

Developing and Validating an LMOOC Quality Evaluation Scale in the Chinese EFL Context

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Abstract

The present study develops an LMOOC Quality Evaluation Scale (LQES) and validates it in the Chinese context, which has the largest number of EFL learners in the world. Adopting a mixed-method approach, the data were collected from 2,315 LMOOC learners from 16 universities in China. A 4-factor model, comprising Instructional Design, L2 Teachers' Literacy, Teaching Implementation and Technical Support, emerged and was validated. The LQES provides an original and comprehensive framework for understanding the complexities of LMOOC quality. This study highlights the critical factors underpinning the evaluation of LMOOC quality and paves the way for further refining of the instrument in future research.

Keywords: Language MOOCs (LMOOCs), Quality, Scale development, EFL learning

Introduction

With the proliferation of Language MOOCs in the past decade, much scholarly attention has been drawn to the potential and opportunities provided in this field. Despite robust development of language MOOCs (LMOOCs) in the past decade (Martín-Monje, 2021; Sallam et al., 2022), challenges remain within the field. Quality issues, such as inappropriate course design, inefficient learner support and unfit assessment have hindered the development of LMOOCs (Bárcena et al., 2015; Sokolik, 2014; Zhang & Sun, 2023). Although LMOOC quality exerts a decisive impact on learners' online language learning, the issue

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of how to properly evaluate the quality of LMOOCs remains under-explored. Existing research into the quality of LMOOCs is limited to qualitative studies (Perifanou & Economides, 2014; Ding & Shen, 2022; Luo & Ye, 2021) and no existing instrument has been developed to measure learners' evaluation of LMOOC quality.

Methods

The present study develops an LMOOC Quality Evaluation Scale (LQES) for measuring L2 learners' perceptions of LMOOC quality and validates it in the Chinese EFL context, which has developed the largest number of EFL learners in the world. The study develops theoretically and empirically grounded rubrics that capture a range of dimensions of LMOOC design, teaching and implementation. Combining quantitative and qualitative methods, the present study also investigates the key dimensions underpinning L2 learners' evaluation of LMOOC quality.

Throughout the research process, a total number of 2,327 university students in mainland China participated in the study. All together the data of 15 LMOOCs were collected, seven of which are recognized as national first-class online courses and the other eight as provincial first-class online courses. Adopting a mixed-method approach, we collected data from multiple sources: a literature review, interviews of LMOOC learners and experts, and questionnaires from previous studies. Development and validation of the scale involved: (1) generation of an initial item pool based on a review of the literature on MOOC quality and a focus group interview; (2) evaluation of the content validity through consultation of LMOOC experts and exploration of the factor structure of the scale using Exploratory Factor Analysis (EFA); and (3) validation and confirmation of the final scale through Confirmatory Factor Analysis (CFA).

Results

Based on results from the open-ended questionnaire and literature review, an initial item pool of 43 items was generated. After the focus group interview, four new items reflecting LMOOC learning in the Chinese context were added to the initial item pool. Eight LMOOC experts were invited to review the scale and 41 quality items were retained as a preliminary set for further investigation. This study conducted Bartlett's test of the sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The results ($KMO = 0.985$, >0.60 , $p < 0.001$) showed that the data were suitable for subsequent factor analysis.

Then Exploratory Factor Analysis with Principal Axis Factoring and Promax Rotation was performed with the preliminary set of 41 scale items. The final version of the LQES consisted of 32 items, Instructional Design, L2 Teachers' Literacy, Teaching Implementation and Technical Support. The variances explained by the four factors were 42.28%, 13.27%, 8.62%, and 5.74% respectively, accounting for 69.91% in total. Based on multiple criteria (refer to Table 4), the initial Confirmatory Factor Analysis results suggested that the model exhibited a good fit to the data, with $\chi^2/df = 1.711$, GFI = 0.96, RMSEA = 0.02, SRMR = 0.01, NFI = 0.92, TLI = 0.97, and CFI = 0.96. The results also showed a good fit between the four-factor model and the sample data. For the four dimensions, the indices (χ^2/df , GFI, RMSEA, SRMR, and CFI) demonstrated satisfactory values.

Discussion and Conclusion

The findings in developing the LQES have theoretical and practical implications. Theoretically, the identification of a four-factor structure of the LQES provides a better understanding of learners' perceptions of learning with LMOOCs. The present study highlights the critical factors in the evaluation of LMOOC quality and paves the way for further refining of the instrument in future research. The research findings have pedagogical implications for LMOOC practitioners. Firstly, the LQES provides a standardized way to evaluate and compare different LMOOCs. The LQES helps LMOOC developers to decide whether their courses have met standards in various dimensions, which is crucial for maintaining the effectiveness of online language learning. Secondly, by identifying the key elements in the LQES, LMOOC designers can focus on these standards when developing new courses, leading to better-structured, more engaging, and pedagogically sound courses. Thirdly, the LQES can be used as a diagnostic tool to provide general feedback to LMOOC practitioners. MOOC instructors, platform developers, and policy makers are increasingly being expected to understand the learning effectiveness of using MOOCs beyond enrolment numbers, number of certificate earners, and completion rates (Major & Blackmon, 2016). Although this study was situated in the Chinese EFL context, the results have implications for other EFL contexts.

We acknowledge the following limitations in this study. Firstly, although 2,315 learners of 15 LMOOCs cover a wide range of participants and themes of LMOOC, the participants in this study cannot represent all learners of LMOOCs. Secondly, further validation of translation versions into other languages from the LQES should be implemented since this study is conducted in a Chinese EFL context. To conclude, the present study develops an LMOOC

Quality Evaluation Scale (LQES) for the first time and paves the way for developing instruments for measuring the quality and effectiveness of other technology-enhanced language learning practice.

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