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Research Article

The Cultural Contexts Of E-Learning In Higher Education In China And Flemish: A Study Focused Student And Teacher Perspectives

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ABSTRACT

This research presents the outcomes of a study that compared the study habits and techniques of students from Flemish and Chinese backgrounds. "Collaborative Learning Inventory" (COLI) and "Approaches and Study Skills Inventory for Students" (ASSIST) were given to first-year learners from China (n=362) and Belgium (n=360) by researchers. They tested each culture group using two different models: one based on the three-factor ASSIST model and the other a modified version of the four-factor COLI model. Findings showed that compared to their Flemish peers, Chinese students were more prone to follow learning theories that place an emphasis on comprehension, self-improvement, and the development of social competence. Their perception of learning as a process of rote memorization remained unchanged. Different learning settings used different approaches to education. Despite the obvious differences between the two datasets, they were able to find commonalities in our exploration of learning theory and practice. When seeking to understand challenges connected to students' learning, it is vital to examine both cultural and learning environment components.

KEYWORDS: *E-learning platform, Higher education, Cultural context, Teacher, and student perspectives.*

1. Introduction

They are essentially complementary processes; cultural transmission and education "meet" in educational settings. Historical research indicates that students' cultural practices and beliefs influence their preferred methods of learning. And how students handle different learning situations is heavily influenced by their own learning views. Research lends credence to what seem to be fundamental cultural variations in the conceptualization of learning. In addition to shaping one's social actions and interests, one's cultural background also affects one's attitudes and beliefs towards learning. Culture has a significant influence on pupils' ideas and learning processes, according to people who say this. In light of the cultural and pedagogical disparities between Chinese and Flemish university pupils, this research seeks to answer the question of whether or not these groups vary in their approaches to learning. The assumption that cultural practices affect students' learning is a prominent foundation in the literature that builds this research issue. This idea proposes that cultural norms and beliefs shape how people see education, which in turn causes biases in how people perceive learning (Bacos and Grove, 2019).

2. Background of the Study

There are several steps involved in the complex process of learning, including conceptualization, motivation, and behavioural modification. The learning process, sometimes broken down into the acquiring, knowing, and applying phases, relies heavily on understanding. Because learning is founded on prior experiences, it improves a person's ability to change their behaviour over time. A few more inspiring perspectives on education include "learning as a duty" and "learning as empowerment." While many cultures have different ideas on how children learn, most agree that there are two main stages of processing: deep and superficial. Thirdly, there's the

accomplishing or strategic approach, which is a kind of surface-level analysis designed to increase the probability of getting good marks. Research has mostly supported the structure of learning processes, which include motivation and strategy (Santos et al., 2019). Empirical research suggests that learning strategies are procedurally based and rely on context. Several scholars have tried to find other ways in certain fields of study. Deep learning is necessary for comprehending and retaining new ideas since it involves assessing fresh notions and connecting them to previously established principles and ideas. What they mean by "surface learning" is the opposite: mindlessly memorising facts and figures. Many Chinese students see memorising and comprehenhas as complimentary tasks, even though certain research have shown that the two are clearly distinct. A variety of perspectives on learning have been associated in the literature with various learning strategies, including memory and surface methods as well as comprehension and deep approaches. It is unclear how this may change in different cultural contexts, and there isn't enough of a theoretical or empirical basis to draw direct causal conclusions between concepts and approaches. Both the cultural setting and the learning context must be considered as factors in order to comprehend the ways in which pupils learn (Chen et al., 2020).

3. Purpose of the Research

Concerns about different cultures may influence students' participation with their schoolwork. These factors are more significant in a virtual classroom. Cultural variations persist in areas like student choice and classroom perspectives, even though e-learning is accessible to people from all walks of life. According to studies, there are "cultural gaps" when it comes to people's perceptions of online education. For example, research has shown that internet use varies between ethnic groups. Evaluating the influence of social-constructivist e-learning requires considering the learners' cultural origins since it impacts their beliefs, perceptions, ambitions, and emotions. No research has looked at how a social-constructivist "e-learning system" will fare in various cultural contexts (Cacheiro-Gonzalez et al., 2019).

4. Literature Review

Inherently instructive, culture is a space for the construction of identities. The Confucian-heritage traditions of China draw on the ideas of European-Socratic philosophy, which encourages the critical evaluation of established facts and the development of one's own theories. Learning that is courteous, thorough, practical, and labor-intensive is highly prized in Confucian philosophy, in contrast to the collectivistic Chinese society that places a premium on reciprocity, tradition, responsibility, dependency, obedience to authority, balance, personal growth, and correct conduct. While individualistic cultures place an emphasis on innovation, courage, self-sufficiency, and personal responsibility, collectivistic cultures value reciprocity, responsibility, tradition, dependency, obedience to authority, balance, self-improvement, and appropriate behaviour. Factors including one's upbringing, cultural norms, goals, and environmental pressures all have a role in shaping one's level of intrinsic motivation. Because learning is a domain-specific cognitive process, deep and surface learning strategies appear differently depending on the subject matter. Individual experiences, cultural background, goals, and the needs of the situation shape students' perspectives and methods (China's Higher Education, 2021). Students might switch up their strategies depending on the situation or the demands of the course, and the knowledge domain plays a significant role in this. When comparing students' learning perspectives and practices across knowledge areas, significant discrepancies were found. The learning environments of Chinese and Flemish reflects distinct contrasts. University admissions are more difficult for Chinese students due to national entrance exams, but Flemish students have it simpler. Students are now expected to actively participate and undergo constant review and assessment due to recent programme improvements that have increased their participation. The result is a more stringent screening process for first-year students at Flemish universities, with an acceptance rate of around 50%. Students in China face rigorous entrance exams, but after they've enrolled in classes, they feel far less pressure. The course content of study programmes in both cultural settings is comparable, but the methods of instruction and assessment are different (Hansen, 2018).

5. Research Question

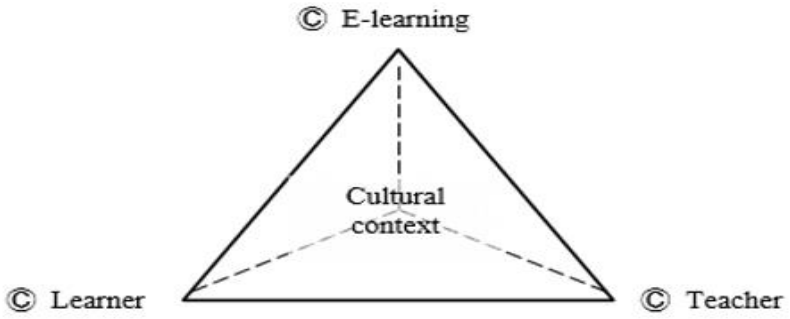
- How different are the perspectives and approaches to education among Chinese and Flemish students?
- Does a person's cultural background affect how they approach studying, and if so, how?
- How does one's cultural background impact their learning philosophies and practices in relation to their knowledge area?

6. Research Design

The study's overarching goal was to ascertain the extent to which cultural and learning environments influenced the study habits of first-year social science learners at Ghent University (Belgium) and Beijing Normal University (362 students from China). This study made use of the “Approaches and Study Skills

Inventory for Students" (ASSIST), a long-standing instrument for evaluating college students' academic progress. For this purpose, they administered the ASSIST questionnaire, which asked students to rate their own learning concepts using a 5-point Likert scale. To gauge students' understanding of learning, they administered the Conceptions of Learning Inventory (COLI). This 36-item inventory measured students' beliefs about learning across six dimensions: information acquisition, memorization, application, and comprehension; personal growth; learning as a process independent of location and time; and, finally, the cultivation of social competence. The questionnaires were administered via Dutch and Chinese using the back-translation method to ensure culturally relevant concepts. The subscale means for different disciplinary and cultural groups were compared using a one-way analysis of variance (ANOVA), and the component constructs were matched with the sample groups using confirmatory factor analysis (CFA). To examine if cultural environment and knowledge domain had any mutual influences, multivariate analysis of variance (MANOVA) was used. Students' prevailing methods were compared using chi-square analysis, and learning ideas and learning approaches were considered as independent factors in regression analysis.

6.1 Conceptual Framework



7. Results

- **Fit of the Data Model and Reliability**

They checked whether the factor constructions were appropriate for our sample using structural equation modelling (SEM) and confirmatory factor analysis (CFA). Acceptable the goodness of fit indices ($X^2/df<3$, RMSEA<.06, and GFI>.9) were shown by the three-factor model that ASSIST had created. If α>.65, then all three components have appropriate internal dependability. A structural factor model of the complete sample's learning techniques. The dissatisfactory low level of internal reliability (α.60) is seen across three COLI subscales: INFO, DUTY, and PROC. Nothing else was done with these scales. Each of the four subscales "social competence," "understanding and applying information," "personal transformation," and "memorising information" had its factor structures evaluated. Items might be changed based on the modification indices (MI). They enhanced the model fit to a tolerable degree "(GFI>.9, RMSEA <.06, X^2/df <3)" and created three items for every component in the new model. Concept learning using the factor structure model across the board. The purpose of evaluating model fit across groups was achieved via the use of crossgroup layered hierarchical limited models. Finding measurement invariance was accomplished using the Unrestricted Measurement weights, and Structured covariances models. The findings demonstrated acceptable consistency ($X^2/df<3$, CFI>.90, RMSEA<.05) and were applicable to different groups. Due to a decrease in model fit after including the equality component, they may infer that the Flemish and Chinese populations varied in the means of some variables. The indices of goodness of fit for the total sample and its subsamples are detailed in Table 1.

Table 1: Reliability Measures for the ASSIST and Revised COLI Models

	ASSIST			Adapted COLI		
Indexes	Flemish group	Chinese group	Total	Flemish group	Chinese group	Total
Goodness-of-fit (GFI)	.91	.92	.92	.96	.94	.95
Adjusted goodness-of-fit (AGFI)	.89	.90	.90	.93	.90	.91
Root mean square error of approximation (RMSEA)	.037	.042	.039	.059	.064	.047
Ratio of chi-square (X^2/df)	2.57	2.26	2.41	2.29	2.96	2.62

- **Disparities And Similarities in Mean Level**

The descriptive results for students' studying strategies and concepts across cultural and educational domain groups are shown in Table 2. Between female and male students, there were no significant differences (p>.05. In terms of social competence development ($F_{(1,729)}$ =3.96, p<.05) and seeing education as a personal change "($F_{(1,729)}$ =17.04, p<.001)," Chinese students fared better than Flemish students. They anticipated this to occur. However, there were no substantial variations in the learning concepts of memory between Flemish and Chinese students ($F_{(1,729)}$ =.09, p>.05. Furthermore, contrary to our predictions, Flemish learners did significantly worse than Chinese learners on the idea of understanding exam ($F_{(1,729)}$ =31.85, p<.001). There was no difference in the use of fundamental and tactical strategies between Flemish and Chinese students (p>.05). Nonetheless, Flemish learners took a greater proportion of surface methods (p<.01). The two groups' patterns of learning approach were comparable, with surface techniques ranking lowest, deep approaches ranking second, and strategic approaches at the top.

Table 2: Learning Strategies for Knowledge Domains and Intercultural Communication

	Mean (sd)					
	Flemish			Chinese		
	Total (*n*=360)	Education	Communication	Total (*n*=362)	Education	Communication
MEM	4.15(.86)	4.13(.92)	4.17(.77)	4.13(.92)	4.08(.78)	4.15(.97)
UND	4.65(.64)	4.69(.65)	4.59(.62)	4.97(.89)	4.79(.85)	5.04(.89)
PERS	4.65(.87)	4.63(.89)	4.67(.85)	4.93(.95)	4.69(.74)	5.02(1.01)
SOC	4.41(.78)	4.55(.77)	4.24(.74)	4.54(.94)	4.48(.82)	4.56(.98)
Surface	2.86(.66)	2.77(.61)	2.99(.71)	2.71(.84)	3.27(.80)	2.49(.75)
Deep	3.59(.55)	3.67(.52)	3.48(.58)	3.59(.64)	3.43(.62)	3.66(.64)
Strategic	3.69(.73)	3.93(.56)	3.35(.79)	3.75(.68)	3.59(.69)	3.81(.66)

MEM=remembering, UND=understanding, PERS=personal change, SOC=social competence.

- **Connections Between Ideas and Methods of Instruction**

The relationships between learning concepts and learning practices for the two cultural groups are shown in Table 3. Students in both cultural environments had the following correlations. Deep methods and the comprehending notion had a favourable correlation (p<.01). There was a positive correlation (p<.05) between learning as a personal transformation and deep and strategic methods, and a negative correlation with superficial techniques. Deep and strategic methods have a favourable correlation with the idea of social competence (p<.05). On the other hand, some distinct variations were noted. For Flemish students, the idea of remembering linked favourably with surface techniques (p<.05), but not for Chinese pupils. Remembering was favourably connected with both deep and tactical approaches (p<.01) for the later students. For Chinese pupils, learning as understanding linked poorly with surface techniques and favourably with strategic approaches. However, for students from Flanders, these relationships were not significant. In conclusion, relationships between learning ideas and learning methodologies were found; nevertheless, there were some correlational discrepancies between Chinese and Flemish students.

Table 3: Examining the Connections Between the Learning Habits and Attitudes of Chinese and Flemish Learners

	MEM	UND	PERS	SOC	Deep	Strategic	Surface
MEM		.480**	.183**	.164**	*.035*	*-.074*	*.109**
UND	.451**		.421**	.408**	.245**	*.091*	*-.050*
PERS	.352**	.538**		.386**	.333**	.131*	-.112*
SOC	.290**	.451**	.498**		.181**	.132*	.028
Deep	*.205***	.258**	.217**	.225**		.281**	*-.105**
Strategic	*.149***	*.224***	.229**	.269**	.564**		-.270**
Surface	*-.016*	*-.134**	-.139**	-.021	*-.057*	-.232**	1

Correlations for Flemish students are presented above the diagonal, and correlations for Chinese students are presented below the diagonal.

*p<.05. **p<.01

- **Interaction Between the Cultural Context and Knowledge Domain**

In "multivariate analysis of variance" (MANOVA) tests, the learning ideas and techniques were utilised as dependent variables, while the knowledge domain and cultural context were employed as independent factors. The results are shown in Table 4. The multivariate tests show that Wilk's Lambda significantly affects cultural context, information domain, and the link between culture context and academic domain (p<.01). Personal growth is highly influenced by knowledge domain "($F_{(3,716)}$=6.80, p<.01, partial η^2 =.009)". The interaction between the cultural environment and knowledge domain has a substantial influence on conceptions of comprehension "($F_{(3,716)}$=8.63, p<.01, partial η^2=.012)" and competence in society "($F_{(3,716)}$=8.53, p<.01, partial η^2 =.012)". When considering the impact sizes of 0.01 for small, 0.06 for medium, and 0.14 for huge, all effects are negligible. Both strategic and surface methods are substantially influenced by knowledge domain "($F_{(3,716)}$=11.27, p<.01, partial η^2 =.015)," with interface approaches having the most effect "($F_{(3,716)}$=23.63, p<.001, partial η^2=.032)." The interaction between cultural context and expertise domain is found to have significant effects on all dimensions of learning approaches, with a small effect on deep methods "($F_{(3,716)}$=18.99, p<.001, partial η^2 =.026)." and an intermediate impact on tactical "($F_{(3,716)}$=58.01, p<.001, partial η^2 =.075)" and exterior approaches :($F_{(3,716)}$=78.47, p<.001, partial η^2 =.099)."

Table 4: Results Of the MANOVA For Group Differences in Learning Ideas and Methodologies

Source	Dependent variable	F	Sig.	Partial Eta Square
Cultural context	MEM	.29	.590	.000
	UND	20.69	.000***	.028
	PERS	8.32	.004**	.01
	SOC	3.74	.047*	.005
	Surface	.001	.969	.000
	Deep	.364	.546	.001
	Strategic	1.173	.279	.002
Knowledge domain	MEM	.58	.447	.001
	UND	1.61	.205	.002
	PERS	6.80	.009**	.009
	SOC	2.95	.086	.004
	Surface	23.63	.000***	.032
	Deep	.198	.656	.000
	Strategic	11.27	.001**	.015
Cultural context * Knowledge domain	MEM	.064	.800	.000
	UND	8.63	.003**	.012
	PERS	3.84	.051	.005
	SOC	8.53	.004**	.012
	Surface	78.47	.000***	.099
	Deep	18.99	.000***	.026
	Strategic	58.01	.000***	.075

**$p<.01$. ***$p<.001$.

8. Discussion

The cultural and contextual disparities between Chinese and Flemish college learners were brought to light in this research by comparing their learning conceptions and practices. According to the findings, people's perceptions of learning are shaped by their goals, cultural background, and the limits of their environment. It is defined as "acting within man-made institutions and adapting to the particular definitions of learning that are valid in the educational environment in which one finds oneself." For Chinese students, going to college is about more than simply getting a degree; it's also about improving oneself and finding one's place in the world (Burac et al., 2019). The results show how the knowledge domain affects learning strategies and concepts as well as how the cultural context and the knowledge domain interact. Students from Flemish universities, who are known for their strict first-year requirements, tended to concentrate on surface learning, whereas students from China embraced deep learning approaches as well. The educational methods of Chinese and Flemish students have been influenced by many areas of knowledge and cultural settings in every academic area. In order to resolve the inconsistencies seen in this study, more variables must be investigated. When evaluating student traits and creating conducive learning settings, the research stresses the significance of considering cultural circumstances (Suresh et al., 2018).

9. Conclusion

The primary goal of this study was to identify the elements that impact the level of acceptability of online education among both instructors and students. In order to understand the similarities and contrasts among instructors and students in different cultural-educational contexts, they were delving into several significant concepts related to "invariance" (Vitoria et al., 2018).

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