LUYU CHEN

(University of Szeged, Institute of English and American Studies)

Factors Influencing Chinese Learners' Satisfaction with Online Classes: Insights from Confucius Institutes in Hungary

Abstract

This quantitative study investigates the factors that influence Chinese as a Foreign Language (CFL) learners' satisfaction with online learning in the context of Hungarian Confucius Institutes. The COVID-19 pandemic forced a rapid shift to online instruction, and while the acute phase of the pandemic has subsided, its impact on education remains significant. This study explores learners' preferences and satisfaction with online learning in the post-pandemic era. A questionnaire was administered to 241 CFL learners across five Confucius Institutes in Hungary, and in-depth interviews were conducted with two learners to provide contextual insights. An exploratory factor analysis and a scale reliability analysis were performed to examine the underlying structure and reliability of the questionnaire data. Five key factors influencing learner satisfaction were identified: engagement and interaction, technical issues, preferences for learning methods, teaching methods and course design, and assessment and feedback. Learners expressed a strong preference for face-to-face learning, citing concerns about engagement, interaction, and motivation in online environments. Technical challenges and the user interface of the online learning platform were also areas of concern. However, learners expressed satisfaction with teachers' performance and responsiveness in online classes

Keywords: COVID-19, Chinese as a Foreign Language, online learning, factors

陈璐钰

影响汉语学习者在线课程满意度的因素分析: 以匈牙利孔子学院为例

摘要

本文通过定量研究,调查了匈牙利孔子学院汉语作为外语学习者 (CFL) 在线学习满意度的影响因素。尽管新冠疫情 (COVID-19) 的高峰期已经过去,但其对教育的影响仍然具有研究意义。本研究探讨了疫情后时代汉语学习者对在线学习的偏好和满意度。研究人员对匈牙利五所孔子学院的 241 名 CFL 学习者进行了问卷调查,并对两名学习者进行了深度访谈,以提供背景信息。采用探索性因素分析和量表信度分析来检验问卷数据的潜在结构和信度。研究确定了五个影响学习者满意度的关键因素:参与和互动、技术问题、学习方法偏好、教学方法和课程设计以及评估和反馈。学习者表达了对面对面学习的强烈偏好,并表达了对在线环境中参与度、互动性和驱动力的担忧。技术挑战和在线学习平台的用户界面也是他们关注的方面。然而,学习者对教师在在线课程中的表现和响应能力表示满意。研究结果突出了在线 CFL学习中学习者满意度的复杂性,并强调需要解决教学法、技术和动机因素以增强在线学习体验。本研究同时也为寻求优化疫情后时代在线语言学习的教育工作者和机构提供了宝贵的见解。

关键字:新冠疫情,汉语作为外语,在线学习,影响因素

Introduction

The COVID-19 pandemic triggered a global shift towards online learning, forcing educational institutions to rapidly adapt and embrace digital platforms. In Hungary, universities were among the first to transition to online instruction, with a nationwide ban on in-person classes implemented in March 2020. This unprecedented disruption persisted for over a year, with univer-

¹ Komuves–Than 2020.

sities progressively resuming face-to-face learning in the spring/summer of 2021. While the pandemic has subsided, its impact on education remains significant, with online and blended learning models becoming increasingly prevalent. This transition to online learning has spurred a growing body of research exploring its effectiveness and impact on student satisfaction.³ While these studies have yielded valuable insights, they often focus on general online learning experiences or specific disciplines, with limited research examining Chinese language learning in the context of Confucius Institutes. While extant research on Confucius Institutes has predominantly focused on their cultural and economic diplomacy functions⁴ and Chinese language teaching methodologies,⁵ less emphasis has been placed on student satisfaction, particularly in comparing face-to-face and online learning environments in the pandemic period. Recent studies have explored teacher satisfaction within Confucius Institutes amidst the pandemic-induced lockdowns, but further research is needed to understand the student perspective. This gap is particularly evident in the Hungarian context, where research on online learning satisfaction in Confucius Institutes remains scarce.

This study endeavours to address this gap by investigating the factors that influence Chinese language learners' satisfaction with online classes offered by Confucius Institutes in Hungary. Confucius Institutes, established by the Chinese government to promote Chinese language and culture globally, have been instrumental in fostering intercultural exchange and language acquisition. In Hungary, the inaugural Confucius Institute was established in 2006 at Eötvös Loránd University in Budapest. Subsequently, a network of five Confucius Institutes has been established across Hungary, situated in Budapest, Debrecen, Miskolc, Pécs, and Szeged. These institutes offer a diverse range of Chinese language courses, often employing English as the medium

Reuters 2021, April 9. https://www.reuters.com/business/healthcare-pharmaceuticals/hungary-delays-secondary-schools-reopening-by-3-weeks-may-10-pm-orban-2021-04-09/(last accessed: 05.03.2024)

³ Almusharraf–Khahro 2020; Mohammed et al. 2022; Hettiarachchi et al. 2021; Teng 2023, among others.

⁴ Gil 2017; Hartig 2012; Lien et al. 2012; Lien–Tang 2022; Yao 2023.

⁵ Gonondo 2021; Starr 2009.

⁶ Lu–Hua 2024: 335.

Csikó 2024: 95.

Hungarian university launches country's fifth Confucius Institute 2019. https://www.glo-baltimes.cn/content/1170291.shtml (last accessed: 10.06.2023)

of instruction, and provide opportunities for Hungarian students to obtain university credits. This study's findings have implications for Confucius Institutes both within Hungary and internationally, informing their endeavours to enhance online learning experiences and promote Chinese language education in the digital era.

Focusing on a selection of Chinese as a Foreign Language (CFL) learners in Hungary who have experienced both face-to-face and online learning modalities within Hungarian Confucius Institutes, this study investigates their preferences and satisfaction with online learning. Specifically, this research seeks to address the following questions:

- 1. What are the most frequently cited challenges and problems encountered by CFL learners in online learning environments in Hungary, and conversely, which aspects of online learning are most positively perceived?
- 2. Are CFL learners in Hungary satisfied with the online learning system implemented during the pandemic?

Theoretical Framework

The COVID-19 pandemic forced a rapid shift to online learning across educational contexts, prompting increased research interest in language learning and teaching within this modality. While studies on English as a Foreign Language (EFL) in lockdown situations have garnered considerable attention, research on CFL remains limited. In particular, factors influencing CFL teaching and learning in online environments require further investigation. Learning Chinese presents unique challenges due to its orthography, which combines graphic and phonetic elements in one of the world's most phonologically opaque writing systems. Writing Chinese characters online is particularly challenging due to the importance of stroke order. Beyond the complexities of the writing system, understanding learner motivation in the online CFL context is crucial, particularly within Confucius Institutes. With China's rising global prominence, interest in learning Chinese language and culture

⁹ Allo 2020; Atmojo–Nugroho 2020; Famularsih 2020; Sepulveda-Escobar–Morrison 2020.

¹⁰ Packard et al. 2006; Ye 2024.

¹¹ Gu 2020.

has surged, leading to the establishment of Confucius Institutes as overseas language promotion agencies.¹² The first Confucius Institute was founded in South Korea in 2004, and as of 2023, there are 498 institutes across 160 countries.¹³ These institutes play a key role in meeting the growing demand for Chinese language education.

Pre-pandemic research on online language learning predominantly focused on computer-assisted language learning (CALL) and computer-mediated communication (CMC). While CALL and CMC offer valuable possibilities for synchronous and asynchronous teaching, their technology primarily serves as an adjunct to traditional classroom instruction. However, the pandemic necessitated a complete shift to online learning, ¹⁴ leading to the widespread adoption of video conferencing platforms (e.g., Zoom, Skype, Microsoft Teams) and learning management systems (e.g., Google Classroom, Canvas, Moodle). Despite the availability of these technologies, the abrupt transition to online learning often resulted in unpreparedness and inefficient teaching practices. Factors such as low expectations for technology use in education¹⁵ and inadequate teacher training¹⁶ can hinder effective digital pedagogy. Consequently, a study found that students often prefer text-based communication in online sessions due to instructors' limited technological proficiency. ¹⁷ However, online learning also presents opportunities for increased student participation. The virtual environment can afford greater privacy and anonymity, reducing anxiety for some learners. 18 This can lead to less pressure during online interactions. Another study emphasised the importance of participation and interaction for successful language learning, regardless of the learning environment (e.g., face-to-face, blended, or online). 19 Recognising the significance of peer interaction, language teachers strive to cultivate online learning communities and foster real-time synchronous interaction to enhance language acquisition.

¹² Liu 2019: 257.

¹³ Yimeng 2023.

¹⁴ Moorhouse 2020: 609.

¹⁵ Al-bataineh et al. 2008: 382.

¹⁶ Baran 2014.

Peachey 2017: 114.

Bump 1990; Warschauer 1998.

¹⁹ Wang–Chen 2009: 5.

Method

1. Research Design

This study employed a quantitative research design to investigate the factors influencing CFL learners' satisfaction with online learning in Hungarian Confucius Institutes. A questionnaire was utilised as the primary research instrument to gather data from a larger sample of learners. To enrich the contextualisation and interpretation of the quantitative findings, qualitative interviews were conducted with two CFL learners. This mixed-methods approach allowed for a more comprehensive understanding of the research topic. The research procedure commenced with a comprehensive review of relevant literature to establish a theoretical foundation and inform the development of the research instrument. This review encompassed recent empirical studies on online language learning in both EFL and CFL contexts, as well as seminal texts on online education, pedagogical approaches, and potential challenges associated with online learning.²⁰

2. Interview data for the questionnaire

To gain deeper insights into CFL learners' experiences and perspectives, indepth and semi-structured interviews were conducted with two students, one male and one female (21 and 29 years old, earning a BA in Computer Sciences and a PhD in International Relations, respectively), who had had the experience of learning Chinese in both face-to-face and online situations at the Confucius institute in Szeged. These interviews explored their perceptions of the advantages, disadvantages, and challenges associated with online language learning, providing valuable context for the subsequent quantitative data collection. Both students volunteered and were told at the beginning that they could withdraw from the study at any time. The main interview questions were designed as, but were not limited to, the following:

²⁰ e.g., Allo 2020; Famularsih 2020; Moorhouse 2020.

- How long have you been learning Chinese?
- Why did you choose to learn Chinese?
- Are you satisfied with this current online learning? Were you satisfied with face-to-face learning?
- Are you still motivated to learn Chinese?
- What are your problems and challenges in learning Chinese online?
- What is a difference between learning online and face-to-face?

Both students expressed notable dissatisfaction with the transition to online learning. While the male student initially held a positive view of Chinese language and culture, influenced by personal interactions and observations of athletes, the shift to online learning significantly dampened his motivation. He cited the 'absence of engaging classroom activities', such as 'card and group games', as a key factor contributing to this decline.

Similarly, the female student, despite being driven by academic incentives, found the online learning environment inadequate. She criticised the lack of audiovisual materials and the over-reliance on typing, which she deemed detrimental to the acquisition of Chinese characters. This perceived deficiency in effective instructional strategies, coupled with technical issues related to the online platform, ultimately led to her disengagement and withdrawal from the course. These findings collectively underscore the importance of replicating, to the extent possible, the interactive and engaging elements of face-to-face language instruction in the online environment. The students' feedback suggests that a greater emphasis on dynamic activities, visual learning aids, and opportunities for active participation may be crucial to maintaining student motivation and ensuring a satisfying learning experience. Furthermore, the technical limitations of the chosen platform highlight the need for the careful consideration and selection of online learning tools that are both user friendly and conducive to effective language acquisition.

Based on the insights gleaned from the literature review and qualitative interviews, a questionnaire was developed to assess CFL learners' satisfaction with various aspects of online learning, such as course design, instructor presence, technology use, interaction, and perceived learning outcomes. Regarding the interview data, questionnaire items N2: 'I think I will get better grades this year'; N16: 'It is difficult to have concentration in online classes'; N17: 'compared to face-to-face classes, the teachers rarely use creative teaching methods (such as language cards, character games, and brainstorming) in

online classes'; N18: 'compared to face-to-face classes, the teachers rarely use Chinese audiovisual products such as films and songs in online classes)'; N28: 'I found the user interface of the online learning's platform (e.g., Dingtalk) not friendly'; and N30: 'The home environment for learning online is annoying and I lose concentration' were added and modified.

3. Pilot Study

A five-point Likert scale was incorporated into the questionnaire to capture participants' responses, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree); this allowed for a nuanced measurement of attitudes and opinions. To ensure the validity and reliability of the questionnaire, a pilot study was conducted with 12 CFL learners at the University of Szeged. This pilot study aimed to establish face validity and gather feedback on the clarity and comprehensiveness of the questionnaire. Additionally, expert review was sought from specialists in CFL and EFL education to further refine the instrument and ensure content validity. The finalised questionnaire was then distributed to a larger sample of CFL learners across five Confucius Institutes in Hungary. Data were collected from 241 participants (65 males, 153 females, and 23 participants did not indicate their gender), age from 18 to 36, via an online survey platform to maintain anonymity and confidentiality, from 2020 to 2024. The majority of the participants (161) were pursuing Bachelor of Arts or Bachelor of Science degrees, while the remaining students were enrolled in higher education programs, such as master's and doctoral programs.

To conduct a comprehensive statistical analysis of the data, IBM SPSS was used. This included an exploratory a factor analysis (EFA), a reliability analysis, and descriptive statistics, allowing for a thorough investigation of the research questions.

Results and Discussion

To assess the first research question and ensure the validity and reliability of the newly developed instrument, both an EFA and a scale reliability analysis were employed. The suitability of the collected data for an EFA was evaluated using the Kaiser–Meyer–Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity. The KMO value of .78 indicated excellent sam-

pling adequacy, 21 and the significant Bartlett's test (p < .05) further confirmed the appropriateness of the data for the EFA. These results supported the use of the EFA to explore underlying constructs and establish construct validity. Several criteria were employed to determine the optimal number of factors to retain. After the application of Kaiser's criterion, which suggests retaining factors with eigenvalues greater than or equal to 1, an initial solution of nine factors was indicated. These nine factors collectively explained approximately 57.45% of the total variance in the dataset. However, as Pallant (2016) notes, Kaiser's criterion can sometimes lead to the retention of an excessive number of factors. Therefore, various factor structures were examined, considering solutions with four, five, and six factors. While acknowledging the absence of a definitive objective method for determining the precise number of factors to retain in exploratory factor analysis, Hair et al. (2006) suggest examining multiple factor solutions and selecting the structure that offers the most compelling conceptual justification. This approach recognises the inherent subjectivity in factor extraction and emphasises the importance of theoretical grounding and interpretability in making decisions about the final factor structure. A five-factor solution ultimately emerged as the most conceptually meaningful and interpretable option. To achieve this final solution, certain variables that did not load significantly on any factor or exhibited crossloading on multiple factors were removed from the analysis. Specifically, items N06, N01, and N27 were excluded, resulting in a refined dataset of 27 variables categorised into five distinct factors.

Following the identification of the latent constructs, or factors, within the dataset, a scale reliability analysis was performed to evaluate the internal consistency of each factor. Cronbach's alpha, a widely used measure of internal consistency, was calculated for each factor. As shown in Table 1, the Cronbach's alpha values ranged from .61 to .81, indicating satisfactory to excellent internal consistency for all factors. While a Cronbach's alpha of .70 is generally considered acceptable, values as low as .61 can be adequate in exploratory research within the humanities, where constructs tend to be more abstract and less precisely defined (Field, 2024). This is particularly true for factors with fewer items, where alpha values may be naturally lower. The obtained alpha values suggest that the scales used in this study are reliable and exhibit good internal consistency.

²¹ Kaiser, 1974.

To facilitate interpretation and discussion, each extracted factor was assigned a label that reflects both the highest loading variables and the overarching theme unifying the corresponding items, as detailed in Table 1. This labelling process aids in understanding the underlying constructs represented by each factor and facilitates a more meaningful analysis of the results.²²

Factor 1 Engagement and Interaction		Factor 2 Technical Issues		Factor 3 Preferences for Learning Methods		Factor 4 Teaching Methods and Course Design		Factor 5 Assessment and Feedback	
N22	.69	N10	.71	N03	.81	NII	.62	N13	.67
N14	.65	N08	.69	N04	.69	N02	.56	N16	.64
N15	.59	N29	.63	N21	.66	N26	.49	N28	.49
N30	.57	N12	.57	N18	.64	N07	.43		
N17	.51	N24	.52	N19	.59	N09	.40		
N05	.49	N23	.48						
N20	.47	N25	.47						
Cronbach's Alpha: .81		Cronbach's Alpha: .76		Cronbach's Alpha: .74		Cronbach's Alpha: .71		Cronbach's Alpha: .61	

Table 1: Resulting Factor Structure and Item Loadings

Accounting for 13.71% of the total variance, the first and foremost factor was labelled 'Engagement and Interaction'. Seven variables were used to identify this category, comprising: N22: 'Compared to face-to-face classes, I am tempted to check my social network activity during online classes which makes me losing the focus'; N14: 'The teachers do not encourage me in participating actively in online classes'; N15: 'The learners do not want to participate actively in online classes'; N16: 'It is difficult to participate in group works in online classes'; N17: 'As I connect to the classes in other places than schools and universities, it is difficult to have concentration in online classes'; N05: 'Online classes were the reason for losing my motivation of learning Chinese'; and N20: 'Compared to face-to-face classes, the amount of homework has been increased for online classes'. The second factor of importance, accounting for a total variance of 12.24%, was described as 'Technical Issues'. Seven variables loaded onto this factor, representing items: N10: 'The teachers rarely are online out of the class time to respond to the

²² Hair et al. 2006.

students' questions and problems'; N08: 'The teachers respond to the students' problems very late'; N29: 'I face so many technical problems in terms of the platform (e.g., DingTalk)'; N12: 'The teachers do not have technical background information for teaching online'; N24: 'I found the user interface of the online learning's platform (e.g., Dingtalk) not friendly'; N23: 'I often experience internet disconnection in online classes'; and N30 'The home environment for learning online is annoying, and I lose concentration'. The third factor, notably defining 8.65% of the total variance, was termed as 'Preferences for Learning Methods'. This factor was characterised by five variables, including N03: 'I prefer to participate face-to-face classes rather than online ones'; N04: 'Compared to face-to-face learning, I cannot learn writing characters by typing in online classes'; N21: 'It is difficult to make summary of the material which I learnt online'; N18: 'Participation in online classes has not highlighted my weak and strong points in learning Chinese'; and N19: 'Participation in online classes made me lazy since I am bored to participate actively in the classes'. Five variables loaded onto the fourth factor. which explained 7.95% of the total variance and was labelled as 'Teaching Methods and Course Design'. This category was represented by N11: 'Compared to face-to-face classes, the online classes are boring'; N02: 'Compared to face-to-face classes, the teachers rarely use creative teaching methods (such as language cards, character games, and brainstorming) in online classes'; N26: 'Compared to face-to-face classes, the teachers rarely use Chinese audiovisual products such as films and songs in online classes'; N07: 'Compared to face-to-face classes, the course syllabus is designed in a way that I cannot be interested in'; and N09: 'Compared to face-to-face classes, the amount of homework has been increased for online classes'. The analysis yielded a fifth and final factor, accounting for 5.12% of the total variance, which was termed 'Assessment and Feedback'. The category was represented by three variables including: N13: 'I have not received planned feedback on my homework from the teachers during online classes'; N16: 'In compared to face-to-face exams, the format of the online exams makes me stressed'; and N28: 'The students can easily cheat on the online exams'. The results of the EFA and scale reliability analysis demonstrated that the data obtained through the developed instrument exhibited strong internal consistency and construct validity. This indicates that the instrument effectively measures the intended constructs and that the findings derived from its use are reliable and meaningful.

As for the problems perceived by the CFL learners in Hungary, Table 2 presents the highest and lowest rated items from the questionnaire on CFL learners' perceptions of online learning. The table is divided into two sections: 'Highest Rated' and 'Lowest Rated'. Each section lists the item number, the number of respondents (N), the mean score (M), and the standard deviation (SD) for each item. The highest-rated items reflect aspects of online learning that learners viewed most favourably, while the lowest-rated items indicate areas of dissatisfaction or concern. By comparing the mean scores, we can identify the relative importance of different aspects of online learning from the learners' perspective.

To answer the second research question, the results presented in Table 2 reveal some seemingly contradictory findings regarding CFL learners' satisfaction of online learning. While several of the highest-rated items express a clear preference for face-to-face instruction and highlight challenges associated with online learning, others indicate satisfaction with specific aspects of the online experience, particularly related to teacher performance. Several of the highest-rated items reflect a strong preference for face-to-face learning and underscore challenges associated with the online modality. For example, item N06: 'I prefer to participate in face-to-face classes rather than online ones' received the highest mean rating (4.63), indicating a wide-spread desire among learners to return to the traditional classroom setting. This finding aligns with other studies that have reported learners' preference for in-person interaction and the social dynamics of face-to-face learning in the other contexts.²³

Despite the challenges and preferences expressed for face-to-face learning, the results also indicate satisfaction with certain aspects of online learning, particularly teacher performance, which is in line with the previous research. Learners disagreed with items suggesting that teachers were unresponsive or lacked technical skills, including N10: 'The teachers rarely are online out of the class time to respond to the students' questions and problems'; N08: 'The teachers respond to the students' problems very late'; and N27: 'The teachers do not have technical background information for teaching online'. These findings suggest that teachers were perceived as accessible, responsive, and technologically proficient, contributing positively to the online learning

Fatani 2020: Suharvat et al. 2022.

²³ Badovinac et al. 2021; Gherhes et al. 2021; Kemp–Grieve 2014.

experience. Furthermore, the learners expressed concerns about the effectiveness of group work in online environments (N16: 'It is difficult to participate
in group works in online classes'); the impact of online learning on their motivation (N05 'Online classes were the reason for losing my motivation of
learning Chinese'); and the challenges of maintaining concentration in a home
learning environment (N30: 'The home environment for learning online is
annoying and I lose concentration'). These findings highlight the importance
of addressing the social, motivational, and environmental challenges associated
with online learning to enhance learner satisfaction and engagement. The
low rating for item N24 ('I found the user interface of the online learning
platform [e.g., Dingtalk] not friendly') points to the significance of userfriendly technology in online learning. Difficulties navigating or utilising the
online platform can lead to frustration and hinder effective learning.

Highest	Rated			Lowest	Rated		
Item	N	M	SD	Item	N	M	SD
N06	241	4.63	1.09	N24	241	1.31	1.07
N14	241	4.59	1.09	N25	241	1.50	1.07
N04	241	4.41	1.09	N26	241	1.51	1.07
N30	241	4.37	1.09	N12	241	1.56	1.08
N07	241	4.21	1.08	N20	241	1.63	1.08
N23	241	4.06	1.08	N13	241	1.75	1.08
				N28	241	1.81	1.08
				N08	241	1.88	1.08
				N05	241	2.00	1.09
				N19	241	2.06	

Table 2: Highest- and lowest-rated perception of the learners toward learning online

Conclusion

This study provides valuable insights into the factors influencing CFL learners' satisfaction with online learning in the context of Hungarian Confucius Institutes. By employing a mixed-methods approach, combining quantitative data from a questionnaire with qualitative insights from interviews, this research explored learners' perceptions and experiences in the post-pandemic era. The findings reveal a complex interplay of factors contributing to satisfaction, including pedagogical approaches, technological affordances, and individual learner characteristics.

The results highlight the need for educators to adapt their teaching strategies to better address the challenges and preferences of learners in online environments. Specifically, the findings suggest that instructors should focus on enhancing learner engagement and interaction, addressing technical issues and ensuring user-friendly online platforms, accommodating diverse learning styles and preferences, employing creative and engaging teaching methods, and providing timely and effective feedback. By incorporating these recommendations into their practice, educators can create more supportive and engaging online learning experiences that cater to the unique needs of CFL learners. Furthermore, examining Confucius Institute teachers' perceptions of online and face-to-face teaching modalities could provide valuable insights into pedagogical practices and challenges from an instructor's perspective, complementing the student-centred focus of this study. While this study sheds light on the important roles of educational technology and teacherstudent interaction in online learning, it is crucial to acknowledge its limitations. The effectiveness of online teaching is a complex phenomenon influenced by a multitude of factors beyond the scope of this research. These include, but are not limited to, the specific teaching content and methods employed, the subject matter being taught, and the individual characteristics and expertise of the teachers involved. Future research should delve into the intricate interplay of these factors to provide a more comprehensive understanding of how to optimise online learning environments.

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