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An Analysis of Intercultural Students' Self-Determination in Graduate Online Programmes: Implications for Praxis

Abstract

In this study, self-determination is considered to be the individual autonomy in the form of intrinsic motivation which propels the individual to work toward achieving a specific goal. The self-determination of online graduate students was studied in terms of the impact on autonomy, competence and relatedness to their persistence. Unique to this study was the assessment of the potential influence of socio-cultural factors with respect to self-determination. As most of the research regarding online university students' persistence is generated from the US, Canada, UK and European countries assessing their own domestic populations, the global nature of this study provides a new perspective. Fifty-four online graduate students representing 26 countries (19 lesser developed economies and 7 developed economies) participated in the study. Collectivist versus individualistic cultures were equally represented. Self-determination Theory (SDT) was examined both in terms of the online classroom environment as well as overcoming life challenges for programme perseverance. A correlational matrix was used to test the null hypothesis formulated as 'There is no statistical significance among the variables of autonomy, competence and relatedness with respect to a correlational matrix'. Results indicated that statistically significant correlations exist among the three variables, and thus the null hypothesis is rejected in these cases. With regards to the variables of autonomy and relatedness, a significant negative correlation exists. The findings indicate that the participants displayed strong internal locus of control, self-directed learning, competency and relatedness in attaining success within the online environment programmes. Thus, within the online environment, it is important for online lecturers to be aware of the different aspects of self-determination inherent in their students and how they can capitalize on them when posing critical thinking and problem-solving questions in the shared discussion forum.

KEYWORDS: self-determination theory; cultural diversity, student motivation, online education, self-regulation

Introduction

The study of students' self-determination within the online environment continues to be of critical importance and is considered to be a factor in retention (Chen & Jang, 2010). Dietz Uhler et al. (2007) indicated that online retention rates are less than the face-to-face classrooms. However, Moore et al. (2003) suggested that this could be because of competition with other priorities within the students' lives (Kahn et. al., 2017). The need to retain students and understand student motivation was further investigated by Harnett et al. (2011) who concluded that previous studies of online students' motivations focused on either trait-like characteristics or their intrinsic motivation. At the time of their study, the authors found little research on the interplay between the learner and his/her learning environment.

More recently, Filak and Nicolini identified potential changes to the three SDT components and online students' classroom experiences (2018). Therefore, self-determination is a critical aspect of the online environment and one in which more research is needed as to how students' motivational needs are catered to in the design and structure of the online modules (Filak & Nicolini, 2018; Khan et al. 2017). With the rapid growth in e-learning worldwide expected to surge beyond USD243 billion by 2022 (Statista, 2018), fresh research is important for the higher learning community to understand the nuances of the learning experience which lead to or inhibit students' success.

Indeed, poor motivation has been identified as a determining factor in online student retention (Mullenburg & Berge, 2005 cited in Harnett et al. 2011). Chen and Jang (2010) underscored this and stated that high attrition rates can be an indication of a lack of motivation. Added to poor motivation is the diversity of the online student population which creates additional stress for students when collaborating within the classroom (Rumble & Latchem, 2004). The same benefits derived from attending studies online, that of being able to defy time and space, become an issue when this diversity threatens students' motivational levels. In contrast to the views of Garrison (1997), Harnett et al. (citing McCombs & Vakili, 2005) question whether or not online students can really be viewed as possessing the ability to problem-solve, to study independently, practice self-directed learning and be intrinsically motivated (2011).

Self-determination Theory

One of the theories that encapsulates both intrinsic and extrinsic motivation is the self-determination theory (Deci & Ryan, 1985 in Harnett et al., 2011). Moreover, definitions of self-determination indicate individual autonomy in the form of intrinsic motivation which propels the individual to work toward achieving a specific goal. From the extant literature, it is evident that researchers have conceptualized self-determination as trait-like, with less consideration of the dynamic interplay between the learner and his/her environment (Harnett et al. 2011).

Ryan and Deci (2000) further indicated that there are specific components of the self-determination theory that exemplify the innate nature of motivation and how it works with the personality. According to Durksen et al. (2016), there are three psychological needs which are seen as intrinsic motivators: competence (Harter, 1978; White, 1963); relatedness (Baumeister & Leary, 1995; Reis, 1994), and autonomy (deCharms, 1968; Deci, 1975). “Autonomy has been defined as an individual’s experience of volitional and freely chosen behaviours” (p. 244). This definition is congruent with Filak and Nicolini’s (2018) view that autonomy entails the individuals’ belief about the extent to which they possess internal locus of control.

Relatedness indicates the connection individuals feel to people whom they value as important to them, in terms of the other person demonstrating understanding and not objectifying them. It is the most interpersonal of the three components of self-determination and is linked to the theory of sense of belonging (Filak & Nicolini, 2018). Earlier, Baumeister and Leary (1995) linked sense of belonging to “frequent, non-aversive interactions within an ongoing relational bond sense” (p. 497). Filak and Nicolini further indicated that autonomy and relatedness are sometimes placed together in educational research without regard for the important differences between these two components.

Self-determination Theory and Online Learning

According to Held, Thoma, and Thomas (2004) an individual’s self-determination increases and/or decreases based on his/her interaction with key persons in his/ her life. Additionally, Chen and Jang (2010) indicated that the self-determination theory of motivation is especially suited to the online environment because its three constructs: relatedness, competency and autonomy are linked to the benefits of online learning such as “flexible learning (Moore, 1993), computer mediated communication and social interaction (Gunawardena, 1995), and challenges for learning technical skills (Howland & Moore, 2002)” (p. 742). Furthermore, Chen and Jang (2010) as well as Filak and Nicolini (2018) continued a discussion as to the tenability of the self-determination theory in depicting individual and collective motivation within the online environment. For example, Mullen and Tallent-Runnels (2006) as well as Filak and Nicolini (2018) concluded that differences in students’ perceptions of their teachers and the online learning environment were directly correlated to their motivation.

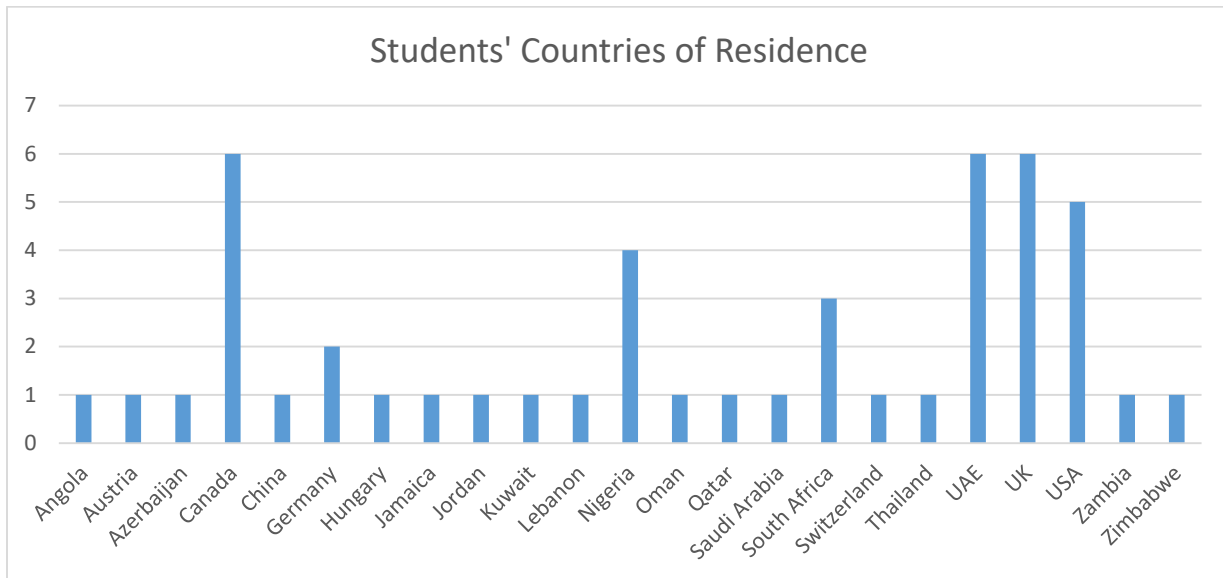
Methodology

Designed to capture the experiences of online students affecting persistence, the survey instrument was constructed by the researchers based on the self-determination theory espoused by Ryan and Deci (1985). Questions were connected to the components of the self-determination theory (relatedness, competence, and autonomy) while worded to reflect known behaviours associated with national cultural values (Hofstede, 2018; LeBaron, 2003a; LeBaron 2003b). Classification of the economic development of students’ home country (developed vs. lesser-developed) was based upon the classification of internationally-recognized MSCI (2018). The pilot revealed a satisfactory level of confidence with the instrument with a Cronbach Alpha of .80. Fourteen online graduate students completed the pilot study on the 11th October to 23rd October, 2017. They took approximately 15 minutes to complete with no issues. It was then launched to the University of Liverpool Online Masters and Doctoral students December 2017 through July, 2018 via email, LinkedIn and University announcements.

A convenience sample was used to email surveys to potential participants. The survey consisted of 16 statements asking online graduate Masters and Doctoral students to rate statements, along a 5 point Likert-scale, on components of the self-determination theory (autonomy, competence and relatedness) as being highly important (5 points); important to me (4 points); neutral or somewhat important (3 points); less important to me (2 points) and no impact on my perseverance (1 points). Twenty alumnus and 34 current students completed the online survey with 23 females and 31 males. Forty-three respondents ranged in age from 31-50, older millennials and Generation X age cohorts. Four were under age 30 (millennials), six age 51-60 and 1 participant was over age 60. Figure 1 shows a

frequency count of the online students' primary countries of residence while enrolled in the programme. It can be seen that most participants came from Canada, Nigeria, UAE, UK and the US.

Figure 1: Primary country of residence while enrolled in the programme



Findings

Correlational Matrix

H1₀: There is not statistical significance among the variables of autonomy, competence and relatedness when a correlational matrix is performed.

Relatedness and Autonomy

Based on the survey findings, a correlational matrix was performed using MS Excel Mega Stats Add-Ins; several correlations were found. In Table 1, R is synonymous with relatedness and Auto with autonomy. For example, the first four questions pertaining to relatedness (R1; R2; R3; & R4) share a significant correlation when the p value is .01 and a two tail test was conducted. R1 refers to the statement: “The expectations of you held by others who are important in your life (family members, close friends or peers)” and it shares a correlation co-efficient of .503 with the statement “I persevered because duty and honour are important to me” which is Auto5. Similarly, R2 which refers of the statement: “The perceived status or power associated with being a University of Liverpool student” shares a significant correlation of .452 with Auto5 statement and a mild relationship of .350 with statement Auto11 which is “When faced with problems and adversity, I will do whatever is necessary [and even beyond] to sustain enrolment and attain success.” However, the R3 statement: “The respect others hold for you as a University of Liverpool student” shares a mild correlation of .295 with the statement for Auto5. R4 refers to the statement: “The feeling of inclusion with family, friends and/or peers experienced by attending and/or graduating from a University of Liverpool online programme” and shares a strong significant correlation of .417 with statement Auto5 and a mild correlation of .282 with statement Auto11 which is: “When faced with problems and adversity, I will do whatever is necessary [and even beyond] to sustain enrolment and attain success.” However, statement R 4 shares a strong significant relationship of .495 with statement Auto15: “The challenges rated in Part 2 depressed or demotivated me and made it difficult to persist in my studies.” R 12, “The interaction with classmates provided a sense of inclusion or belonging in my programme” shares a significant relationship of .429 with statement Auto5 and a strong relationship of .730 with statement Auto11. R13, “The interesting material studied and/or sense of enjoyment experienced in this programme motivated me to persist in completing it”, shares a slight relationship of .298 with Auto11 and a slight negative relationship of -.206 with A15. R14, “The challenges rated in Part 2 inspired me to try all the more and complete my studies,” shares a strong significant relationship of .422 with Auto5 and a slight negation relationship of -.016 with Auto15. R16, “I believe my ability to succeed is reliant upon others, which then affects my motivation to persevere,” shares a strong significant relationship of .380 with Auto15.

Table 1. Correlation Matrix for Relatedness (R) and Autonomy (Auto)

	R 1	R 2	R 3	R 4	R12	R 13	R 14	R 16
Auto 5	.503	.452	.295	.417	.429	.241	.422	.068
Auto 11	.124	.350	.223	.282	.730	.298	.167	.031
Auto 15	.195	.180	.239	.495	.092	.206	.016	.380
	54	sample size						
	± .271	critical value .05 (two-tail)						
	± .351	critical value .01 (two-tail)						

Competence and Autonomy

According to Table 2, significant correlations exist between the variables of autonomy and competence when the p value is .01. The most significant correlations can be found in the Auto4 and 11 and the competence questions 6, 7, 8, 9, and 10. For example, Comp6, “Problem-solving is the most effective manner of resolving situations that threaten the completion of my modules” shares a significant correlation of .482 with Auto5 and a strong correlation of .397 with Auto11. Comp7, “I have always relied upon my self-determination as my primary motivator to persevere,” shares a significant correlation of .360 with Auto5 and a significant correlation of .509 with Auto11. Comp8, “I should, and do exert control over my life situations to ensure I achieve my goals,” shares a significant correlation of .490 with Auto5 and .509 with Auto11 and a slight negative correlation of-.136 with Auto15. Comp9, “I have confidence to take on and put in the necessary effort to succeed at overcoming challenges,” shares a significant correlation of .507 with Auto5 and .557 with Auto11. Comp10, “My natural ability to redirect paths and find ways of accomplishing goals,” shares a significant correlation of .520 with Auto5 and .531 with Auto11.

Table 2: Correlation Matrix for Autonomy and Competence

	Comp 6	Comp 7	Comp 8	Com 9	Com 10	Auto 5	Auto 11	Auto 15
Auto 5	.482	.360	.490	.507	.520	1.000		
Auto 11	.397	.509	.569	.557	.531	.387	1.000	
Auto 15	.146	.128	-.135	.011	.051	.023	.038	1.000
	± .271	critical value .05 (two-tail)						
	± .351	critical value .01 (two-tail)						

Relatedness and Competence

Table 3 shows that a strong correlation exists between R2 and Comp8 (.275), Comp9 (.365) and Comp10 (.489). A strong significant correlation exists between R3 and Comp10 with .492 and a slight correlation between R3 and Comp9 .287. R4 and Comp6 and are strongly positively correlated with a value of .383 and .376 respectively. R13 is strongly correlated with Comp10 at .390 and slightly correlated with .344. R14 is slightly correlated with Comp7 (.287), Comp9 (.277), and Comp10 (.293).

Table 3: Correlation Matrix for Relatedness and Competence

	<i>Relatedness</i>					<i>R</i>	<i>R</i>
	<i>1</i>	<i>R2</i>	<i>R3</i>	<i>R4</i>	<i>R13</i>	<i>14</i>	<i>16</i>
<i>Comp 6</i>	.144	.259	.140	.383	.236	.161	.218
<i>Comp7</i>	.065	.125	.062	.263	.135	.287	-.150
<i>Comp8</i>	.090	.275	.220	.223	.344	.154	-.035
<i>Comp 9</i>	.085	.365	.287	.208	.390	.277	.033
<i>Comp 10</i>	.155	.489	.492	.376	.169	.293	.186

± .268	critical value .05 (two-tail)
± .348	critical value .01 (two-tail)

Correlational Among Total Scores of Competence, Relatedness and Autonomy

When a correlational matrix was calculated among the total score for the three variables, it was found that Relatedness and Competence share a significantly strong relationship with a value of .986, whilst Competence and Autonomy share a slight relationship of .276 (Table 4). Based on the aforementioned findings, it can be noted that significant and slight correlations exist among the variables when the scores for each question are compared (Tables, 1, 2, &3). It can also be seen that correlations exist among the variables when the total scores are compared (Table 4).

Table 4: Correlational Matrix of Total Scores of Three Variables

	<i>Relatedness</i>	<i>Competence</i>	<i>Autonomy</i>
<i>Relatedness</i>	1.000		
<i>Competence</i>	.983	1.000	
<i>Autonomy</i>	.189	.276	1.000

54 sample size

± .268	critical value .05 (two-tail)
± .348	critical value .01 (two-tail)

Conclusions

Self-determination theory has captured the interest of professionals and researchers alike in its helpfulness towards an understanding of the human behaviour associated with its internalized motivators as well as its interrelatedness to external influences. Rooted in the three needs of autonomy, competence and relatedness, the human experience can be best studied holistically in its realistic context. With this in mind, this study examined not only factors within the classroom environment affecting self-determination to persist but also, and especially, those

outside of the classroom: the students' lived experiences of attending school. Relatedness, autonomy and self-perception of competence to achieve the programme itself were assessed beyond that of completing class tasks such as homework or discussions.

Under the context of introjected regulation of externally regulated behaviours posited by Deci and Ryan (1985), the potential influence of cultural values upon this must be considered in the global classroom. This study included questions directly attributed to the communitarian values of individualism versus collectivism as defined by Hofstede (2018), whose work is the most widely used typology to capture values in a generalized sense. This dimension addresses "the degree of interdependence a society maintains among its members" (Hofstede 2018). It captures the degree to which self-image is tied to the family, community and society. Low individualism indicates a collectivist society, with loyalty to the group and relationships of high importance. In this study, the researchers sought to determine whether or not this particular cultural value influenced the components of students' self-determination.

Duty and honour are specifically named as these are known values associated with collectivist societies (LeBaron, 2003a; LeBaron, 2003b). Duty and honour are a self-perception of one's obligation to others, which is stronger in cultures where an individual's identity and self-image are closely connected with family and society. One might assume the manner in which the question is worded would generate agreement of those from collectivist cultures and lesser agreement of those from individualistic cultures. However, results from either type of culture mirrored the other. It seems values of duty and honour, then, may be tied less to national cultural values and more to students' sense of autonomy with limited impact upon motivation to persist. The results of this study align with the accepted definition of integrated motivation supporting a high internal locus of control.

Self-regulation plays into this. The researchers view self-regulated behaviours as the manifestation of internalization of intrinsic motivators. Cross-comparing results, and having ruled out introjected motivation in the analysis, there is the presence of identified and integrated/intrinsic motivation (Filak, & Niolini, 2018, p. 775).

Finally, relatedness: questions indicated that the participants' perception of status of the University of Liverpool degree in terms of self-perception or inclusion in family/friends was only moderately high. This should not be discarded. Educators must recognize the impact of an education upon students' relationships outside of class, and vice versa. This should be considered in areas of programme and policy design, advisement and mentoring/guidance. To only look at relatedness and belonging within the classroom environment would prove a myopic view. In this global classroom, there is a need to look at the students' holistically from *their* perspectives, with their studies being one aspect of their full life, in order to determine best practices for engagement and knowledge construction that motivate perseverance.

Our research also questioned the impact of the materials and subject studied upon perseverance. While it might be assumed to pertain to competence, its importance is connected to relationships. Pentaraki and Burkholder (2017) stated "You and Kang (2014) found that enjoyment had a mediating effect on the relationship between perceived academic control and self-regulated learning, but the moderating effect of enjoyment was not significant" (p. 11). This study, however, found enjoyment to be quite significant in students' perseverance. The internalization of this integrated motivation, according to Deci and Ryan's (1985) Organismic Integration Theory (OIT), is affected by the social environments within which this takes place, thus, tying relatedness to the motivation behind self-determination.

With this in mind, online practitioners can consider strategies to use within the Shared Discussions which cater to students' need for interaction, their autonomy and their competence. One such strategy would be to ensure that probes seek to capitalize on students' critical thinking, problem-solving, application and synthesis of information. In giving formative and summative feedback and feedforward online facilitators should ensure that they cater to the students' need to build relationships, have autonomy, and be competent. One such strategy to ensure that the online classroom is more active is the use of screen recording software as a means of giving students feedback on assessments (Nabi & Rogers, 2009). It is recommended that online lecturers continue to find innovative ways to motivate students and ensure that they feel valued individually and collectively. Additionally, online lecturers must find ways to ensure that students are enjoying the experience so that they persevere.

Limitations and recommendations for further research

The possibility that traits remain more influential than cultural values in autonomy provides room to develop an instrument for university advisors and recruiters to help students estimate the struggles that may arise if they choose online education rather than face-to-face classrooms. Additionally, through technology and globalization, worldwide common cohort values of millennials and Generation Z are forming. These 'global cohorts' have developed shared values (Glenn, 2000) which influence individual behaviour along with their own nature (traits) and local cultural values. This study did not use age categories that align with the commonly-accepted categories of generational age cohorts (Baby Boomers, Generation X, Generation Y/Millennial, and Generation Z). Future studies would do well to capture their data within age ranges so as to identify if and how age cohort values affect persistence, specifically in self-determination. Finally, research on online students' determination and persistence typically focus on the classroom and study experience. Remaining understudied is the effect of conquering life challenges (external to the classroom) upon motivation to persist in the programme, filtering into motivation to complete the individual tasks necessary to do so.

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