This interaction ranges from visual

contact with a logo, newspaper advertisement, website, brochures to contacts with front-line staff of the brand (Berry 2000; Kaperefer 2004). Brand experience heightens individual's interest, loyalty and trust in a brand (Berry 2000; Delgado-Ballester et al. 2003; Landa 2006). This is because experience plays an important role in trust by making it possible to compare the realities of the firm with preconceived expectations (Mitchell et al. 1998). Since online learners have no direct human contact with the education providers, the only form of direct experience with an education brand is via the Web site. In fact, Web site quality is discussed as a main factor in engendering trust in the e-retailer (McKnight et al. 2002; Sharma 2007; Siau & Shen 2003).

Good structure/clarity of design, technical helpdesk and self-checking activities are influential factors in the market acceptance of online education (Chung & Ellis 2003). Site quality in this paper is taken to mean a well-designed web site that gives online learners up-to-date information (knowledge content), is easy to navigate, and shows necessary links to other relevant websites or provides an effective interaction with online learners.

#### 2.4 Public awareness (indirect brand experience)

According to Chung and Ellis (2003), industry support (recognition of skills achieved), strong alumni network (mouth-to-mouth communication) and friends or family's opinions about online tertiary education are vital for its success. This paper intends to validate this argument in relation to brand trust.

### 3. Methodology

#### 3.1 Questionnaire

An interviewer assisted questionnaire where respondents rank the importance (as quality cues) in trusting online tertiary education with regards to institutional and course assurance factors, site quality and public awareness factors is utilized in this research. The questionnaire was pre-tested on a group of 20 Singapore and Malaysian students from the University of Otago, New Zealand. On average, it was found the questionnaire took between 10-15 minutes for the respondent to complete. The respondents were also asked for their opinion about the difficulty of completing the questionnaire. No problems were identified with understanding of the questions.

#### 3.2 Samplings

The targeted sample was high school or junior colleges students. These students in their school uniforms are a common sight in the various shopping malls in these two countries. They are easy to identify and solicit responses from for the survey. To increase the randomness of this convenience sample, the malls were randomly selected in place and time over a two-week period. To ensure that all possible times were represented when students went to a mall, preliminary observations were taken to discover the time frame the mall had the largest concentration of students. The period from 1-6pm was observed to have greatest concentration of high school/junior college students in all randomly selected malls.

Interviewers were positioned at high foot traffic locations near mall entrances to intercept respondents. Interviewers used the number indicated by the minute hand of their watch to determine which person to intercept as they entered the mall. For example, if the minute hand was at two, then the second person entering the mall was approached to complete the questionnaire. If a student elected not to participate, the interviewer selected the next available person. Upon completion of each interview, the interviewer would check the minute hand on the watch to determine the next respondent. The number of interview rejections was approximately 10 percent. Eight hundred questionnaires were distributed between Singapore and Malaysia (Johore). Out of the 437 questionnaires returned, 210 were from Singapore and the balance from Malaysia. Survey respondents comprised 53% males and 47% females. The response data was normally distributed.

#### 3.3 Factorial validity and structural model test

The 437 respondents, who completed the survey, met the primary requirements for factor analysis (i.e. 5:1 case/variable ratio, Coakes & Steed 2001). To test the fit of the data for factor analysis, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used. Tabachnick and Fidell (1996) recommend a correlation coefficient of at least 0.3, a KMO index of >0.6 and Bartlett's  $p < 0.5$  as appropriate for factor analysis. All four factor scales in the research hypothetical model were subjected to exploratory factor analysis using SPSS's Principal Component Analysis (PCA) using varimax rotation technique. PCA (varimax rotation) was initially chosen because of its ease of interpretation. For varimax, a simple solution means that each factor has a small number of large loadings and a large number of small loadings. This simplifies the interpretation because, after a varimax rotation, each original variable tends to be associated with one (or a small number) of factors, and each factor represents only a small number of variables (Pallant 2001)

All four factorial scales had a KMO index greater than 0.6 and Bartlett's  $p < 0.5$  indicating the fit of the data in these factor analysis. Factor analysis on all factor scales extracted one clear component each (Figure 1). Factor loadings ranged from 0.754 to 0.867 for the *course assurance* factor, from 0.798 to 0.825 for the *institutional*

assurance factor, and from 0.791 to 0.888 for the *site quality* (direct brand experience) factor. The *public awareness* factor (indirect brand experience) had loadings ranging from 0.806 to 0.893.

Structural Equation Modelling (SEM) using AMOS ver. 6.0 software on all factorial models showed that the discrepancy between the sample covariance matrix  $S$  and the population covariance matrix  $\Sigma(\theta)$  is minimal (that is,  $[S - \Sigma(\theta) = \text{minimum}]$ ). A structural model test (full model) on the 4-factor model used revealed a good-of-fit between the proposed model and the sample data (CMIN/DF=2.10, RMSEA=0.050, GFI= 0.962). A reliability test conducted showed good internal consistency with all factorial measurement scales (Cronbach's alpha > 0.7). These results confirmed that all the measurement scales used in the 4-factor model were statistically valid. The goodness-of-fit and reliability test statistics are presented in Figure 2.

#### 4. Findings and discussions

Homogeneity of variance tests between the samples from Singapore and Malaysia was not significant ( $p > .05$ ) for all variables. The t-value, degrees of freedom and two-tail tests of measured significance showed no significant differences apparent ( $p > .05$ ) between all measurement items. On this basis, there is not enough statistical evidence to reject the null hypothesis  $H_0: \mu_1 = \mu_2$  (means of the two groups are equal) at  $p = 0.05$ . Thus, no major differences between Singapore and Malaysia were found with all measurement variables.

##### 4.1 Institutional assurance factors and courseware design assurance factors

The SEM results (Figure 2) indicated that institutional assurance factors and courseware design assurance factors had regression weights of 0.88 and 0.64 respectively. The indicated importance of instructor's quality, university ranking and government recognition of online tertiary degree (institutional assurance factors) as quality cues could be interpreted as; a potential online graduate needing the assurance that their efforts and money spent with online tertiary education would be rewarded with public recognition; that quality instructors are available to encourage, mentor and motivate them to maintain their interest in their 'isolated' learning journey; and that the institution they enrolled in is highly regarded worldwide for its quality of teaching/research.

Similarly, the SEM model suggests the need of a minimum period of study, course entry requirements and study materials the same as classroom study (courseware design factors) used as quality cues could be interpreted as respondents viewing these factors as necessary to avoid falling into the 'certificate mill' trap. The importance of institutional and courseware design assurance factors suggest respondents try to reduce uncertainty (risks) of online tertiary education, since online education involves no direct staff contact. These research results support hypothesis one that brand trust as quality cue in online tertiary education is related to risk aversion, contingent on situational factor such as institutional assurance and courseware design.

##### 4.2 Site quality (regression weight=0.78) and public awareness factors

Site quality (regression weight=0.78) and public awareness factors (regression weight=0.71) also influence brand trust working as quality cues for online tertiary education. Thus, the hypothesis that brand trust act as a quality cue in online tertiary education and is influenced by knowledge acquired through direct brand experience (site quality) and indirect brand experience (public awareness) is also supported. This confirms McKnight et al. (2002), Sharma (2007) and Siau and Shen (2003) argument, that site quality is vital to engender trust in online commerce offerings. This study also replicates Chung and Ellis (2003) assertion that family and friend's opinions about an online degree; industry support in the form of employment and strong alumni network for word-of-mouth communication (public awareness) are also influential factors in the uptake of online tertiary education. This may be due to respondents being concerned that their investment in time consuming and costly education may be rejected by their community, if the education they undertake is not up to the quality expectations of their peers or society.

#### 5. Limitations and further research

There are several imitations with this study. First, the mall-intercept sampling design is more of a convenience than a probability sample (Murry et al. 1989; Zikmund 2000) although the large sample size ( $n=416$ ) improves its external validity. While this study tried to increase the randomness of the sample overall by randomly selecting the malls, and times to select the survey respondents, a comparison of the demographic variables collected in this research with a validation sample (collected in the same geographical areas) would be advisable to ensure the generalizability of the results to the resident population and to test the comparability and stability of the proposed hypothetical models (Hair et al. 1998; Spector 1992). However, a validation sample was not available for this study.

Second, by not focusing on a specific institution, the effect of an institution's micro environment (a university's perceived brand image, university's frontline staff service quality, corporate missions etc) and its brand positioning statement in relation to brand trust as quality cues in online tertiary purchase is unknown.

Finally, further research on the relationship between brand image, brand positioning statement and brand trust in online tertiary purchase is needed to provide insights of how brand affects student's decision-making process. For

the academic community, this is an area where little research has been done. For the university, research information on brand positioning is eagerly sought after, given the increasing pressure on universities to get fee-paying students to help fund itself (Göbbels-Dreyling 2003).

## 6. Conclusion

This study supports the argument that governmental support and industry collaboration are important for the propagation of online education. Brand trust as quality cues in online tertiary education is related to risk aversion (contingent on institutional and courseware design assurance factors) and knowledge acquired through direct brand experience and indirect brand experience.

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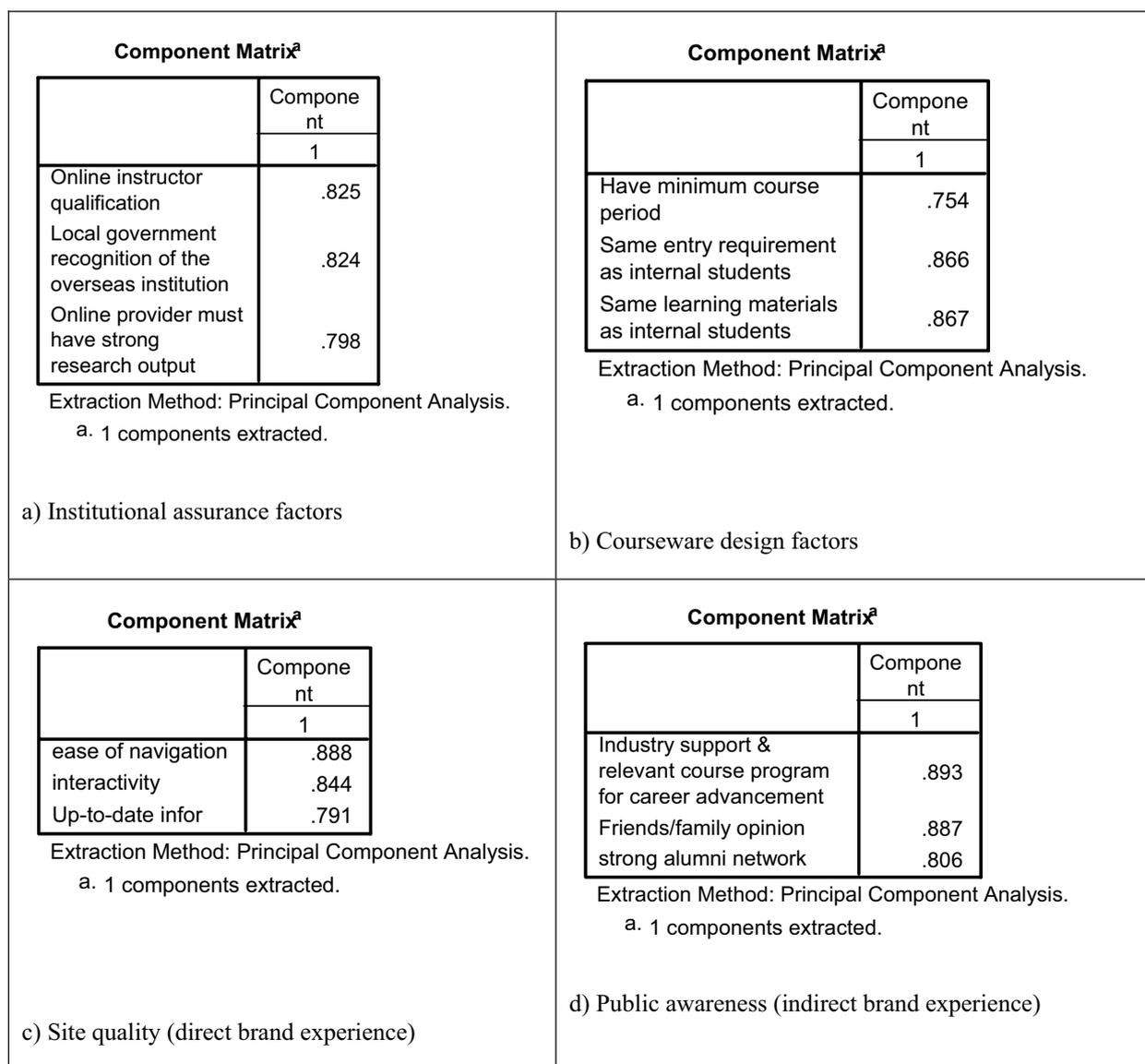


Figure 1. Factor analysis component scores from the 4-factor scale used in the proposed model

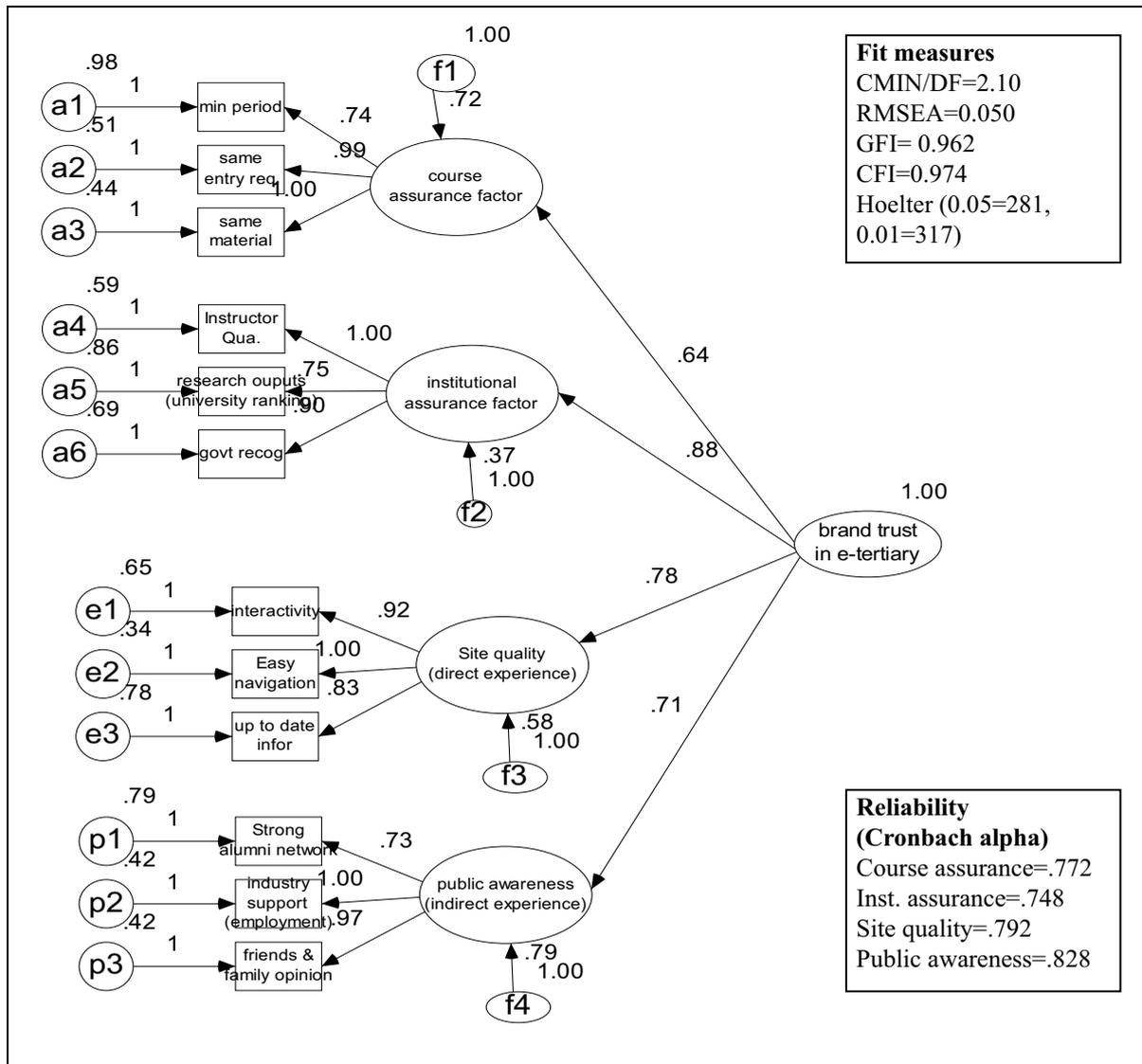


Figure 2. SEM statistics (unstandardised) of the proposed model