Understanding Behavioural Intention towards Online Tertiary Degree in Kazakhstan using the Theory of Planned Behaviour

Kim-Choy Chung

Abstract—The adoption of online education in Central Asia is limited despite its promises of teaching and learning beyond the classroom for sparsely populated nation. This study aims to understand the underlying beliefs/attitude that drives behavioural intent towards online tertiary degree in Kazakhstan using the Theory of Planned Behaviour [1] as the research underlying framework. Data from semi-structured interviews and questionnaire survey revealed that subjective norm in the form of perceived peer or societal pressure such as family and friend’s opinion about online degrees, university’s reputation (based on international ranking), industry support, and fraud prevention exerted significant influence on behavioural intent towards online tertiary degree in Kazakhstan. Managerial implications and directions for future research are discussed.

Keywords—Online tertiary degree, subjective norms, behavioural beliefs, perceived behavioural control.

I. INTRODUCTION

RAPID proliferation of the Internet and demand for knowledge in newly emerging economies has created opportunities for higher institutions to access potential students who otherwise have no opportunity for tertiary education because of their geographic distance from physical campuses or their full-time work commitments. Kazakhstan, a central Asian nation with 16 million people has the most advanced telecommunication infrastructure among the CIS countries [2]. Its Internet penetration rate is 34.3% with 5,300,000 Internet users [3]. Given the geographical spread of its population in a large land mass and the promise of ‘education without wall’, online tertiary degree would be attractive in Kazakhstan. However, this was not to be.

II. LITERATURE REVIEW

Theory of Planned Behaviour [1] posits that human behaviour is guided by three kinds of considerations:
1) Behavioural beliefs- beliefs about the likely outcomes of the behaviour and the evaluations of these outcomes.

   Behavioural beliefs produce a favourable or unfavourable attitude toward the behaviour or the degree to which performance of the behaviour is positively or negatively valued.

2) Normative beliefs- beliefs about the normative expectations of others and motivation to comply with these expectations. Normative beliefs in turn result in subjective norm or the perceived social pressure to engage or not to engage in the behaviour

3) Control beliefs- beliefs about the presence of factors that may facilitate or impede performance of the behaviour and the perceived power of these factors. Control beliefs give rise to perceived behavioural control, which is people’s confidence that they are capable of performing the behaviour under investigation.

According to the TpB [1], the most important determinant of a person’s behaviour is behaviour intent. The individual’s intention to perform behaviour is a combination of attitude toward performing the behaviour, subjective norms and perceived behavioural control. As a general rule, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger would be the person’s intention to perform the behaviour in question. Prior studies postulate the low acceptance of online tertiary degrees to mixed feelings regarding the effectiveness of online education as a learning medium compared with traditional classroom-based education; and the influence of societal norms and values [4]; language proficiency, software design (pedagogical) issues and learner’s acceptance of online degrees [5].

A. Aim and justification of research

There is a void of study probing into the lack of market acceptance of online tertiary degree in Kazakhstan. Using the Theory of Planned Behaviour [1] as the research underlying framework, this study investigates the constituents of the social norms (normative beliefs), perceived behavioural control (control beliefs) and behavioural beliefs (attitude) that affect behavioural intent towards online tertiary degree in Kazakhstan. The TpB (being an established model of consumer behaviour) provides an excellent approach to reveal the constituents of the underlying beliefs that influence behavioural intent towards a particular performance/choice (online tertiary degree).
III. METHODOLOGY

As the explanatory functions of attitude, subjective norms and perceived behavioural control underlying the TPB are associated only with salient beliefs or beliefs that are readily accessible in memory, a formative search to eliciting and measure accessible beliefs is necessary. Following the guidelines established by Ajzen [1], a two-stage research design was adopted. Stage 1, guided by the literature, was a formative works to identify accessible behavioural, normative, and control beliefs using semi-structured interviews. Twenty interviewees were given a description of the behaviour (intention to study online degrees) and are asked a series of opened-questions designed to elicit accessible beliefs in the sample population. The results of the formative works are summarised in a conceptual model (Figure 1), from which the following hypotheses were generated:

**H1:** The behavioural beliefs (measured by constituents such as employment prospect for online degree, Internet an effective medium for learning; online education suitable for time constraint people) had an impact on the behavioural intention towards online tertiary degree in Kazakhstan.

**H2:** The perceived behavioural control (measured by perceived computing, writing and communication skills; and individual capability for independent learning) had an impact on the behavioural intention towards online tertiary degree in Kazakhstan.

**H3:** Subjective norm (measured by family and friends’ opinion with respect to course accreditation, industry support and course relevancy for career advancement, online tertiary provider’s reputation and security of online programs to prevent exam fraud) had an impact on the behavioural intention towards online tertiary degree in Kazakhstan.

Stage II of this research is a questionnaire survey using seven-point Likert scale. The pre-tested questionnaire has four parts: Part A records the demographic profiles of respondents. Part B measures behavioural beliefs (to test H1), Part C measures perceived behavioural control in online learning (to test H2) while Part D measures subjective norms (to test H3). The targeted sampling frame was pre-university, diploma, undergraduate students and working adults who intended to enrol in tertiary study. Questionnaires were randomly distributed in two public libraries in Almaty, Kazakhstan. Overall, 437 questionnaires were collected with age ranging from 18 to 38 years (males: 52.6%, females: 47.4%). The data was normally distributed.

![Fig. 1 Resultant conceptual model from stage 1](image-url)

**Table I**

<table>
<thead>
<tr>
<th>Scales</th>
<th>Measurement scales</th>
<th>Extracted scales</th>
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<tbody>
<tr>
<td>a) Perceived behaviour control: Cronbach alpha=0.843</td>
<td>1. I need good computing skills in using the Internet</td>
<td>.785</td>
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<tr>
<td></td>
<td>2. I need good communication skills in using the Internet</td>
<td>.750</td>
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<tr>
<td></td>
<td>iii. I need good writing skills (online chat etc) in using the Internet</td>
<td>.707</td>
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<tr>
<td></td>
<td>iv. I am capable of independent learning</td>
<td>.768</td>
</tr>
<tr>
<td>b) Behavioural beliefs: Cronbach alpha=0.827</td>
<td>i. I believed there is employment prospect for online degree</td>
<td>.902</td>
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<tr>
<td></td>
<td>ii. I believed Internet is an effective medium for learning</td>
<td>.877</td>
</tr>
<tr>
<td></td>
<td>iii. I believed online education is suitable for time constraint people</td>
<td>.807</td>
</tr>
<tr>
<td>c) Subjective norms: Cronbach alpha=0.860</td>
<td>My family and friends think that I should only enrol for an online degree when there is:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. Course accreditation with relevant bodies to ensure authenticity and quality of online degree</td>
<td>.896</td>
</tr>
<tr>
<td></td>
<td>ii. Industry support &amp; relevant course program for career advancement</td>
<td>.886</td>
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<tr>
<td></td>
<td>iii. Good reputation of the university that I intend to study (based on international universities’ ranking tables)</td>
<td>.739</td>
</tr>
<tr>
<td></td>
<td>iv. Security of online program to prevent fraud and protect exam records</td>
<td>.840</td>
</tr>
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**Fig. 2 SEM statistics**

Exploratory Factor Analysis (EFA) using SPSS ver. 14 and Structural Equation Modelling (SEM) using AMOS 6.0 was
used to investigate factorial and convergent validity of the scales, and for hypothesis testing (as recommended by [6]). The normally distributed, fairly large sample, and the continuous scale used in the measure met the underlying assumptions for the maximum likelihood estimations used in the SEM analysis [7]. EFA using Principal Component Analysis (varimax rotation) on all measurement variables extracted three factors with an KMO index greater than 0.6 and Bartlett’s χ<sup>2</sup> < 0.5, indicating the appropriateness for factor analysis. All three extracted factors had Cronbach Alpha above the minimum of 0.80 recommended for internal consistency [6]. The extracted component scores and reliabilities statistics are summarised in Table 1. The Structural Equation Modelling of the proposed model indicated a good model fit to the collected data (Figure 2): Goodness of Fit Index = 0.950; Comparative Fit Index = 0.963 was above the standards of 0.9 recommended by [6].

IV. FINDINGS AND MANAGERIAL IMPLICATIONS FOR TERTIARY INSTITUTION

As shown in Figure 2, all three proposed hypotheses were supported. Of these, subjective norms (hypothesis H2) exerted the most influence (regression wt = 0.84) on the behavioural intent towards online degree. Specifically, family and friends’ opinion on the educational dimensions of course accreditation, industry support and course relevancy for career advancement, university’s reputation, and security to prevent exam fraud and exam record constituted the ‘subjective norms’, which in turn affect the behavioural intention towards online tertiary degree among the Kazakhstani respondents. These findings are consistent with [4] that reputation of university, family and friend’s opinion, security and preference for mixed mode of instruction influenced the acceptance of online education in Asian society. As such, interventions designed to change attitude toward online degree are best directed to address the underlying issues in the subjective norms. Universities in the business of education need to get accredited in relevant national bodies; and respond to the evaluative criteria in international ranking tables and work towards improving their rank in those tables. They should also be closely linked to the industry so that the courses offered are relevant to industry needs. In addition, advertisements targeting Kazakhstani to entice enrolment in online tertiary study should prominently highlight the above issues for effective results. There is also evidence to indicate that personal competency factors like having good computing, communicating and writing skills and capability for independence learning are the constituents of perceived behavioural control (H1) that influence behavioural intent towards online tertiary degree in Kazakhstan (regression wt = 0.76). As such, online tertiary education provider could make known their alumni and their employments to enhance the visibility of online graduates.

V. CONCLUSION AND DIRECTION FOR FUTURE RESEARCH

The paper provided insight into the constituents of the subjective norms (normative beliefs), perceived behavioural control (control beliefs) and behavioural beliefs (attitude) that drives behavioural intent towards online tertiary degree in Kazakhstan. Of these, subjective norms (perceived social pressure) exerted the most influence. In particular, societal norms like family and friend’s opinion about online degree, public reputation of the tertiary provider (based on international ranking), course accreditation, security against fraud (prevention) and industry support/recognition influence behavioural intent towards online tertiary degree in Kazakhstan. Further study into the effect of societal norm on consumer behaviour with regards to online education degree is recommended using data from other country. In addition, additional research is needed to better explain within-culture influences on individuals’ motivations to comply with societal norms in educational choices.

REFERENCES