

Volume 2, Issue 9, 2024

Print ISSN: 2959-992X

Online ISSN: 2959-9938

TRENDS IN SOCIAL SCIENCES AND HUMANITIES RESEARCH



Copyright© Upubscience Publisher

Trends in Social Sciences and Humanities Research

Volume 2, Issue 9, 2024



Published by Upubscience Publisher

Copyright© The Authors

Upubscience Publisher adheres to the principles of Creative Commons, meaning that we do not claim copyright of the work we publish. We only ask people using one of our publications to respect the integrity of the work and to refer to the original location, title and author(s).

Copyright on any article is retained by the author(s) under the Creative Commons

Attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Authors grant us a license to publish the article and identify us as the original publisher.

Authors also grant any third party the right to use, distribute and reproduce the article in any medium, provided the original work is properly cited.

Trends in Social Sciences and Humanities Research

Print ISSN: 2959-992X Online ISSN: 2959-9938

Email: info@upubscience.com

Website: <http://www.upubscience.com/>

Table of Content

TYPICAL CASES OF ONLINE TEACHING QUALITY EVALUATION BASED ON MULTIMODAL AFFECTIVE STATE ANALYSIS Jin Lu	1-8
RESEARCH ON THE SYNERGY EFFECT OF CORPORATE TRAINING AND EMPLOYEE DEVELOPMENT IN INCENTIVE MECHANISMS UNDER THE BACKGROUND OF THE DIGITAL ECONOMY QiuYing He*, XinJie Lyu	9-14
DOES MANAGEMENT ATTITUDE TOWARDS ECONOMIC UNCERTAINTY INFLUENCE THE VALUE RELEVANCE OF INTELLECTUAL CAPITAL? YiRu Yang	15-25
FACTORS RESPONSIBLE FOR MARITAL CONFLICTS AMONG NEWLY MARRIED COUPLES IN ILORIN, KWARA STATE NIGERIA Inioluwa Racheal Ogungbemi*, Samson Aderemi Ajiboye, Ayodele Bamidele Ogungbemi, Lateef O. Adegboyega	26-32
ATTITUDES AND SOCIAL RESEARCH DISPOSITION AMONG ACADEMIC IN NIGERIA Inioluwa Racheal Ogungbemi*, Samson Remi Ajiboye, Ayodele Bamidele Ogungbemi	33-36
SOCIAL MEDIA AND PROTEST ON THE NIGERIA ECONOMY AND DEMOCRACY: A CASE STUDY OF END SARS AND BAD GOVERNANCE PROTEST Nathan Udoinyang*, Osajie Justina Nwazuni	37-44
THE CHOICE PREFERENCE OF PUBLIC SERVICE AGENCIES IN CHINESE AFFORDABLE HOUSING COMMUNITIES: AN EXPLANATORY FRAMEWORK OF WELFARE MANAGEMENT YanRunYu Liang, YaQian Zhao, ShiYu Xie*	45-50
THE ROLE AND IMPACT OF MUSIC EDUCATION IN THE CULTURAL INDUSTRY XinJie Lyu	51-55
CULTIVATION OF UNDERGRADUATE PHYSICAL EDUCATION TALENTS UNDER THE “INTEREST CLASS-MORNING EXERCISE-CLASS TUTOR” TRINITY EDUCATION MODEL: THE CASE OF CHENGDU UNIVERSITY XingShuo Xu, XinXuan Chen*, JingWen Jiang	56-61
RESEARCH AND PRACTICE ON THE CULTIVATION MODE OF COMPOSITE TRANSLATION TALENTS IN AGRICULTURE UNIVERSITIES UNDER THE BACKGROUND OF NEW LIBERAL ARTS Fei Deng	62-68

TYPICAL CASES OF ONLINE TEACHING QUALITY EVALUATION BASED ON MULTIMODAL AFFECTIVE STATE ANALYSIS

Jin Lu

Guangdong Key Laboratory of Big Data Intelligence for Vocational Education, Shenzhen Polytechnic University, Shenzhen 518000, Guangdong, China.

Corresponding Email: lujin0808@szpu.edu.cn

Abstract: With the popularity of online education, how to evaluate online teaching quality scientifically and comprehensively has become an urgent problem. Traditional teaching quality evaluation methods often rely on single text data (e.g., student feedback, teacher self-assessment, etc.), which has shortcomings such as strong subjectivity and incomplete information. The multimodal affective state analysis technology can capture multiple affective states of students in the learning process (e.g., facial expression, voice tone, body posture, etc.), thus providing a more comprehensive and objective basis for teaching quality evaluation. This paper proposes an intelligent modern quality evaluation scheme, using multimodal machine learning technology, integrating multidimensional information to comprehensively assess students, and realizing the organic combination of process evaluation, comprehensive ability evaluation and dynamic evaluation. The scheme proposed in this paper can achieve intelligent online teaching evaluation and establish an accurate portrait of teachers and students' learning, and gradually realize trace-free and accompanying teaching evaluation. The experimental results show that the multimodal emotion recognition method for online learning using fused video semantic information in this paper is able to increase the accuracy of emotion recognition by 6% in practical applications. This indicates that the method has great potential in online teaching and can provide teachers with more accurate feedback on students' affective states, so as to better adjust teaching strategies and improve teaching effectiveness.

Keywords: Multimodal emotional analysis; Online teaching quality evaluation; Adaptive teaching system; Video semantic information

1 INTRODUCTION

With the rapid development of information technology, the online teaching mode is becoming increasingly popular. The online education system breaks through the geographical and time constraints of traditional education, allowing learners to study anytime, anywhere, with a rich resource base that meets personalized learning needs, while also providing more opportunities for interaction. However, online teaching also faces some challenges, such as the high self-regulation requirements of online learning and the uneven quality of resources[1]. Therefore, scientific and effective evaluation of online teaching quality is crucial. As an emerging method, multimodal sentiment analysis provides new ideas for online teaching quality evaluation. Traditional sentiment analysis methods mainly focus on the sentiment information in text or speech, while ignoring other modalities. Multimodal sentiment analysis fuses multiple modal information, such as text, voice, image, video, etc., which can provide a more comprehensive understanding of human emotions. In online teaching, through multimodal sentiment analysis, students' various performances in the learning process can be considered comprehensively, such as the emotional expression in text communication, the emotional state in voice feedback, and the change of expression in video interaction, etc., so as to evaluate the teaching quality more accurately. According to statistics, the current online education market is expanding and the number of users continues to grow. However, the problem of uneven quality of online teaching is also increasingly prominent[2-3]. The introduction of multimodal sentiment analysis technology is expected to provide strong support to solve this problem. By analyzing students multimodal affective states, we can understand students learning situation and needs in a timely manner, which provides a basis for teachers to adjust their teaching strategies, thus improving the quality of online teaching[4].

The structure of this paper is as follows. Chapter 1 firstly describes the background and purpose of the study, pointing out that multimodal sentiment analysis provides new ideas for online teaching quality evaluation, aiming to improve the accuracy and comprehensiveness of evaluation. Chapter 2 introduces the theoretical basis of multimodal sentiment analysis, including the concepts and principles, data fusion technology, sentiment feature extraction technology, and the theoretical basis of online teaching quality evaluation, such as the principle of constructing the evaluation index system and the diversified selection of evaluation methods. Chapter 3 demonstrates the role of multimodal sentiment analysis in improving the accuracy of sentiment recognition, learners' emotional state and teaching effect through the application cases of multimodal sentiment analysis in online teaching, such as adaptive teaching system based on multimodal sentiment recognition and online learning sentiment recognition by fusing video semantic information. Chapter 4 proposes specific strategies for multimodal sentiment analysis for online teaching quality evaluation, including constructing multimodal sentiment indicators and analyzing the association between sentiment state and teaching

quality. Finally, the research conclusions are summarized, pointing out the application value and deficiencies of multimodal sentiment analysis in online teaching quality evaluation, and looking forward to future research directions, including technological innovation, data collection and processing, and application expansion.

2 BASIC THEORY

2.1 Concepts and Principles of Multimodal Sentiment Analysis

Multimodal Sentiment Analysis is a method that integrates multiple modal information to analyse and understand human emotions. It does this by fusing data from different modalities such as text, speech, and images to obtain more comprehensive and accurate sentiment information. Multimodal data fusion technology aims to effectively fuse data information from different modalities to improve the accuracy and efficiency of target tracking and analysis. Currently, there are three main fusion methods for multimodal data fusion: front-end fusion, back-end fusion and intermediate fusion. The details are shown in Table 1.

Table 1 Classification of Multimodal Data Fusion Techniques

Integration Approach	Mode of Operation
Front-end Fusion[5]	By fusing multiple independent datasets into a single feature vector, which is then fed into a machine learning classifier. However, this approach often fails to take full advantage of the compartmentalizes between multiple modal data and the raw data usually contains a lot of redundant information. For example, methods such as Principal Component Analysis (PCA), Maximum Relevance Minimum Redundancy (mRMR) algorithm, and Auto-encoders are often combined with front-end fusion to remove redundant information
Back-end Fusion[6]	By transforming different modal data into high-dimensional feature representations first, and then fusing them in the intermediate layer of the model. A major advantage of the intermediate fusion method is the flexibility of choosing the fusion location
Intermediate Fusion[7]	Fusion is performed by scoring the outputs of classifiers trained separately for different modal data. The advantage of this approach is that the errors of the fused models come from different classifiers, and the errors from different classifiers tend to be uncorrelated and unaffected by each other, without causing further accumulation of errors. Common back-end fusion methods include maximum fusion, mean fusion, Bayes rule fusion, and integrated learning. Among them, integrated learning, as a typical representative of back-end fusion methods, is widely used in communication, computer recognition, speech recognition and other research fields

The study of online teaching quality evaluation method based on multimodal affective state analysis is an interdisciplinary research method that combines knowledge from the fields of psychology, education and computer science. This method aims to assess students' affective states by analyzing their multiple modalities (e.g. speech, facial expressions, body language, etc.) and evaluate the quality of online teaching accordingly. Sentiment feature extraction is one of the key aspects of multimodal sentiment analysis. Common sentiment feature extraction methods are shown in Table 2.

Table 2 Summary of Emotion Feature Extraction Techniques

Data Type	Extraction Method	Application Channel
Text Data[8]	The common methods used for sentiment feature extraction from text data are bag-of-words model, TF-IDF (Term Frequency-Inverse Document Frequency), and word embedding. Bag-of-words model takes each word in the text as a feature and counts the word frequency; TF-IDF combines the word frequency with penalties of other words in the document to consider the importance of the word. Word embedding use neural networks to learn semantic relationships between words, generating continuous vector representations	Emotional analysis of students' language in texts such as discussion boards and homework feedback to determine their emotional attitudes.
Speech Data[9]	For speech data, per-emphasis is applied to the speech sequence and then a discrete FFT transform is performed, and the MFCC parameters are calculated step by step. Specific steps include applying per-emphasis to the speech sequence and then doing the discrete FFT transform; sampling a frame in the speech, adding the Hamming window and then doing the FFT of M points to get the discrete power spectrum. Calculate the power value, natural logarithm, discrete cosine transform, etc. Finally, remove the DC component and take the specific parameters as MFCC parameters	Analyzing students' voice intonation characteristics such as rate of speech, volume, and pitch changes to determine their affective tendencies, e.g. excitement, frustration, or preoccupation.

Image Data[10]	<p>The extraction of emotional features from image data is relatively complex, and emotional features in images can be extracted by deep learning models such as conventional neural networks, for example, capturing emotion-related information such as expressions and colour in images.</p> <p>Students' facial expressions are captured by the camera, and computer vision techniques are used to recognize different types of expressions, such as happy, surprised, confused, etc., and then infer the students' emotional state.</p>
----------------	--

2.2 Theoretical Basis of Online Teaching Quality Evaluation

The construction of the evaluation index system should follow the principles of scientificity and repeatability, which have important applications in multimodal evaluation. The principle of scientificity requires that the evaluation indexes can objectively and accurately reflect the quality of online teaching and the emotional state of students. Multimodal sentiment analysis can comprehensively assess students' learning process from different perspectives by integrating text, voice, image and other modal information, which provides strong support for the principle of scientificity[11-12]. For example, in text communication, students' questioning and discussion content can be analyzed to determine their understanding of knowledge and learning attitude. In voice feedback, students' emotional state and engagement are understood by analyzing features such as intonation and speed of speech. In video interaction, observe the change of students' expression to infer their learning interest and concentration. The principle of portability emphasizes that evaluation indicators are easy to measure and access. Multimodal sentiment analysis technology can use existing sensors and software tools to collect and analyse students' multimodal information. For example, voice data can be captured through microphones, image information can be captured using cameras, and text analysis tools can be used to process the content of students' online communication. Meanwhile, with the development of artificial intelligence and big data technology, the algorithms and models of multimodal sentiment analysis are continuously optimized, which makes the evaluation process more efficient and accurate and meets the requirements of the principle of repeatability, which is as shown in Figure 1.

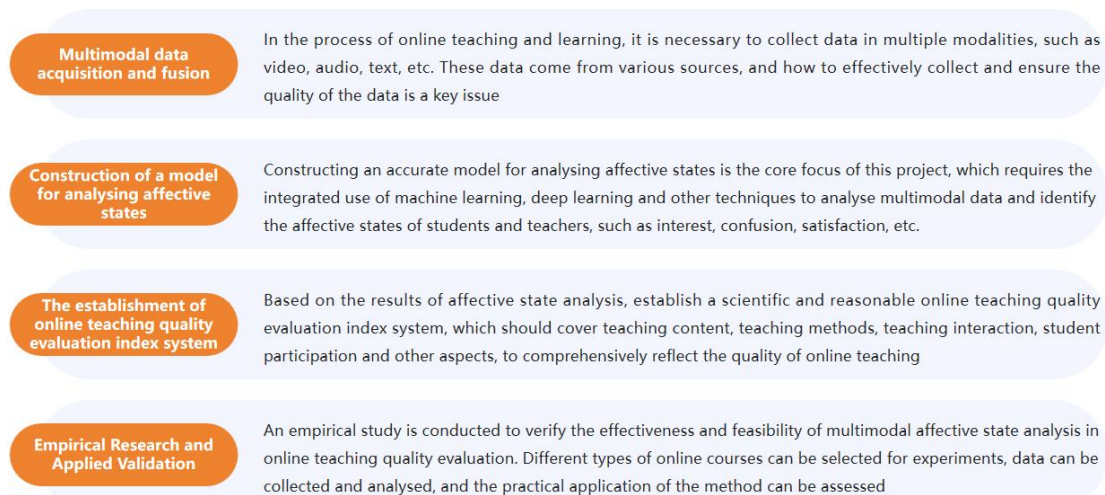


Figure 1 Difficulties in Multimodal-based Emotion Recognition for Teaching and Learning

In multimodal scenarios, methods such as comprehensive evaluation and self-evaluation have an important use value. The comprehensive evaluation method can combine the results of multimodal sentiment analysis to comprehensively assess the quality of online teaching. For example, the hierarchical analysis method is used to determine the weights of each modality information, and the results of the sentiment analysis of different modalities, such as text, speech, and image, are weighted and summed to obtain a comprehensive evaluation score. At the same time, statistical methods such as principal component analysis can also be used to extract the main features in the multimodal information, reduce the data dimensions, and improve the evaluation efficiency. Self-evaluation methods also have positive significance in multimodal online teaching. Students can self-evaluate their learning attitude, emotional state and engagement by reviewing their text communication, voice feedback and video interaction performance in the learning process. Teachers can guide students in self-evaluation to help them better understand their own learning and improve their self-management and learning ability. In addition, self-evaluation can be combined with teacher evaluation, peer evaluation, etc. to form a diversified evaluation system and provide more comprehensive feedback for the improvement of online teaching quality. Therefore, in online teaching quality evaluation, combining the theoretical basis of multimodal sentiment analysis, following the principles of evaluation index system construction, and choosing diversified evaluation methods can more accurately and comprehensively assess the quality of online teaching and provide powerful support for improving teaching effectiveness and students' learning experience.

3 TYPICAL CASE

With the continuous development of multimodal sentiment analysis technology, more and more adaptive teaching systems are beginning to apply this technology, which improves the accuracy and robustness of sentiment classification and detection by obtaining the user's expression during the virtual human's dialogue with the user and the textual content of the dialogue in real time in order to perform multimodal sentiment recognition.

3.1 Adaptive Teaching System Based on Multimodal Emotion Recognition

Video interaction behaviour and learner portrait features are important multimodal feature data in online teaching[13]. By analyzing learners' video interaction behaviors, such as eye contact and body movements, we can understand their level of engagement and concentration. Meanwhile, learners' portrait features, such as facial expressions and eyes, can also reflect their emotional state. For example, when learners are smiling and have focused eyes, it may indicate that they are interested in the content. And when learners frown and have wandering eyes, it may indicate that they are experiencing difficulties or feeling confused. Related studies have shown that multimodal sentiment analysis can improve the accuracy of sentiment recognition by feeding speech data and text data of the audio to be recognized into speech encoder and text encoder respectively. This multimodal emotion recognition technique can help teachers to better understand the emotional state of their students, so as to adjust online teaching strategies and improve teaching effectiveness. The specific architecture is shown in Figure 2.

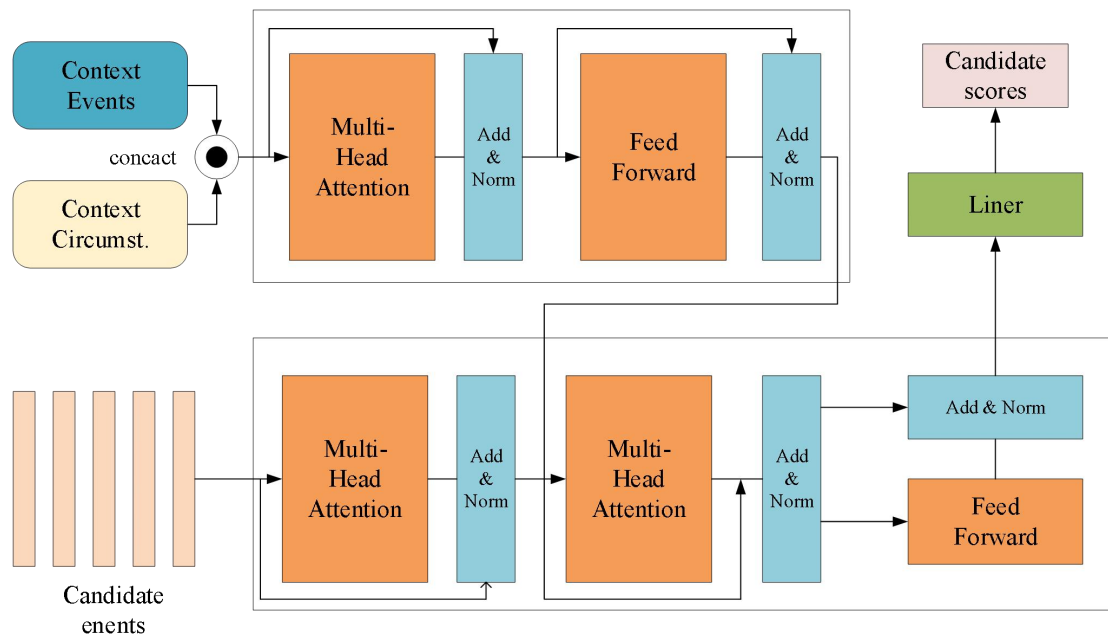


Figure 2 Video Interaction Behaviour and Learner Portrait Feature Application Extraction Architecture

As shown in Figure 2, adaptive teaching system based on multimodal emotion recognition has practical implications for online teaching. Firstly, it can enhance the learners' emotional state. By monitoring learners' affective state in real time, the system can give timely feedback and support, such as encouragement and reminders, to help learners maintain a positive learning attitude[14]. When the system detects that learners are confused, it can provide additional explanations and examples; when learners make progress, it can give praise and rewards. Secondly, this system can improve teaching effectiveness. Teachers can understand the learning situation and needs of students and adjust the teaching content and methods based on the results of multimodal sentiment analysis provided by the system. If most students are confused about a certain knowledge point, the teacher can slow down the teaching progress and add more explanations and exercises. If students are interested in a certain topic, the teacher can guide students to have an in-depth discussion and exploration. Adaptive teaching system based on multimodal emotion recognition has an important application value in online teaching, which can improve the accuracy of emotion recognition and enhance the learners emotional state and teaching effect by analyzing multimodal data such as video interaction behaviour and portrait characteristics of learners.

3.2 Fusing Video Semantic Information for Online Learning Emotion Recognition

The multimodal emotion recognition method fusing video semantic information is of great significance in online learning, which will be introduced in detail in the following with specific cases, as shown in Figure 3.

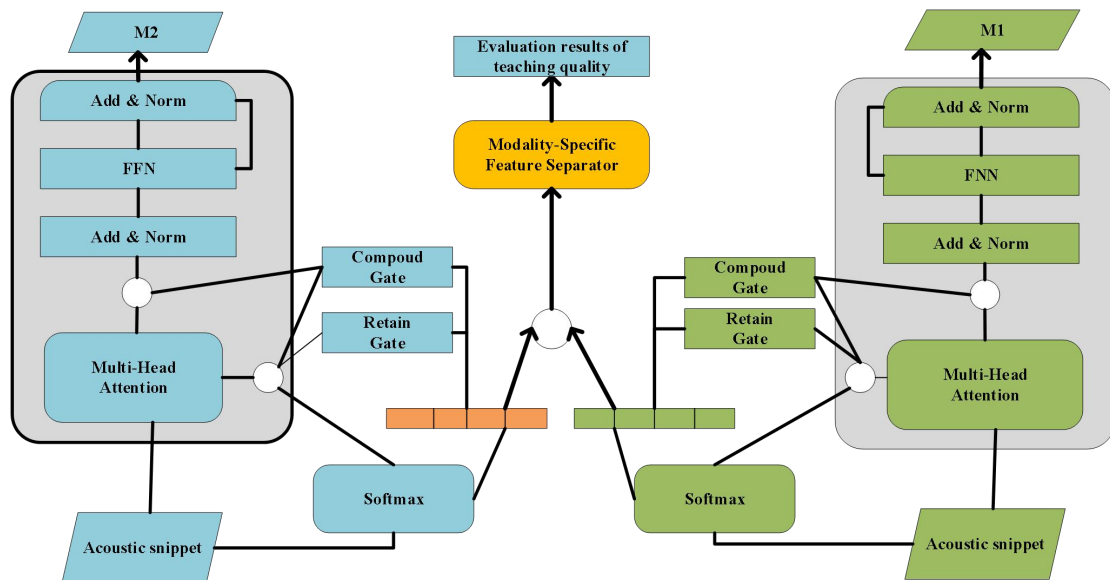


Figure 3 Video Interaction Behaviour and Learner Portrait Feature Application Extraction Architecture

In terms of data collection, this was done in three main ways. Firstly, a flat-panel eye-tracking device was used to collect data on gaze, eye jumps, pupil size, and eye-movement trajectories generated by the learners during the learning process[15]. This process captures learners' visual focus and attention changes while watching instructional videos. Second, wearable ear clip sensors are used to capture the PPG signals generated by the learners during the learning process. The PPG signals can reflect the changes in the physiological state of the learners and provide an objective basis for sentiment analysis. Finally, for video semantic extraction, a video text description is generated to capture the rich semantic information of the video. This textual description includes detailed textual information describing the scenes, objects, actions, and episodes in the video, as well as expressing the emotion and emotional context of the video content. In the data preprocessing stage, different processing methods are adopted for different types of data. For eye-movement data, since there may be missing data due to subjects blinking, closing their eyes or looking down during the experiment, a linear interpolation method was used to fill in the missing values of the eye-movement data. These filled eye movement data were then baseline corrected to exclude variability between subjects and ensure data consistency. For the PPG signals, the raw PPG signals may be affected by a variety of interfering factors, including motion, light variations, noise, and electromagnetic interference, which may lead to artifacts. Firstly, a filter is used to noise the signal to reduce the effect of high-frequency noise and improve the quality of the PPG signal. Subsequently, baseline correction of the PPG signals was performed to exclude variability between subjects and ensure data consistency.

As shown in Figure 3, in the feature extraction stage, the pre-processed data are subjected to multimodal feature extraction. By comprehensively analyzing the eye movement, PPG signal and video semantic information, features that can reflect the learner's emotional state are extracted. The eye movement features can include gaze time, eye beat frequency, etc. The PPG signal features can include heart rate variation, pulse wave features, etc. Video semantic features can include emotional tendency of teaching content, plot tension, etc. This multimodal feature extraction method can significantly improve the accuracy of emotion recognition. On the one hand, data from different modalities complement each other and provide more comprehensive emotion information. The eye movement data can reflect the learner's attention allocation, the PPG signal can reflect the changes in physiological state, and the video semantic information can provide the impact of the teaching content on the learner's emotion. On the other hand, multimodal feature extraction can reduce the noise interference of single modal data. Relying on eye movement data alone may be affected by individual differences and environmental factors, while combining PPG signals and video semantic information can improve the stability and reliability of emotion recognition.

4 MULTIMODAL SENTIMENT ANALYSIS FOR EVALUATING ONLINE TEACHING QUALITY

In this paper, we intend to explore the optimal strategy for modelling teaching behaviors through online teaching multimodal collaborative data collection, modelling and correlation analysis, and at the same time, analyse the actual development of teaching quality evaluation in China, to develop an adaptive online teaching quality evaluation system based on multimodal data collaboration, and to carry out experimental testing of the functionality through a real teaching platform, with the specific architecture as shown in Figure 4.

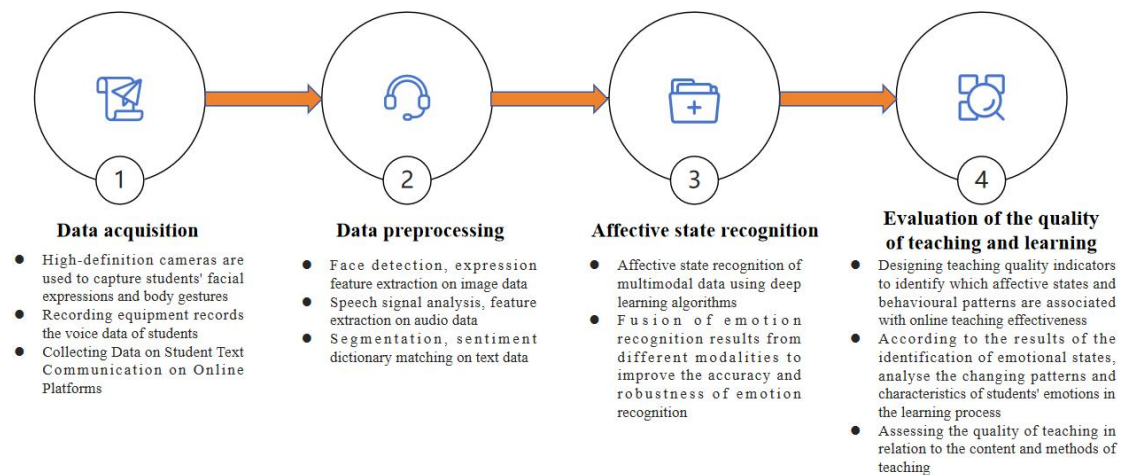


Figure 4 Overall Architecture

4.1 Data Acquisition

Facial Expression Capture, which captures students' facial expressions in real time via a high-definition camera. The camera needs to be placed in a suitable position to ensure that the details of students' facial expressions can be clearly captured. Voice tone capture, using professional recording devices or software, such as microphones or voice recorders, to record students' voice data in the online classroom. This data will be used for subsequent tone of voice analysis. Text content collection, through the online teaching platform or chat tool, collects students' content in text communication areas such as discussion forums and chat rooms. These data will be used for text content analysis.

4.2 Data Preprocessing

Image per-processing, which is performed on the captured facial expression images for face detection, face alignment, expression feature extraction, etc. This usually involves algorithms and techniques in the field of computer vision, such as Haar features, HOG features, Convolution Neural Networks (CNN), etc. Speech preprocessing, speech signal analysis is performed on the recorded data, including processing such as noise reduction, reverberation, and endpoint detection. Then extract the features of speech such as intonation, speech rate, volume, etc., which will be used for subsequent speech sentiment analysis. Text preprocessing, the collected text data are processed with word splitting, duplication, lexical labeling and so on. Then tools such as sentiment dictionary and sentiment analysis model are used to judge and classify the sentiment tendency of the text content.

4.3 Affective State Recognition

Multimodal fusion, fuses preprocessed image, speech and text data. This can be achieved by either feature fusion or model fusion. Feature fusion involves splicing or weighted summation of feature vectors from different modalities to obtain a comprehensive feature representation, while model fusion integrates the prediction results from different modalities to improve the accuracy of emotion recognition. Deep learning algorithms, which use deep learning algorithms for emotion state recognition on fused multimodal data. These algorithms can automatically learn complex feature representations in the data and perform sentiment classification or regression based on these features. Sentiment annotation and evaluation, where the recognized sentiment states are annotated and evaluated to ensure the accuracy and reliability of sentiment recognition. This usually involves comparison and validation with manual labeling results.

4.4 Evaluation of the Quality of Teaching and Learning

Affective change analysis, based on the identified affective state data, analyses the changing patterns and characteristics of students' affective changes in the learning process. This helps to understand the students' acceptance of the teaching content, the degree of interest, and the changes in the learning state. Teaching quality assessment, combining teaching content, teaching methods and other factors. By comparing the changes in students' affective state under different teaching sessions or teaching strategies, the quality of teaching can be assessed and problems and directions for improvement can be identified. Feedback and suggestions, based on the results of teaching quality assessment, provide teachers with targeted feedback and suggestions. These feedback and suggestions can help teachers optimize teaching strategies and improve teaching methods, thus enhancing the quality of online teaching.

In summary, the online teaching quality evaluation method based on multimodal affective state analysis achieves the comprehensive capture and analysis of students' affective states through the steps of data collection, data preprocessing, affective state recognition and teaching quality evaluation, which provides a more objective and comprehensive basis for teaching quality evaluation.

5 CONCLUSION

In this study, the online teaching quality evaluation method based on multimodal sentiment state analysis is deeply explored, and the following main results are achieved. First, multimodal sentiment analysis provides new ideas and methods for online teaching quality evaluation. By integrating multimodal information such as text, voice, image, etc., it is able to capture students' affective states in the online learning process more comprehensively and accurately, overcoming the limitations of traditional evaluation methods. In terms of theoretical foundation, the concepts and principles of multimodal sentiment analysis are clarified, including multimodal data fusion technology and sentiment feature extraction technology. Meanwhile, an online teaching quality evaluation index system based on the principles of scientificity and operability is constructed, and diversified evaluation methods are selected to provide theoretical support for the application of multimodal sentiment analysis in online teaching. In terms of application cases, the adaptive teaching system based on multimodal emotion recognition and the online learning emotion recognition method that integrates video semantic information improve the accuracy of emotion recognition and enhance the emotional state of learners and the teaching effect by analyzing the multimodal data such as video interaction behaviors, learner's portrait features, eye movement data, PPG signals and video semantic information. In terms of specific strategies, multimodal emotion indicators were constructed, including textual modal emotion indicators and image and sound modal emotion indicators, which provide multidimensional information for teaching quality evaluation. Meanwhile, the association between multimodal sentiment analysis and teaching quality is analyzed, and the influence of affective state on learning engagement and learning effect is clarified. Multimodal sentiment analysis has an important application value in online teaching quality evaluation and can provide powerful support for improving online teaching quality. However, there are some shortcomings in this study, such as the complexity of multimodal data fusion technology and the accuracy of sentiment feature extraction, which need to be further explored and improved in future research.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

FUNDING

This work is partially supported by 2024 Guangdong Province Education Science Planning Project (Higher Education Special Project) "Research on Smart Classroom Teaching Behavior Analysis Methods Based on Scene Semantic Understanding and Deep Learning Characteristic Representation (2024GXJK766)", 2023 Guangdong Provincial Higher Vocational Education Teaching Reform Research and Practice Project "Research on Online Teaching Quality Evaluation Method Based on Multimodal Affective State Analysis (2023JG277)", 2024 Shenzhen Polytechnic University Quality Engineering Project "Research on Classroom Scene Understanding and Behavior Analysis Method Based on Multimodal Attention Mechanisms (7024310268)", 2024 Higher Education Scientific Research Planning Project of the Chinese Society of Higher Education "Research on the Analysis of Teaching and Learning Deep Interaction Characteristics in Smart Classroom Environment Supported by Multimodal Data (24XH0407)".

REFERENCES

- [1] Shuyan W. Multi-attribute decision-making methods based on Aczel-Alsina power aggregation operators for English blended teaching quality evaluation under single-valued neutrosophic sets. *International Journal of Knowledge-based and Intelligent Engineering Systems*, 2024, 28(3): 539-552.
- [2] Arega B, Mengistu M, Mersha A, et al. Evaluation of hospital quality of care outcomes in a teaching hospital in Ethiopia: a retrospective database study. *BMJ open*, 2024, 14(9): e082908.
- [3] Guo S, Yang X, Farizan H N, et al. The analysis of teaching quality evaluation for the college sports dance by convolutional neural network model and deep learning. *Heliyon*, 2024, 10(16): e36067-e36067.
- [4] Sharma A ,Nishadham V, Gupta P, et al. Evaluation of Turnaround Times of Diagnostic Biopsies: A Metric of Quality in Surgical Pathology. *International journal of surgical pathology*, 2024, 10668969241261561.
- [5] Liu M. A combined exponential TODIM-GRA framework for multiple-attribute group decision-making under 2-tuple linguistic Pythagorean fuzzy sets and applications to art teaching quality evaluation in higher education institutions. *Soft Computing*, 2024, 28(17-18): 10317-10330.
- [6] Ma W, Chu N. Evaluation of online teaching quality in colleges and universities based on digital monitoring technology. *Journal of Intelligent Systems*, 2024, 33(1).
- [7] Camilo S, Edwin M, Jose A. Analysis of different affective state multimodal recognition approaches with missing data-oriented to virtual learning environments. *Heliyon*, 2021, 7(6): e07253-e07253.
- [8] Caridakis G, Karpouzis K, Wallace M, et al. Multimodal user's affective state analysis in naturalistic interaction. *Journal on Multimodal User Interfaces*, 2010, 3(1-2): 49-66.
- [9] Johnstone E, Liao H M, Strani K. How does it feel? Space and text as affective affordances in the multimodal museum. *Multimodality & Society*, 2024, 4(3): 314-329.
- [10] VillenaGonzalez M. Caresses, whispers and affective faces: A theoretical framework for a multimodal interoceptive mechanism underlying ASMR and affective touch: An evolutionary and developmental perspective for understanding ASMR and affective touch as complementary processes within affiliative interactions. *BioEssays*, 2023, 45(12): e2300095-e2300095.

- [11] Xiaoshuang G. Multimodality in language education: implications of a multimodal affective perspective in foreign language teaching. *Frontiers in Psychology*, 2023, 141283625-1283625.
- [12] Olsen D. *Media Arts Education: Transforming Education Through Multimodal Cognition, Holistic Learning, and Techno-Embodiment*. Taylor & Francis: 2024-09-25. DOI:10.4324/9781003430834.
- [13] Kewalramani S, Aranda G, Sun J, et al. A Systematic Review of the Role of Multimodal Resources for Inclusive STEM Engagement in Early-Childhood Education. *Education Sciences*, 2024, 14(6): 604-604.
- [14] Anne-Marie H, M S M, P T H, et al. Falls After Hospital Discharge: A Randomized Clinical Trial of Individualized Multimodal Falls Prevention Education. *The journals of gerontology. Series A, Biological sciences and medical sciences*, 2019, 74(9): 1511-1517.
- [15] Giannakos N M, Lee-Cultura S, Sharma K. Sensing-Based Analytics in Education: The Rise of Multimodal Data Enabled Learning Systems. *IT Professional Magazine*, 2021, 23(6): 31-38.

RESEARCH ON THE SYNERGY EFFECT OF CORPORATE TRAINING AND EMPLOYEE DEVELOPMENT IN INCENTIVE MECHANISMS UNDER THE BACKGROUND OF THE DIGITAL ECONOMY

QiuYing He*, XinJie Lyu

School of Management, Sichuan Film and Television College, Sichuan 611331, China.

Corresponding Email: hqy-91@163.com

Abstract: This study aims to explore the synergistic effect of corporate training and incentive mechanisms in the context of the digital economy and their impact on employee development. Through qualitative research methods, including in-depth interviews and case analysis, it was found that the combination of training and incentives can significantly enhance employees' job satisfaction and sense of career growth, while the integrated application of digital technology further strengthens this effect. The research findings emphasize the importance of considering personalized incentives and employee personal growth when designing incentive mechanisms, providing a new perspective for enterprises in the fields of human resource management and organizational development. These findings are of great significance for enterprises to optimize incentive strategies, cultivate key talents, and gain a competitive advantage in the market during the digital transformation process.

Keywords: Digital economy; Incentive mechanism; Corporate training; Employee development; Synergy effect

1 INTRODUCTION

The rapid development of the digital economy is undergoing a fundamental transformation in the operation and management environment of enterprises[1]. Digitalization not only reshapes the value creation process of enterprises but also has a significant impact on the skill requirements, work methods, and career development paths of employees[2]. Faced with these changes, corporate managers are urgently in need of redesigning incentive mechanisms to adapt to the needs of digital transformation and promote the personal and professional development of employees[3]. In the digital economy, the role of incentive mechanisms is particularly crucial, as it directly relates to employees' work motivation, innovative behavior, and organizational commitment. However, existing incentive mechanisms often fail to fully consider the personalized needs and career development goals of employees, leading to a disconnect between incentive effects and employee development needs. In addition, corporate training, as an important way to improve employee capabilities, has not yet fully explored and utilized the synergistic effect with incentive mechanisms. Therefore, this study aims to explore how to effectively integrate corporate training with incentive mechanisms under the background of the digital economy to promote the personal and professional development of employees and thereby enhance organizational performance.

Although there is a certain depth of research on incentive mechanisms, there are still several shortcomings in the following aspects: First, there is a lack of systematic research on the adaptability and transformation needs of incentive mechanisms in the context of the digital economy; second, there is a lack of in-depth discussion on the mechanism and effect of the interaction between corporate training and incentive mechanisms; finally, there is a lack of empirical research on how digital technology promotes the synergistic effect between incentive mechanisms and employee development.

Therefore, the objective of this study is to deeply analyze the synergistic effect of corporate training and incentive mechanisms in the context of the digital economy, clarify how the two interact to promote employee development, and propose corresponding management strategies and practical suggestions. The research scope focuses on the specific background of the digital economy, and through qualitative research methods, including in-depth interviews and case analysis, explores the strategies, effects of integrating corporate training with incentive mechanisms, and their impact on employee job satisfaction, career growth, and organizational commitment.

The results of this study will provide a new theoretical perspective and practical guidance for the field of human resource management, helping corporate managers to more effectively design and implement incentive mechanisms during the digital transformation process, promote the common growth and development of employees and organizations, and thus gain an advantage in fierce market competition. Through this study, we hope to provide enterprises with a new perspective to understand and design more effective employee training and incentive strategies to adapt to the requirements of digital transformation.

2 THEORETICAL FOUNDATION AND LITERATURE REVIEW

2.1 Conceptual Framework of the Digital Economy

The concept framework of the digital economy, as a new form of modern economic activity, is characterized by the value realization of data resources, digital industrialization, industrial digitization, and digital governance[4]. This emerging economic form takes digital knowledge and information as key elements, driven by digital technology, and promotes the deep integration of the real economy through modern information networks, enhancing the digitalization, networking, and intelligence level of society.

2.2 The Evolution of Incentive Mechanism Theory

The theoretical foundation of incentive mechanisms has evolved from the early “economic man” assumption, which considered money as the only incentive factor, to multi-level theories that satisfy a variety of needs. Maslow’s hierarchy of needs theory summarizes human needs into five basic needs, arranged in five levels from low to high. Modern incentive theory pays more attention to individualization and the intrinsic motivation of employees, emphasizing the enhancement of employees’ work motivation and organizational commitment through a combination of various incentive means. The design of incentive mechanisms needs to consider the heterogeneity factors such as employees’ personal goals, fairness perception, and their own needs, emphasizing precision and accuracy in the design of incentive objectives, integration of incentive strategies, performance accounting and assessment, and long-term feedback in the incentive process to achieve better incentive effects.

2.3 The Relationship Between Corporate Training and Employee Development

Corporate training is an essential part of employee development, promoting personal and professional growth by providing necessary skills and knowledge[5]. Effective training and development programs can improve job satisfaction, career growth, and organizational commitment, thereby enhancing organizational performance[6]. Employee training usually refers to providing specific skills and knowledge to employees to improve their performance in their current positions. In contrast, employee development focuses more on long-term career development and personal growth. It not only pays attention to the performance of employees in their current positions but also to their potential and future career planning. Employee development aims to provide opportunities for personal growth so that employees can adapt to future organizational needs and challenges.

2.4 The Relationship Between Corporate Training and Employee Development

The application of digital technology in human resource management continues to deepen, covering various aspects such as big data technology, cloud computing, and artificial intelligence. The application of big data technology enables human resource management to make more precise decisions based on quantitative data analysis. Cloud computing provides flexible data storage and access capabilities, while artificial intelligence technology offers new solutions in recruitment, employee development, performance management, and compensation incentives. Digital transformation has not only changed the tools and methods of human resource management but also put forward new requirements for the roles and capabilities of human resource managers, promoting them to transform from traditional administrative managers to drivers of organizational change and strategic partners.

3 RESEARCH QUESTIONS PRESENTED

3.1 Theoretical Model of Incentive Mechanism Design and Its Practical Application in the Context of the Digital Economy

Incentive mechanism design is a core issue in management studies, and its theoretical models have evolved from early scientific management theories like Taylor’s to modern comprehensive incentive theories. Modern incentive theories suggest that incentive mechanisms should consider heterogeneous factors such as employees’ personal goals, perceptions of fairness, and individual needs. They emphasize the need for precision and accuracy in designing incentive objectives, integrating incentive strategies, performance accounting and assessment, and long-term feedback to achieve better incentive effects. In the context of the digital economy, the motivation of knowledge workers is particularly important, as their creativity is a significant factor in determining the future direction and market share of enterprises. Therefore, constructing an effective incentive mechanism for knowledge workers is crucial for enhancing corporate creativity. Studies have shown that organizations can use a variety of digital devices to collect various types of data, such as biometric information, text information, and online footprints of employees, to understand the sequence and duration of their work behavior, as well as their emotions and attitudes. Based on this data, organizations can accurately and comprehensively record and evaluate employees’ work behavior.

3.2 The Impact Pathway of Corporate Training on Employee Development

The relationship between corporate training and employee development has always been a hot topic in the field of human resource management. Effective training and development programs can improve job satisfaction, career growth, and organizational commitment, thereby enhancing organizational performance. Employee training is not only an effective means of improving professional skills but also a key factor in stimulating employee potential and promoting

continuous progress in their careers. Through professional and systematic training, employees can acquire new knowledge and improve practical operation skills, making them more competitive in the workplace, capable of handling more challenging tasks, and laying a solid foundation for career development. In addition, the impact of corporate training on employee development is also reflected in the improvement of employee skill levels and the promotion of career advancement. Through systematic training programs, employees can better understand the strategic goals of the enterprise, enhance soft skills such as teamwork and leadership, and these skill improvements provide strong support for employees to quickly stand out and get promoted in their careers.

3.3 The Theoretical Framework of the Synergy Effect between Training and Incentive Mechanisms

The synergistic effect of training and incentive mechanisms is key to improving employee performance and organizational competitiveness. In the context of the digital economy, this theoretical framework of synergistic effect needs to consider how digital technology promotes the integration of employee training and incentive mechanisms. The application of digital technology, such as big data analysis and artificial intelligence, can improve the transparency and fairness of incentive mechanisms, thereby enhancing employees' sense of trust and participation. In addition, personalized incentive strategies and data-driven training programs can significantly improve employee satisfaction and career growth, and the integrated application of digital technology further enhances this effect. The research emphasizes the importance of personalized incentives and employee personal growth in the design of incentive mechanisms, providing a new perspective for corporate management practices, especially in the fields of human resource management and organizational development. Through digital incentives, organizations build a digital platform ecosystem based on digital technology, capturing behavior and characteristic data of the incentivized subjects in real-time, and automatically conducting subsequent data processing and analysis to fully unleash the motivational potential of the data, achieving a precise process of strengthening or weakening specific behaviors of the incentivized subjects.

4 ANALYSIS OF THE ISSUE

4.1 Empirical Analysis: Research on the Relationship between Incentive Mechanisms and Employee Performance

Against the backdrop of the digital economy, the relationship between incentive mechanisms and employee performance has become a hot topic for research[7]. Empirical studies have shown that the digital transformation of enterprises can significantly promote the construction of human capital property rights incentive systems in listed companies[8], with core employees being more likely to be included in the scope of incentives. Digital transformation drives the construction of human capital property rights incentive systems in listed companies by improving corporate governance structures, curbing the short-sighted tendencies of managers, and enhancing the investment in intellectual capital. Moreover, the implementation of human capital property rights incentive systems has improved the quality of corporate innovation and corporate value, with this promotional effect mainly stemming from the incentives for core employees rather than managerial incentives. These findings reveal the empowering effect of digital transformation on the design of incentive systems, providing important insights for improving corporate governance mechanisms and achieving high-quality development of enterprises in the digital economy era.

4.2 Assessment of the Impact of Corporate Training on Employee Career Development

Corporate training has a significant impact on employee career growth. Through training, employees can acquire new skills and knowledge, enhance their understanding of new products and services, learn new technologies and systems, and thus better contribute to the company. Training and development opportunities are one of the main concerns for employees in terms of career development and can increase employees' career motivation and satisfaction. In addition, a good training and development plan is key to improving employees' career development opportunities, giving them more chances and confidence to take on higher-level professional responsibilities. Therefore, corporate training not only improves employees' skills but also indirectly enhances their satisfaction and provides more career development opportunities for employees.

4.3 The Role and Challenges of Digital Technology in Incentive Mechanisms

Digital technology plays an increasingly important role in incentive mechanisms[9]. The application of digital technology not only provides data, technical, and institutional support for incentive practices but also brings opportunities to break through incentive dilemmas[10]. Studies have shown that predictive algorithms, data mining, and visual analysis methods can help managers grasp employees' personality, skills, influence, and other characteristics, accurately excavate employee needs, and guide team staffing and talent development. Enterprises collect biometric information and online footprints of employees through digital devices such as facial or fingerprint sign-in, video monitoring, etc., to understand the details of their work behavior sequence, duration, attitude, emotions, etc. Based on this information, enterprises can accurately and comprehensively record, measure, and evaluate employee behavior, effectively solving the "free-rider" problem. However, the application of digital technology also brings challenges, such

as employees' concerns about being replaced by digital technology, digital surveillance may cause employee stress, dehumanized management may lead employees into a "performance trap," and exacerbate employee overwork.

4.4 Case Study Comparison of the Synergy Effect of Training and Incentive Mechanisms

job satisfaction, career growth, and organizational commitment. For example, Haier Group has explored the process of achieving precise incentives and the role of digital technology in forming precise incentives through the practice of chain group contracts. The study found that achieving precise incentives requires four key factors: the unification of incentive objectives, the three-dimensionalization of incentive mechanisms, the visualization of incentive processes, and the precision of incentive results. It also emphasizes the importance of promoting future incentive objectives based on incentive results, forming an incentive cycle. These case comparisons reveal the importance of digital technology in promoting the synergy effect of training and incentive mechanisms, providing valuable experience and insights for other enterprises.

5 STRATEGIES FOR SOLVING THE PROBLEM

5.1 Strategic Framework for the Integration of Corporate Training and Incentive Mechanisms

In the context of the digital economy, the integration of corporate training and incentive mechanisms is key to enhancing employee performance. The strategic framework should include the following aspects: First, clarify the organizational vision and strategic objectives, and use these as the basis for designing training and incentive plans. Second, conduct employee capability assessments and needs analysis to ensure that training content matches employees' career development paths. Next, design personalized growth paths, provide employees with diverse training and development opportunities, and establish mentorship programs and challenging projects to promote employee growth. Additionally, establish a scientific performance assessment and incentive mechanism, such as through intelligent learning report functions, to help enterprises accurately assess employees' learning outcomes and work performance, providing data support for the construction of incentive mechanisms. Finally, create a positive working atmosphere by enhancing employees' sense of belonging and enthusiasm through corporate culture, communication channels, and team building.

5.2 Application Modes of Digital Technology in Promoting Synergy Effects

The application modes of digital technology in promoting the synergy effect of corporate training and incentive mechanisms include: using big data technology for employee behavior analysis to achieve precise incentives; providing personalized learning suggestions and career development path planning through artificial intelligence technology; using blockchain technology to ensure the transparency and security of training and incentive activities; and using cloud computing platforms for the sharing and optimized allocation of training resources. The application of these technologies not only improves the targeting and effectiveness of training but also provides more scientific and precise data support for incentive mechanisms.

5.3 Integration Path of Personalized Incentives and Employee Personal Growth

The integration path of personalized incentives and employee personal growth requires enterprises to deeply understand employees' needs and expectations, and design incentive measures that fit the characteristics of employees. This includes providing personalized training and development plans, such as through online learning programs and OMO (Online Merge Offline) hybrid training, to meet the learning needs of different employees; introducing innovative teaching methods, such as AI coaching, to enhance the attractiveness and effectiveness of training; and establishing assessment and feedback mechanisms to give employees recognition and rewards, encouraging continuous learning. In addition, enterprises should provide a variety of training methods, such as online learning, offline discussions, and practical operations, to meet the learning needs of different employees.

5.4 Case Study Analysis

Case studies have shown that by combining corporate training with incentive mechanisms, employees' job satisfaction, sense of career growth, and organizational commitment can be significantly enhanced.

6 RESEARCH FINDINGS

The empirical analysis results of this study indicate that the combination of corporate training and incentive mechanisms significantly enhances job satisfaction among employees. Particularly in the context of the digital economy, the motivation issues of knowledge workers are especially important. By implementing employee training, enterprises can improve the knowledge and skills required for employees to complete their work, thereby achieving improved organizational performance.

The results suggest that the synergistic effect of corporate training and incentive mechanisms has a significant positive impact on employees' sense of career growth. Through digital transformation, enterprises can more effectively record

and evaluate employee behavior and performance, thereby enhancing employees' perception of fairness in the work process and outcomes. This enhanced sense of fairness motivates employees and promotes their career growth. Furthermore, research on incentive mechanisms in human resource management also shows that incentive mechanisms not only affect employee motivation and creativity but are also directly related to the overall performance of the organization.

The application of digital technology plays a key role in enhancing the synergistic effect of corporate training and incentive mechanisms. Digital technology provides data, technical, and institutional support, offering new opportunities to break through traditional incentive dilemmas. Enterprises can use digital technology to collect data on employee work behavior and performance, achieving precise incentives. Moreover, digital technology also helps to increase the transparency and fairness of the incentive process, thereby enhancing employees' perception of fairness and motivation. However, the application of digital technology also brings challenges, such as employees' concerns about being replaced by digital technology, digital surveillance may cause employee stress, and dehumanized management may lead employees into a "performance trap," exacerbating employee overload.

The four key factors of goal alignment, three-dimensional incentive mechanisms, visualization of incentive processes, and precision of incentive results, with an emphasis on using incentive results to advance the setting of future incentive goals, forming an incentive cycle. These case comparisons reveal the importance of digital technology in promoting the synergistic effect of training and incentive mechanisms, providing valuable experience and insights for other enterprises.

7 CONCLUSIONS

7.1 Main Findings and Conclusions of the Study

Based on these findings, it is recommended that enterprises should closely integrate training and development plans with incentive mechanisms, use digital technology to optimize incentive mechanisms, and pay attention to the ethical and privacy issues in the application of digital technology in human resource management.

7.2 Strategic Recommendations for Corporate Human Resource Management and Organizational Development

Based on the findings presented above, this study proposes the following strategic recommendations for corporate human resource management and organizational development:

- Companies should closely integrate training and development plans with incentive mechanisms to ensure that employees' pursuit of personal career goals aligns with the organization's objectives;
- Utilize digital technology to optimize incentive mechanisms, identify employees' needs and potential through data analysis, and thereby design more precise and personalized incentive measures;
- Establish an open and transparent performance assessment system to ensure employees have a clear understanding of the incentive process, enhancing their commitment and trust in the organization;
- Consider employees' long-term career development paths in the design of incentive mechanisms, providing necessary training and promotion opportunities to support their continuous growth;
- Pay attention to the ethical and privacy issues in the application of digital technology in human resource management, ensuring that the use of technology does not infringe upon employees' personal rights, and avoiding excessive surveillance and dehumanized management.

7.3 The strategic significance for enterprises to adapt to digital transformation

In the era of the digital economy, enterprises must adapt to digital transformation to maintain competitiveness and market position. This study emphasizes the key role of the synergy effect of corporate training and incentive mechanisms in promoting employee development and organizational performance. By optimizing incentive mechanisms and leveraging digital technology, enterprises can better stimulate the potential of employees, promote innovation, and efficiency improvements, thereby gaining an advantage in fierce market competition. In addition, the study also shows that enterprises need to pay attention to the personal growth and career development of employees during the digital transformation process to ensure that employees can adapt to new work requirements and challenges. Therefore, enterprises should regard human resource management as a core component of the digital transformation strategy to achieve long-term sustainable development. This involves not only the application of technology but also a comprehensive transformation of organizational culture, leadership, and strategic planning. With this comprehensive approach, enterprises can ensure that their human resource strategy is consistent with the goals and needs of digital transformation, thus maintaining a leading position in the rapidly changing market.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

FUNDING

The research was supported by the Key Research Base of Sichuan Province for Philosophy and Social Sciences: Research on Human Resource Incentive Mechanisms in the Integration of Cultural Tourism Development and Traditional Culture Protection in Sichuan (Project Number: WRF202442); the Key Research Base of Sichuan Province for Philosophy and Social Sciences, Yi Culture Research Center Funding Project “Research on Rural Cultural Human Resource Management in Yi Ethnic Areas of Sichuan” (Project Number: YZWH2412); the Key Research Base of Sichuan Province for Philosophy and Social Sciences, “Research on the Integration of Traditional Village Culture of Jiarong Tibetan in Danba Area and the Development of Study Tours in the Digital Era” (Project Number: WRF202417); the “Double First-Class” University Construction Gongga Plan of Sichuan Province.

REFERENCES

- [1] DataGrand. The “Four Modernizations” framework for the digital economy is first proposed: the “White Paper on Digital Economy Development in China (2020)” is released, 2020.
- [2] Tencent Cloud Developer Community. Digital Transformation of Human Resources | Review of the Application of Digital Technology in Human Resource Management, 2020.
- [3] Industrial Economics Research Institute, Chinese Academy of Social Sciences. Digital Transformation of Human Resource Management: Elements, Patterns, and Paths. *China Industrial Economics*, 2021(1): 56-77.
- [4] China Government Network. The State Council’s Notice on Printing and Distributing the “14th Five-Year Plan” for Digital Economic Development, 2021.
- [5] Research on Employee Training and Corporate Human Resource Development. *Human Resource Management*, 2022(3): 45-59.
- [6] Corporate Employee Training Evaluation Strategies: A Practical Guide to Enhancing Learning Behavior and Performance, 2022.
- [7] A Review of the Frontier of Incentives and Outlook for Incentive Synergy Research—Perspectives from Multiple Disciplines/Schools, Levels, and Dimensions. *Journal of Management*, 2023(2): 112-130.
- [8] A Review of Incentive Theories and Their Implications. *Business Economics and Management*, 2023(4): 67-82.
- [9] Analysis of Incentive Issues and Countermeasures for Knowledge Workers in the Digital Economy Context—A Case Study of Company R. *Management Case Study and Review*, 2023(5): 89-105.
- [10] McKinsey Greater China. Digital Workforce White Paper: Unleashing Human Potential to Help Enterprises Move Steadily and Far, 2023.

DOES MANAGEMENT ATTITUDE TOWARDS ECONOMIC UNCERTAINTY INFLUENCE THE VALUE RELEVANCE OF INTELLECTUAL CAPITAL?

YiRu Yang

School of Accounting, Guangzhou College of Commerce, Guangzhou 511363, Guangdong, China.

Corresponding Email: yangyiru2019@163.com

Abstract: This paper examines whether the management attitude towards economic uncertainty affects the value relevance of intellectual capital (IC) and how management attitude towards economic uncertainty influences investors' perception of future earnings generated by IC. Content analysis of 318 annual reports of Australian firms listed on the Australian Securities Exchange (ASX) is used to obtain information on IC and management attitude. T-tests and ordinary least squares (OLS) regressions are used to examine the hypotheses. This study finds that during the economic uncertainty period, the investors incorporate future earnings generated by IC to stock returns only when firms show an optimistic attitude towards the economic uncertainty. The results suggest that investors' perceptions of future earnings generated by IC depend on the firm's attitude towards the economic uncertainty.

Keywords: Intellectual capital; Value relevance; Signalling theory; Management attitude; Economic uncertainty

1 INTRODUCTION

According to the World Health Organization, Covid-19 first appeared in December 2019 in the city of Wuhan, Hubei Province, China. The virus then spread rapidly all over the world and is continuing to circulate globally. Covid-19 has caused the greatest disruption on the global economy. Although protective precautions such as social distancing, travel bans and lockdowns have proven effective in curbing transmission of the virus to a large extent, they have had adverse effects on financial markets [1] and lead the economic uncertainty.

Intellectual capital (IC) is generated by or developed from unique organisational design, innovation and human resources that can be used as core drivers to increase the economic benefits of a firm in the context of uncertainty and challenges such as those caused by the Covid-19 pandemic. During this pandemic, firms that accounted for their IC could positively influence investors' perceptions of the value of firms. Based on signalling theory, this paper attempts to examine whether the economic uncertainty (proxy by Covid-19 pandemic), has influenced the value relevance of IC. This paper also attempts to examine how management attitude to the economic uncertainty (proxy by Covid-19 pandemic) has influenced investors' perceptions of future firm performance generated by IC. The sample used for this study is from the Australian Securities Exchange (ASX) top 200 listed firms. Australia was chosen as the research context because Australian firms are considered to follow best practice in IC reporting, which has led many studies examine IC in the Australian context [2]. Two subsamples are used in this paper: firms in the year 2017 are chosen to examine the pre-Covid-19 period and firms in the year 2020 are chosen to examine the Covid-19 pandemic period (i.e., economic uncertainty period).

The results of this study reveal a significant and positively relationship between IC disclosure and the amount of future earnings reflected in current annual returns in the pre-Covid-19 period, suggesting that IC is value relevant to the market in reflecting the future earnings of the firm. However, the findings reveal that during the Covid-19 pandemic period (i.e. economic uncertainty), market did not efficiently reflect the future earnings generated by IC. The examination of how management attitude to the economic uncertainty influences the value relevance of IC reveals that the market reacts favourably to IC and views IC as value relevant in reflecting firms' future earnings when firms are optimistic in relation to the economic uncertainty.

In the additional test, this study investigates whether management attitude towards the economic uncertainty influences the value relevance of the three IC elements (i.e. internal capital, external capital and human capital) as evidenced by investors incorporating future earnings information in current stock returns. The result of this test reveals that when firms are optimistic in relation to the economic uncertainty, external capital can effectively communicate current earnings information to the market, while human capital and internal capital can communicate future earnings information and reflect this future earnings information in current stock returns. The results of the additional test indicate that when management attitude about the economic uncertainty is optimistic, the market perceives external capital to be value relevant in reflecting the firm's current earnings information, while human capital and internal capital are value relevant in reflecting the firm's future earnings.

This paper makes several contributions to existing literature on IC disclosure and value relevance. First, the paper extends understanding of value relevance of IC in Australia by examining whether disclosing IC through annual reports can reflect firms' future economic performance and help investors to evaluate firms' stock prices. Second, the paper builds a theoretical framework based on signalling theory to develop the research hypotheses. This development of a theoretical framework underlying IC is valuable given that few studies on IC have provided a strong theoretical basis

for interpreting their findings[3]. Third, to the best knowledge of the researcher, few study has investigated the effect of the economic uncertainty on the value relevance of IC or how management attitude towards the economic uncertainty influences investors' perceptions of the firm performance generated by IC.

The remainder of this paper is organised as follows. Section 2 presents a review of the relevant literature. Section 3 explains the theoretical framework and develops the hypotheses. Section 4 describes the research design of the study. Section 5 presents the empirical results. Section 6 presents the additional test. Section 7 provides the implications of this study. Section 8 presents the conclusion.

2 LITERATURE REVIEW

2.1 Value Relevance of IC Disclosure

Previous studies found that investors perceive IC as value-relevant with regards to decision-making, and they generally react favourable to such reporting, so a firm's stock price or market value would be enhanced in this sense. The most widely used tool to measure the market valuation of IC is market-to-book ratios. Studies have confirmed that IC disclosure has positive effects on the market-to-book ratios in Taiwan [4], Denmark [5], China [6], which suggests that IC disclosure is value-relevant for market valuation.

However, the extant literature does not present a consistent view of the value relevance of IC. In addition, most studies have employed traditional measures (e.g. market-to-book ratio, market value, and earnings models) to evaluate value relevance [7]. Such measurement methods do not accurately evaluate the value relevance of IC because they consider only IC as generating earnings for the current year. However, IC reflects not only current performance but also future wealth creation and can generate forward-looking benefits, which should also be considered by the market. This study addresses this gap in the literature by including the future earnings in the empirical model to examine whether IC can generate forward-looking benefits.

2.2 IC and Financial Performance in Australia

Evidence about the influence of IC on a firm's financial performance can be found in several literature in Australia.

For example, Joshi et al. [8] examined the relationship between IC measured by VAICTM measurement and a firm's financial performance, measured by ROA, in the Australian financial sector for the period from 2006 to 2008. The study found that all Australian-owned banks have relatively higher human capital efficiency than capital employed efficiency and structural capital efficiency. The study also found that the size of the bank in terms of total assets, total number of employees and total shareholders' equity, has little or no impact on the IC efficiency of the Australian-owned banks.

Clarke et al. [9] examined the effect IC efficiency has on firm performance of Australian listed firms between 2004 and 2008. The IC efficiency was measured by VAICTM measurement, and the firm's financial performance was measured by ROE, ROA, growth in revenues and employee productivity. The results found that there was a direct relationship between IC efficiency and the performance of Australian publicly listed firms, particularly regarding capital employed efficiency and human capital efficiency. A positive relationship between human capital efficiency and structural capital efficiency in the prior year and performance in the current year was also found.

Most prior researchers have employed numerical Value Added Intellectual Coefficient (VAICTM) measurement to calculate IC, but this method has now been overly used and has received significant criticism. VAICTM measurement produces inconsistent results, and its effectiveness has been questioned [10]. This paper contributes to the literature by using established scorecard framework rather than the VAICTM model to measure IC.

3 THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

3.1 Value Relevance of IC

According to signalling theory, useful signals would make investors and other stakeholders reassess the value of a firm before making decisions that are more favourable to the firm[11]. Firms have several ways of signalling information about themselves, of which voluntary disclosure of positive accounting information is considered to be one of the most effective. Voluntary disclosing the IC information is a very effective means for firms to signal their superior quality due to the significance of IC for future wealth creation and forward looking benefits [11]. In this sense a firm's share price would rise with adequate IC information when the IC reflects information of future economic benefits. Inadequate IC information, on the other hand, increases a risk of insider trading [12]. This could potentially make capital more costly because investors demand a premium for bearing risky information [13].

For a signal to be useful to a firm, it is important to ensure the signal cannot be imitated by competitors. This paper forms its theoretical foundation based on signalling theory, which argues that a good-quality firm is likely to use multiple signals to encourage its investors to view the firm favourably. IC is a very effective signal of firm quality to the market because it is rarely imitable and replaceable, and it reflects forward-looking benefits. This means that IC disclosure can signal a firm's future performance to outsiders, which affects stock price. This study hypothesises that if a firm reveals information that is value relevant for its future earnings through its IC, then future earnings will be reflected in current returns as a result of disclosure of IC information. In such cases, the coefficient on the interaction

term between IC and future earnings will be positively related to current stock returns. That is, IC can ‘bring the future forward’ by revealing relevant information about future earnings. Therefore, this paper proposes the following hypothesis:

H1: IC positively influences the relationship between stock returns and future earnings.

3.2 Influence of Economic Uncertainty on Value Relevance of IC

The COVID-19 has disrupted the global economy since 2020. Although several protective precautions (e.g., social distancing, travel bans and lockdowns) have proven effective to a large extent, they have a cost in terms of adverse impacts on financial markets and decreased business revenue [1]. To increase the confidence of investors during this economic uncertainty, firms could disclose more IC information. This study assumes that IC information disclosed by a firm can influence investors’ perception of the ability of the firm to generate future earnings, and that the attitude of a firm during the Covid-19 pandemic (i.e., economic uncertainty) can influence investors’ evaluation of the value of the firm. That is, if a firm has sufficient IC and optimism about its current and future developments during the economic uncertainty, investors could incorporate this information in their evaluation of the stock price of the firm. In contrast, if a firm is pessimistic about the economic uncertainty, despite disclosing IC information to the market, investors may feel uncertain about the future development of the firm as a result of the economic uncertainty, and they may not incorporate information about future earnings in their evaluation of current stock returns.

Thus, this paper assumes that if a firm has an optimistic attitude towards economic uncertainty and reveals IC information that is value relevant to its future earnings, then the investors’ confidence in the firm’s future performance will increase. In such a case, the coefficient on the interaction term between IC and future earnings will be positively related to current stock returns when firms are optimistic during the economic uncertainty. Therefore, this paper proposes the following hypothesis:

H2: During the economic uncertainty period, IC positively influences the relationship between stock returns and future earnings when firms are optimistic in relation to the economic uncertainty.

4 RESEARCH DESIGN

4.1 Data and Sample Selection

This study examines ASX 200 firms in the year 2017 (pre-Covid-19 period) and the year 2020 (Covid-19 pandemic period) as the sampling frame. Information related to financial data was obtained from the DataAnalysis database. Following Dahmash et al. (2009), firms involved in the areas of finance, insurance and real estate were excluded because they are subjected to different reporting requirements. ASX 200 firms were selected as the sample frame because the ASX 200 is recognised as the primary investment benchmark in Australia. ASX 200 firms account for approximately 78% of Australian equity market capitalisation. The study also deletes firms that did not have financial information available on the database over the period from 2016 to 2022. After excluding firms with missing data, the sample size decreased from 200 firms to 159 firms for the pre-Covid-19 period and the Covid-19 pandemic period, thus the total sample size is 318 firm-year observations.

4.2 Content Analysis

To capture IC information, this paper applies the content analysis for 318 annual reports. In analysing the IC content disclosed in the annual reports, this chapter counted the frequency of IC items reported. Annual reports are an ideal research object to apply the IC framework to because they are a good proxy to measure the comparative positions and trends of IC between firms, industries and countries [14]. This chapter conceptualises IC according to Yang [15]’s scorecard framework. To undertake a content analysis of the 318 annual reports, the IC items collected from reading and analysing annual reports were entered into a coding sheet. A numerical coding scheme was used for each IC item. For each firm, the frequency of occurrence of each IC item was used to present the level of IC disclosures; zero was used if the IC item did not appear in the annual report.

To capture management attitude about the economic uncertainty, this study employs content analysis of 159 annual reports for the Covid-19 pandemic period. In analysing firms’ attitude about the Covid-19 pandemic as disclosed in the annual reports, the study scaled attitude from 0 to 5: 0 representing that Covid-19 was not mentioned; 1 representing that the firm reacted pessimistically to the Covid-19 pandemic and presented a pessimistic attitude in the letter from the chair at the front of the annual report; 2 representing that the firm reacted pessimistically to the Covid-19 pandemic but did not present a pessimistic attitude in the letter from the chair; 3 representing that the firm reacted optimistically to the Covid-19 pandemic but also presented information about challenges caused by Covid-19; 4 representing that the firm reacted optimistically to the Covid-19 pandemic but did not present an optimistic attitude in the letter from the chair; and 5 representing that the firm reacted optimistically to the Covid-19 pandemic and presented an optimistic attitude in the letter from the chair.

4.3 Empirical Model

Lundholm and Myers [16] measured the disclosure activities of firms by rating the published reports of the Association

for Investment Management Research, and found that increasing firms' discretionary disclosure activities would bring credible, relevant information about future earnings into the current market place, which then increases the stock price. Their model is based on the residual income valuation model, and they characterise the current annual stock return as the sum of unexpected current earnings, the cumulative change in expectations about future earnings and noise. The researchers used the level of current earnings and past year's earnings as proxy for unexpected current earnings. The proxy for changes in expected future earnings is central to the model. As future earnings have expected and unexpected components, the unexpected component to future earnings is a measurement error when using the realised future earnings to proxy for expected future earnings. The future stock returns are included to control for the measurement error in the model, as they believe an unexpected shock to future earnings should also generate future returns. The measurement error (future returns) should not be associated with current returns in a regression excluding future earnings, nor should it be negatively associated with current returns in the model. Extending the model, their study assumes that a significant source of changing expectations about a firm's future performance is disclosure activity by the firm itself. If a firm reveals news relevant to its future earnings through its disclosure activity, the realised future earnings will be reflected in current returns, albeit with some measurement error. Thus, they include the interaction effect between future earnings and the level of a firm's disclosure activity on stock returns as an interested variable. The interaction between the future earnings and voluntary disclosure activity is labeled as 'revealed future earnings'. As a result, Lundholm and Myers found a positive relationship between 'revealed earnings' and stock returns.

Lundholm and Myers [16] is more appropriate to examine the market value-relevance of IC in this study because this paper attempts to consider whether IC could bring information regarding a firm's future earnings into current stock returns. Lundholm and Myers [16] found that accounting-based earnings beyond three years have little explanatory power and due to the availability of the data in this study, this study regards future earnings as the sum of two years of future accounting based earnings for each current year (investigation year) of the sample.

The empirical model for this study is as follow:

$$R_{j,t} = a_0 + a_1 E_{j,t-1} + a_2 E_{j,t} + a_3 E_{j,t+1to2} + a_4 R_{j,t+1to2} + a_5 DM_{j,t,k} + a_6 DM_{j,t,k} * E_{j,t-1} + a_7 DM_{j,t,k} * E_{j,t} + a_8 DM_{j,t,k} * E_{j,t+1to2} + a_9 DM_{j,t,k} * R_{j,t+1to2} + a_{10} Mtkcap_{j,t} + a_{11} MtoB_{j,t} + a_{12} Opcycle_{j,t} + \text{Year effects} + \text{Industry effects} + e_{j,t} \quad (1)$$

Where:

$R_{j,t}$ —the annual stock return for firm j , year t , over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year, measured by natural logarithm of stock price three months after year end t / stock price three months after year end $t-1$;

$DM_{j,t,k}$ —is a determinant of value relevance, including $IC_{j,t}$ and management attitude. The $IC_{j,t}$ is measured by the sum of natural logarithm of frequency counts of internal capital items, external capital items, and human capital items for firm j , in year t . The $MA_{j,t}$ is management attitude on economic uncertainty (i.e., COVID 19 pandemic) which scaled from 0 to 5 for firm j , in year 2020.

$E_{j,t-1}$ —earnings before tax for firm j , in year $t-1$, deflated by the market capitalisation at beginning of year t for firm j ;

$E_{j,t}$ —earnings before tax for firm j , year t , deflated by the market capitalisation at beginning of year t for firm j ;

$E_{j,t+1to2}$ —the sum of earnings before tax for firm j , years $t+1$ and $t+2$, deflated by the market capitalisation at beginning of year t for firm j ;

$R_{j,t+1to2}$ —the sum of annual stock returns for firm j , years $t+1$ and $t+2$ over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year;

$MtoB_{j,t}$ —market-to-book equity ratio, measured as market value of equity divided by the book value of equity for firm j , in year t ;

$Opcycle_{j,t}$ —natural logarithm of days of accounts receivable plus days of inventory for firm j , in year t ;

$MktCap_{j,t}$ —size of the firm, measured as a natural logarithm of market capitalisation of firm j , at beginning of year t ;

j —firm observation;

t —year 2017 and 2020.

5 EMPIRICAL RESULTS

5.1 Descriptive Statistics

Table 1 presents the summary statistics of the variables for the hypotheses. The results demonstrate that the mean of IC in the Covid-19 pandemic period (mean = 4.991) is significantly higher than the mean of IC in the pre-Covid-19 period (mean = 4.534) (t -value = -2.535, p -value = 0.006). Among the three IC elements, human capital accounts for the majority of IC in Australia, and it has the highest mean (1.995 for pre-Covid-19; 2.193 for Covid-19 pandemic) in both periods. The mean of human capital is higher during the Covid-19 pandemic than in the pre-Covid-19 period (t -value = -2.772, p -value = 0.003). The mean of internal capital is higher during the Covid-19 pandemic (1.140) than in the pre-Covid-19 period (0.939) (t -value = -2.395, p -value = 0.009). The mean of external capital does not change significantly during the Covid-19 pandemic period. Thus, the analysis of the descriptive statistics reveals that the increased IC during the Covid-19 pandemic results from higher levels of human capital and internal capital. This is reasonable because during the Covid-19, employee welfare and safety were a priority and the social distancing rules and lockdowns meant that most employees were working from home, which resulted in firms investing more in training programmes, information technology systems and adopting smarter business management procedures.

Table 1 Descriptive Statistics

Variable	Pre COVID 19 period (year 2017)			COVID 19 period (year 2020)			T-test	
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	t-value	p-value
IC _{j,t}	159	4.534	1.667	159	4.991	1.545	-2.535***	0.006
HUC _{j,t}	159	1.995	0.788	159	2.193	0.469	-2.772***	0.003
INC _{j,t}	159	0.939	0.732	159	1.140	0.764	-2.395***	0.009
EXC _{j,t}	159	1.600	0.754	159	1.658	0.772	-0.677	0.249

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: IC_{j,t} is the sum of natural logarithm of frequency counts of internal capital items, external capital items, and human capital items for firm j, in year t. INC_{j,t} is natural logarithm of frequency counts of internal capital for firm j, in year t. EXC_{j,t} is natural logarithm of frequency counts of external capital for firm j, in year t. HUC_{j,t} is natural logarithm of frequency counts of human capital for firm j, in year t. t is year 2017 and year 2020.

5.2 Pearson and Spearman Correlations for Three IC Elements

Table 2 panel A presents the results of Pearson and Spearman correlations between IC, external capital, human capital and internal capital, revealing that internal capital, external capital and human capital are significantly and positively correlated to each other. In addition, all three individual elements of IC are highly correlated to total IC. Table 2 panel B presents the factor analyses of the three individual elements, while in panel B, internal capital, external capital and human capital are represented by one factor. The results presented in Table 2 panel A and panel B indicate that making the total of the three individual elements of IC represent total IC is appropriate in this study.

Table 2 Pearson and Spearman Correlations for Three Individual IC Elements

Panel A: Pearson and spearman correlations				
	IC	HUC	INC	EXC
IC _{j,t}	1.000	0.685*** (0.000)	0.767*** (0.000)	0.779*** (0.000)
HUC _{j,t}	0.690*** (0.000)	1.000	0.288*** (0.000)	0.312*** (0.000)
INC _{j,t}	0.776*** (0.000)	0.333*** (0.000)	1.000	0.393*** (0.000)
EXC _{j,t}	0.737*** (0.000)	0.326*** (0.000)	0.362*** (0.000)	1.000
Panel B: Factor analysis				
Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	0.839	0.962	1.637	1.637
Factor2	-0.123	0.081	-0.240	1.397
Factor3	-0.204	0.000	-0.397	1.000
Number of obs	318			
Retained factors	1			
Number of params	3			
chi2(3)	97.04			
Prob>chi2	0			
Factor loadings (pattern matrix) and unique variances				
Variable	Factor1	Uniqueness		
HUC _{j,t}	0.471	0.778		
INC _{j,t}	0.547	0.701		
EXC _{j,t}	0.564	0.682		

p-value in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Pearson (spearman) correlations are presented above (below)

Note: IC_{j,t} is the sum of natural logarithm of frequency counts of internal capital items, external capital items, and human capital items for firm j, in year t. HUC_{j,t} is natural logarithm of frequency counts of human capital for firm j, in year t. INC_{j,t} is natural logarithm of frequency counts of internal capital for firm j, in year t. EXC_{j,t} is natural logarithm of frequency counts of external capital for firm j, in year t.

5.3 Management Attitude to Economic Uncertainty

Table 3 presents the frequency count and the percentage of each attitude rating during the economic uncertainty. The results show that 18% presented optimistic information in the letter from the chair at the front of the annual report (i.e. rating 5). Moreover, 30% of firms reacted optimistically to the Covid-19 pandemic but did not present optimistic information in the letter from the chair (i.e. rating 4). In addition, 23% of firms reacted optimistically to the Covid-19 pandemic but also presented information about challenges caused by the Covid-19 pandemic (i.e. rating 3). Further, 20% of firms reacted pessimistically to the Covid-19 pandemic but did not present pessimistic information in the letter from the chair (i.e. rating 2) and 8% of firms presented reacted pessimistically to the Covid-19 pandemic and presented pessimistic information in the letter from the chair (i.e. rating 1).

Table 3 Firms' Attitude on Economic Uncertainty

MA	Count	Percentage
0	2	1%
1	13	8%
2	31	20%
3	37	23%
4	48	30%
5	28	18%

Note: MA represents the firms attitude on economic uncertainty (i.e., COVID 19 pandemic), it is scaled from 0 to 5. where 0 presents that the COVID 19 is not mentioned, 1 presents that the firms react pessimistically on COVID 19 and presents pessimistic attitude in the Chairman letter in the front of the annual reports, 2 presents that the firms react pessimistically on COVID 19 but not presents pessimistic attitude in the Chairman letter, 3 presents that the firms react optimistically on COVID 19 but also presents some challenges that caused by COVID 19, 4 presents that the firms react optimistically on COVID 19 but not presents optimistic attitude in the Chairman letter, 5 presents that the firms react optimistically on COVID 19 and presents optimistic attitude in the Chairman letter in the front of the annual reports.

5.4 Results for Hypothesis

5.4.1 Results for H1

Table 4 presents the results for H1, with stock returns as the dependent variable using ordinary least squares (OLS) regressions. The result of Table 4 model 1 reveals that $E_{j,t+1to2}$ is significantly and positively associated with $R_{j,t}$ (coefficient = 0.631, p-value = 0.000), consistent with the results of Lundholm and Myers (2002). When incorporated with IC, the results of Table 4 model 2 reveal that $IC_{j,t} * E_{j,t}$ is significantly and positively associated with $R_{j,t}$ (coefficient = 0.111, p-value = 0.043) and that $IC_{j,t} * E_{j,t+1to2}$ is significantly and positively associated with $R_{j,t}$ (coefficient = 0.153, p-value = 0.012), which indicates that investors perceived IC information as useful and relevant information in reflecting firms' current and future earnings. This result is consistent with H1's proposal that IC information signals not only current earnings but also future earnings information to the market, and that the market perceives such reporting as value relevant and incorporates the IC information in current stock returns.

Table 4 Results for Value Relevance of IC in Pre-Covid 19 Period

	Model 1 with $R_{j,t}$ as dependent variable				Model 2 with $R_{j,t}$ as dependent variable			
	Coef.	Std. Err.	t	P>t	Coef.	Std. Err.	t	P>t
$E_{j,t-1}$	-0.006	0.064	0.100	0.920	-0.579***	0.219	-2.640	0.009
$E_{j,t}$	0.064	0.111	0.580	0.565	2.181***	0.607	3.590	0.000
$E_{j,t+1to2}$	0.631***	0.072	8.800	0.000	0.140	0.217	0.650	0.518
$R_{j,t+1to2}$	-0.127***	0.031	-4.100	0.000	-0.178***	0.064	-2.760	0.006
$IC_{j,t}$					0.106***	0.017	6.260	0.000
$IC_{j,t} * E_{j,t-1}$					-0.521***	0.145	-3.590	0.000
$IC_{j,t} * E_{j,t}$					0.111**	0.054	2.040	0.043
$IC_{j,t} * E_{j,t+1to2}$					0.153**	0.061	2.530	0.012
$IC_{j,t} * R_{j,t+1to2}$					0.016	0.016	0.980	0.330
$MtoB_{j,t}$	0.012	0.008	1.570	0.118	0.010	0.006	1.640	0.104
$Mktcap_{j,t}$	0.019**	0.007	2.610	0.010	0.013**	0.006	2.000	0.047
$Opcycle_{j,t}$	-0.029	0.034	-0.880	0.382	-0.023	0.029	-0.810	0.421
Industry effects	0.009	0.007	1.320	0.187	0.002	0.006	0.370	0.709
_cons	-0.433***	0.122	-3.550	0.001	-0.749***	0.115	-6.540	0.000
Number of obs	159				159			

R-squared 36.4% 55.9%

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: $R_{j,t}$ is the annual stock return for firm j , year t , over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year, measured by natural logarithm of stock price three months after year end t / stock price three months after year end $t-1$. The $IC_{j,t}$ is measured by the sum of natural logarithm of frequency counts of internal capital items, external capital items, and human capital items for firm j , in year t . $E_{j,t-1}$ represents earnings before tax for firm j , in year $t-1$, deflated by the market capitalisation at beginning of year t for firm j . $E_{j,t}$ is earnings before tax for firm j , year t , deflated by the market capitalisation at beginning of year t for firm j . $E_{j,t+1to2}$ is the sum of earnings before tax for firm j , years $t+1$ and $t+2$ deflated by the market capitalisation at beginning of year t for firm j . $R_{j,t+1to2}$ is the sum of annual stock returns for firm j , years $t+1$ and $t+2$, over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year. $MtoB_{j,t}$ represents market-to-book equity ratio, measured as market value of equity divided by the book value of equity for firm j , in year t . $Opcycle_{j,t}$ is measured by natural logarithm of days of accounts receivable plus days of inventory for firm j , in year t . $MktCap_{j,t}$ is size of the firm, measured as a natural logarithm of market capitalisation of firm j , at beginning of year t ; j is firm observation. t is year 2017.

5.4.2 Results for H2

Table 5 presents the results for H2, with stock returns as the dependent variable using OLS regressions. As seen in Table 5 model 3, $E_{j,t+1to2}$ is significantly and positively associated with $R_{j,t}$ (coefficient = 0.674, p -value = 0.000), which is consistent with the results of [16]. However, when examining Table 5 model 4, $E_{j,t+1to2}$ is significantly and positively associated with $R_{j,t}$ (coefficient = 1.090, p -value = 0.027), but $IC_{j,t} * E_{j,t+1to2}$ is not significantly associated with $R_{j,t}$, suggesting that IC was not efficiently incorporated by investors in evaluating the future earnings of firms during the Covid-19 pandemic. This may be because the economic uncertainty and challenges caused by the Covid-19 pandemic influenced negatively on investors' evaluation of firms' future earnings generated by IC.

When evaluating management attitude towards the economic uncertainty, Table 5 model 5 reveals that $MA * IC_{j,t} * E_{j,t+1to2}$ is significantly and positively associated with $R_{j,t}$ (coefficient = 0.030, p -value = 0.007). This positive relationship indicates that when firms are optimistic during the economic uncertainty period, investors react favourably in relation to the firm's future earnings generated by IC. Thus, the study finds that stock returns reflect future earnings through IC information when firms have an optimistic attitude towards the economic uncertainty. This finding supports H2.

The results presented in Table 5 reveal that, on average, IC was not efficiently incorporated by investors in evaluating the future earnings of firms during the economic uncertainty. However, investors reacted favourably about future earnings generated by IC when firms presented an optimistic attitude towards the economic uncertainty.

Table 5 Regression Results for Value Relevance of IC during COVID 19 Pandemic

	Model 3 with $R_{j,t}$ as dependent variable				Model 4 with $R_{j,t}$ as dependent variable				Model 5 with $R_{j,t}$ as dependent variable			
	Coef.	Std. Err.	t	P>t	Coef.	Std. Err.	t	P>t	Coef.	Std. Err.	t	P>t
$E_{j,t-1}$	-0.046	0.243	-0.190	0.851	-0.425	0.899	-0.470	0.637	-0.682	0.556	1.230	0.221
$E_{j,t}$	0.173	0.251	0.690	0.492	1.378	1.353	1.020	0.310	0.034	0.851	-0.040	0.968
$E_{j,t+1to2}$	0.674***	0.092	7.310	0.000	1.090**	0.489	2.230	0.027	0.269	0.267	1.010	0.316
$R_{j,t+1to2}$	-0.081**	0.037	-2.160	0.032	-0.115	0.108	-1.060	0.290	-0.066	0.072	-0.910	0.363
$IC_{j,t}$					0.041	0.032	1.290	0.199	0.016	0.032	-0.490	0.628
$IC_{j,t} * E_{j,t-1}$					-0.043	0.177	0.250	0.806				
$IC_{j,t} * E_{j,t}$					0.219	0.263	-0.830	0.407				
$IC_{j,t} * E_{j,t+1to2}$					0.067	0.081	-0.830	0.409				
$IC_{j,t} * R_{j,t+1to2}$					-0.008	0.022	0.360	0.717				
MA									0.038	0.041	0.930	0.354
$MA * IC_{j,t} * E_{j,t-1}$									-0.052*	0.030	-1.760	0.081
$MA * IC_{j,t} * E_{j,t}$									0.022	0.049	0.440	0.663
$MA * IC_{j,t} * E_{j,t+1to2}$									0.030**	0.017	1.820	0.007
$MA * IC_{j,t} * R_{j,t+1to2}$									0.000	0.004	-0.090	0.932
$MtoB_{j,t}$	0.105***	0.016	6.700	0.000	0.121**	0.018	6.840	0.000	0.107**	0.017	6.420	0.000
$Mktcap_{j,t}$	0.005	0.009	0.610	0.542	0.005	0.009	0.560	0.574	0.007	0.009	0.760	0.447
$Opcycle_{j,t}$	-0.084**	0.043	-1.940	0.054	-0.094**	0.044	-2.140	0.034	-0.092**	0.043	-2.140	0.034

Industry effects	0.018	0.011	1.620	0.107	0.019*	0.011	1.740	0.084	0.019	0.011	1.650	0.101
_cons	-0.488***	0.178	-2.740	0.007	-0.706**	0.234	-3.020	0.003	-0.571**	0.247	-2.310	0.022
Number of obs	159				159				159			
R-squared	43.1%				44.7%				45.6%			

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: Note: $R_{j,t}$ is the annual stock return for firm j , year t , over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year, measured by natural logarithm of stock price three months after year end t / stock price three months after year end $t-1$. The $IC_{j,t}$ is measured by the sum of natural logarithm of frequency counts of internal capital items, external capital items, and human capital items for firm j , in year t . $E_{j,t-1}$ represents earnings before tax for firm j , in year $t-1$, deflated by the market capitalisation at beginning of year t for firm j . $E_{j,t}$ is earnings before tax for firm j , year t , deflated by the market capitalisation at beginning of year t for firm j . $E_{j,t+1to2}$ is the sum of earnings before tax for firm j , years $t+1$ and $t+2$, deflated by the market capitalisation at beginning of year t for firm j . $R_{j,t+1to2}$ is the sum of annual stock returns for firm j , years $t+1$ and $t+2$, over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year. MA represents the firms attitude on COVID 19 pandemic, it is scaled from 0 to 5. $MtoB_{j,t}$ represents market-to-book equity ratio, measured as market value of equity divided by the book value of equity for firm j , in year t . $Opcycle_{j,t}$ is measured by natural logarithm of days of accounts receivable plus days of inventory for firm j , in year t . $MktCap_{j,t}$ is size of the firm, measured as a natural logarithm of market capitalisation of firm j , at beginning of year t ; j is firm observation. t is year 2020.

6 ADDITIONAL TEST

This section investigates whether management attitude towards the economic uncertainty influences the value relevance of the three IC elements as evidenced by investors incorporating future earnings information in current stock returns. Table 6 presents the results of H2 with $HUC_{j,t}$ (see Table 6 model 6); $INC_{j,t}$ (see Table 6 model 7); and $EXC_{j,t}$ (see Table 6 model 8) as independent variables using OLS regressions. The results reveal that $MA * HUC_{j,t} * E_{j,t+1to2}$ and $MA * INC_{j,t} * E_{j,t+1to2}$ are positively and significantly associated with $R_{j,t}$ (coefficient = 0.074, p -value = 0.042; coefficient = 0.142, p -value = 0.001, respectively), which suggests that the market believes that human capital and internal capital help to reflect firms' future earnings during the economic uncertainty when firms reacted optimistically to the economic uncertainty. Table 6 also reveals that $EXC_{j,t} * E_{j,t}$ and $R_{j,t}$ are positively and significantly associated (coefficient = 0.204, p -value = 0.027), which suggests that external capital can incorporate current economic benefits to firms. Thus, the study finds that the benefit of external capital is released faster than the other two elements because the market reacts positively to the current earnings of firms with external capital, and that the market reacts positively to the future earnings of firms with human capital and internal capital during economic uncertainty when firms react optimistically about the economic uncertainty.

Table 6 Regression Results for Value Relevance of Three Individual IC Elements

	Model 6 with $R_{j,t}$ as dependent variable				Model 7 with $R_{j,t}$ as dependent variable				Model 8 with $R_{j,t}$ as dependent variable			
	Coef.	Std. Err.	t	P>t	Coef.	Std. Err.	t	P>t	Coef.	Std. Err.	t	P>t
$E_{j,t-1}$	-1.087*	0.613	1.770	0.079	-0.288	0.372	-0.770	0.441	-0.457	0.499	0.920	0.361
$E_{j,t}$	0.028	1.017	-0.030	0.978	1.658**	0.724	2.290	0.023	0.604	0.442	-1.370	0.174
$E_{j,t+1to2}$	0.188	0.273	0.690	0.492	0.046	0.230	-0.200	0.841	0.772**	0.160	4.830	0.000
$R_{j,t+1to2}$	-0.033	0.083	-0.400	0.692	-0.033	0.053	-0.620	0.535	-0.109*	0.063	-1.710	0.089
MA	0.017	0.040	0.430	0.670	0.053	0.037	1.420	0.157	0.082**	0.039	2.090	0.038
$HUC_{j,t}$	0.108	0.105	1.030	0.305								
$MA * HUC_{j,t} * E_{j,t-1}$	-0.173**	0.076	-2.280	0.024								
$MA * HUC_{j,t} * E_{j,t}$	0.055	0.130	0.420	0.672								
$MA * HUC_{j,t} * E_{j,t+1to2}$	0.074**	0.036	2.050	0.042								
$MA * HUC_{j,t} * R_{j,t+1to2}$	-0.004	0.011	-0.360	0.722								
$INC_{j,t}$					-0.049	0.068	-0.730	0.465				
$MA * INC_{j,t} * E_{j,t-1}$					0.027	0.079	0.340	0.73				

								1					
MA*INC _{j,t} *E _{j,t}	-0.220	0.136	-	0.10				7					
MA*INC _{j,t} *E _{j,t+1t}	0.142**	0.041	3.510	0.00				1					
o2								2					
MA*INC _{j,t} *R _{j,t+1t}	-0.006	0.011	-	0.57									
o2													
EXC _{j,t}									-0.045	0.065	-	0.48	
											0.700	6	
MA*EXC _{j,t} *E _{j,t-1}									-0.090	0.075	-	0.23	
											1.200	1	
MA*EXC _{j,t} *E _{j,t}									0.204**	0.091	2.240	0.02	
												7	
MA*EXC _{j,t} *E _{j,t+1}									0.036	0.041	-	0.38	
to2											0.880	0	
MA*EXC _{j,t} *R _{j,t+}									-0.009	0.011	0.820	0.41	
1to2												1	
MtoB _{j,t}	0.113**	0.016	7.160	0.000	0.124**	0.016	7.600	0.00	0.094**	0.017	5.720	0.00	
	*				*			0	*			0	
Mktcap _{j,t}	0.004	0.008	0.490	0.627	0.001	0.009	0.160	0.87	0.007	0.009	0.800	0.42	
								1				6	
Opcycle _{j,t}	-	0.042	-	0.025	-0.072*	0.042	-	0.09	-	0.043	-	0.04	
	0.095**		2.270				1.690	2	0.086**		2.010	6	
Industry effects	0.025**	0.011	2.220	0.028	0.014	0.011	1.300	0.19	0.015	0.011	1.280	0.20	
								4				4	
_cons	-	0.833**	-	0.004	-	0.581**	0.218	0.00	-	0.634**	-	0.00	
	*		2.930		*		2.660	9	*		2.740	7	
Number of obs	159				159				159				
R-squared	47.7%				47.3%				45.2%				

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Note: R_{j,t} is measured by natural logarithm of stock price three months after year end t/ stock price three months after year end t-1. HUC_{j,t} is natural logarithm of frequency counts of human capital for firm j, in year t. INC_{j,t} is natural logarithm of frequency counts of internal capital for firm j, in year t. EXC_{j,t} is natural logarithm of frequency counts of external capital for firm j, in year t. E_{j,t-1} represents earnings before tax for firm j, in year t-1, deflated by the market capitalisation at beginning of year t for firm j. E_{j,t} is earnings before tax for firm j, year t, deflated by the market capitalisation at beginning of year t for firm j. E_{j,t+1to2} is the sum of earnings before tax for firm j, years t+1 and t+2, deflated by the market capitalisation at beginning of year t for firm j. R_{j,t+1to2} is the sum of annual stock returns for firm j, years t+1 and t+2, over the 12-month period beginning on the first day of the third month of the given year and ending on the last day of the second month of the subsequent year. MA represents the firms attitude towards COVID 19 pandemic, it is scaled from 0 to 5. MtoB_{j,t} represents market-to-book equity ratio, measured as market value of equity divided by the book value of equity for firm j, in year t. Opcycle_{j,t} is measured by natural logarithm of days of accounts receivable plus days of inventory for firm j, in year t. MktCap_{j,t} is size of the firm, measured as a natural logarithm of market capitalisation of firm j, at beginning of year t; j is firm observation. t is year 2020.

7 IMPLICATIONS

7.1 Implications for Readers

For academics and researchers, this paper provides valuable insights into the changing role of intellectual capital during economic uncertainty like the Covid-19 pandemic. It encourages readers to reconsider existing models and theories in accounting and finance, prompting them to update their understanding of how intellectual capital contributes to firm value in times of economic uncertainty.

Practitioners and professionals in the fields of accounting and finance will find the results relevant for decision-making processes. Understanding the altered value relevance of IC during the economic uncertainty and the influence of management attitudes can guide strategic choices, financial reporting, and investment decisions.

7.2 Implications for Business and Management Practice

The study suggests practical implications for businesses and managers in navigating the challenges posed by the economic uncertainty. Firms need to recognize that the market may not efficiently incorporate the future earnings generated by intellectual capital during economic uncertainty. The findings underscore the importance of transparent communication in annual reports, especially during times of uncertainty, to convey a positive and optimistic attitude.

Business leaders should consider the potential impact of their attitude towards the pandemic on investors' perceptions of intellectual capital. A proactive and optimistic stance during economic uncertainty periods can enhance the value relevance of intellectual capital, signaling to investors that the firm is resilient and well-positioned for future performance.

In summary, this research offers valuable information for readers in academia and practice, and practical guidance for businesses and managers in adapting their strategies and communications to enhance the value relevance of intellectual capital during and after the economic uncertainty.

8 CONCLUSION

This paper employs signalling theory to examine whether the economic uncertainty changed the value relevance of IC to reflect current and future earnings to the market. Moreover, the paper examines how management attitudes towards the economic uncertainty influenced investors' perceptions of future earnings generated by IC.

Using content analysis, t-tests and OLS panel regressions on a sample of 318 annual reports from ASX 200 listed firms, the study confirms the hypotheses. The findings reveal that before economic uncertainty, IC positively influences the relationship between current stock returns and future earnings, suggesting that IC reflects future economic performance, and that the information signals from IC reporting are relevant to future earnings because the signals are incorporated in the current stock returns. However, during the economic uncertainty period, the study finds that investors incorporate future earnings generated by IC to stock returns only when firms show an optimistic attitude towards the economic uncertainty. The results suggest that the economic uncertainty has created uncertainties and challenges for firms, and that investors' perceptions of future earnings generated by IC depend on the firm's attitude towards the economic uncertainty.

These findings enrich not only the current debate about the value relevance of the IC but also present important implications for external stakeholders assessing firms' future economic performance that generated by IC during the economic uncertainty period.

There are several limitations of this study. First, the results of this study may not be applicable to countries other than Australia and to non-listed Australian firms because the study investigated only ASX 200 firms. Second, the coding framework used in the study comprises 33 IC items. However, other studies have used coding frameworks comprising fewer or more varied IC items. Therefore, when comparing the results of this and other studies, the interpretation of the findings must recognise the differences in approach.

Future research should examine IC and its implications for other aspects of a firm's benefits, such as corporate reputation. Moreover, future research should extend the current study on the value relevance of IC into a detailed examination from a different perspective using different methods. For example, future research could conduct interviews or surveys to examine directors' perceptions of the role played by IC in a firm's financial performance.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Xu J, Haris M, Irfan M. The Impact of Intellectual Capital on Bank Profitability during COVID-19: A Comparison with China and Pakistan. *Complexity in Financial Markets*, Special Issue, 2022.
- [2] Guthrie J, Petty R. Intellectual capital: Australian annual reporting practices. *Journal of Intellectual Capital*, 2000, 1(3): 241-251.
- [3] Li J, Pike R, Haniffa R. Intellectual capital disclosure and corporate governance structure in UK firms. *Accounting and Business Research*, 2008, 38(2): 137-159.
- [4] Chen MC, Cheng SJ, Hwang Y. An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, 2005, 6(2): 159-176.
- [5] Bukh PN, Nielsen C, Gormsen P, et al. Disclosure of information on intellectual capital in Danish IPO prospectuses. *Accounting, Auditing and Accountability Journal*, 2005, 18(6): 713-732.
- [6] Xu J, J Li. The impact of intellectual capital on SME's performance in China: Empirical evidence from non-high-tech vs. high-tech SME's. *Journal of Intellectual Capital*, 2019, 20 (4): 488-509.
- [7] Ferraro O, Veltri S. The value relevance of Intellectual Capital on the firm's market value: an empirical survey on the Italian listed firms. *International Journal of Knowledge-Based Development*, 2011, 2(1): 66-84.
- [8] Joshi M, Cahill D, Sidhu J, et al. Intellectual capital and financial performance: an evaluation of the Australian financial sector. *Journal of Intellectual Capital*, 2013, 14(2): 264-285.
- [9] Clarke M, Seng D, Whiting R H. Intellectual capital and firm performance in Australia. *Journal of Intellectual Capital*, 2011, 12(4): 505-530.
- [10] Maditinos D, Chatzoudes D, Tsairidis C, et al. The impact of intellectual capital on firms' market value and financial performance. *Journal of Intellectual Capital*, 2011, 12(1): 132-151.
- [11] Whiting RH, Miller JC. Voluntary disclosure of intellectual capital in New Zealand annual reports and the "hidden value". *Journal of Human Resource Costing and Accounting*, 2008, 12(1): 26-50.
- [12] Vergauwen PGM, Van Alem FJC. Annual report: IC disclosure in The Netherlands, France and Germany. *Journal of Intellectual Capital*, 2005, 6(1): 89-104.
- [13] Brüggen A, Vergauwen P, Dao M. Determinants of intellectual capital disclosure: evidence from Australia. *Management Decision*, 2009, 47(2): 233-245.
- [14] Abeysekera I. *Intellectual capital accounting: Practices in a developing country*, Routledge, London, 2008.

- [15] Yang Y. Do aggressive pro forma earnings-reporting firms have difficulty disclosing intellectual capital. *Journal of Intellectual Capital*, 2018, 19(5): 875-896.
- [16] Lundholm R, Myers L. Bringing the future forward: The effect of disclosure on the returns-earnings relation. *Journal of Accounting Research*, 2002, 40(3): 809–839.

FACTORS RESPONSIBLE FOR MARITAL CONFLICTS AMONG NEWLY MARRIED COUPLES IN ILORIN, KWARA STATE NIGERIA

Inioluwa Racheal Ogungbemi^{1*}, Samson Aderemi Ajiboye², Ayodele Bamidele Ogungbemi³, Lateef O. Adegboyega¹

¹*Department of Counsellor Education, Faculty of Education, University of Ilorin, Ilorin, Nigeria.*

²*Department of Social Sciences, School of Liberal Studies, Yaba College of Technology, Nigeria.*

³*Department of Economics, College of Social and Management Sciences, Tai Solarin University of Education, Nigeria.*

Corresponding Author: Inioluwa Racheal Ogungbemi, Email: Inioluwaajiboye74@gmail.com

Abstract: Conflict exists in nearly every sphere of life. Conflicts exist in people's jobs, families, schools, and even in the church. Marital conflict has profound implications for individual well-being, although marital conflict is consequential for both husbands and wives, it has more pronounced health consequences for wives. Thus, this study investigated factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State. A descriptive survey was adopted for the study and the instrument used to collect data for the study was a questionnaire entitled "Factors Responsible for Marital Conflicts Questionnaire (FRMCQ). The instrument was validated and a coefficient of 0.75 was obtained for its reliability. A research question was raised for the study while four null hypotheses were postulated and tested at a 0.05 level of significance. The findings of the study revealed that the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State are friends' interference in the marital affairs of the couple, poor home background of either spouse, and lack of parenting skills among others. Also, there were no significant differences in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on gender, age, and educational qualification. Based on the findings of the study, it was recommended that counsellors in collaboration with other agencies should set up campaigns on the need to prevent marital conflicts, and government and stakeholders in the society should establish counselling centers in strategic locations where couples can be educated on different patterns of marital conflicts and counsellors and other agencies should synergize to educate couples on how to get committed, avoid conflicting on the issue of fertility and develop a lasting attraction to their wives in order to prevent domestic violence.

Keywords: Friend's interference; Poor home background of either spouse; Lack of parenting skills

1. INTRODUCTION

Marriage is a ubiquitous institution as it encompasses all cultures, races, ethnic groups, or religious groups [1]. Marriage is a lifelong partnership between a man and his wife (Matthew 19; 5-6). Marriage is a union between a man and woman for life that is both voluntary and legal. A marriage contract is an exchange of estates, properties, rights privileges, roles, and statuses. Beyond a legal contract, marriage is a covenant as it is entered into by agreement and vows made by the parties when entering are for life i.e. based on till death do us part commitment. At the time of the exchange of vows and the pledge to be committed, the man and woman involved are both required to be psychologically balanced, physically fit, and emotionally stable: In short, they should be mentally alert so that none is deceived or cajoled into the deal [2]. In marriage, each partner, male and female is unique based on individual needs. In the opinion of [1], there is a need for emotional, physical, and spiritual coordination in nature to add flavor to the marriage relationship. Without a variety of individual and different needs a marriage relationship would be non-stimulating, tedious, and thereby lack flavor [3]. They have defined marriage as a sacred and permanent contract between a man and a woman who has consented to live a life of vocation, love, and sharing for each other to promote their mutual growth and welfare as persons in their journey through life. This implies that a marital relationship is meant to be a lifelong one until the death of a partner. Marriage as an institution is a universal phenomenon that plays a vital role in society and life. However, no matter how much love the individuals involved have for each other, it is natural that they will from time to time experience conflict as a result of differences in opinions, values, needs, desires, and habits.

A strong and loving marriage is a source of great happiness in life and also a valuable resource during difficult times, while a problematic one can be so devastating to many aspects of a marriage [4]. According to Aldridge and Browne, marital relationships experience crises and conflicts that sometimes result in divorce, separation, broken homes, violence against women or men, child neglect, and several other devastating effects of intra-marital conflicts. Even though couples are aware of the intimate contract they are into in marriage and the implication of this contract to their lives, they encounter challenges that they sometimes cannot handle. The survival of such marriages largely depends on how effectively the couples manage their marital relationship.

Marital conflict has been linked to the onset of depressive symptoms, eating disorders, male alcoholism, episodic drinking, binge drinking, and out-of-home drinking. Although married individuals are healthier on average than the unmarried, marital conflict is associated with poorer health and with specific illnesses such as cancer, cardiac disease, and chronic pain, perhaps because hostile behaviours during conflict are related to alterations in immunological, endocrine, and cardiovascular functioning [5]. Grych and Fincham stressed that physical aggression occurs in about 30% of married couples in the United States, leading to significant physical injury in about 10% of couples. All marriages face certain transitions that occur throughout the relationship. Some of these transitions include getting married, career changes, having children, the last child leaving home, and retiring from work. Indeed, the trends towards urbanization and increased mobility bring about much greater separation. Some theorists believe that marital conflict is a normal occurrence for couples [6]. Marital conflict is often seen as an inevitable phenomenon that occurs within all relationships. Based their research on the notion that the transitions and challenges that occur within a marriage present problems that are inevitable and often lead to marital conflict [7].

According to [8], some factors that give rise to marital conflict include: lack of sexual satisfaction, childlessness, communication gap, in-law influence, and poverty among others these factors generate crises and conflicts that are detrimental to marital relationships such as desertion, negligence, malicious beating, child abuse, abscondment, assault, disobedience and several other features in the marital relationship. Marital conflict can influence children's adjustment directly by equipping children with faulty working models of functional behavioural and emotional expression for dealing with social problems [9]. undertook a study on increasing cases of broken marriage in Jos metropolis [9]. A sample of 175 couples participated to determine factors associated with marital conflict. It was discovered that there are many factors individually or in combination that lead to marital conflict. Such factors, according to Miri, lack of love between couples, infidelity, childlessness, problems of in-laws, habitual drunkenness, going into marriage with unrealistic expectations, and improper communication among others. Even though the study did not work on personal factors, the factors mentioned were associated with marital conflicts.

In a study by [10] on marriage conflict and mediation among the Kamantan people of Kaduna State. The findings of the study showed that childlessness with 91.1% is a major cause, cruelty /wife beating 90%, lack of proper care of wife 91%, polygamous marriages 72.24%, lack of love 35.92%, forced marriage 76.11%, extra marital affairs, etc. are all associated with marital conflict. Frequent marital conflict according to Samana generally viewed as a source of ongoing tension that can preoccupy parents and deplete their emotional resources, possibly leading to disengagement from their children [12]. Despite this recognition, there are few direct tests of the proposition that marital conflict affects children's maladjustment through a decrease in parental involvement and attentiveness.

Financial arguments are one of the most frequently occurring conflicts in marriages. On average, lack of finance in a family has a stronger, longer lasting, and predicts marital discord better than other types of marital conflict [11] In spite of these findings, few studies have investigated the predictors of financial arguments. Marital conflicts exist in many marriages because many couples cannot manage conflict in such a way that will strengthen their marriage [12]. It is important to find ways to equip couples with conflict management skills to curb the effects of many escalated conflicts like fighting among couples, abuse of one another, separation and divorce as a result of conflict, and murder which is the end result of escalated conflict. According to [13], incessant conflicts result in broken homes, which consequently breed criminals and juvenile delinquents in society. Children from broken homes also experience educational backwardness and sometimes drop out of school because they cannot cope with conflict at home and academic challenges. When the home or the family is confused and bedevilled by interpersonal conflicts, you do not expect children to develop sound personalities due to family socialization at home. How couples handle conflict in their relationship affects the strength and type of relationship a couple may have. Conflict may have the power to destroy a relationship when not well managed or build a marriage when properly managed. This makes it essential for married couples to know how to manage marital conflict effectively.

The newly married couple could better express their experiences based on different variables, it should therefore be noted that among such variables that could account for marital conflict among this category of people include; educational qualification, employment status, and age at marriage. The number of children is associated with attitude toward wife battering, religious affiliation, number of unions, and type of earnings for work are predictors of holding on to mixed views about wife battering. When there is a wide educational gap between spouses, their approaches to life will be at variance a problem may arise as the less educated person may be more superstitious, traditional, or conservative and there may be difficulty in reasoning together when these disparities exist in wedlock it is often difficult to maintain peace and stability. This study aim to investigate factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State.

1.1 Purpose of the Study

The main purpose of this study was to investigate factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State: The study also sought to know whether the variables of gender, age, and educational qualification would influence factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State.

1.2 Research Question

What are the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State?

2 METHODS

This research gives a detailed procedure for conducting the research work. It presents the methods of investigation and development of the instrument to be used which involves research design, population, sample and sampling procedure, the instrument as well as its psychometric properties, the methods of administration and data collection, scoring of the instrument, and method of data analysis.

2.1 Research Design

The research design adopted for this study is the descriptive survey method. It also focuses attention on the people; their beliefs, opinions, perceptions, motivation attitudes, and behaviours.

2.2 Population, Sample and Sampling Procedure

The sample is a fair representative group selected from the target population and the sampling procedure is a systematic process employed to select a required proportion of the target population. Based on the population of the study, random sampling was used to select 200 respondents from public places in the Ilorin metropolis.

2.3 Instrumentation

Instrumentation is a way of developing measuring devices and methods for gathering data in educational research. The instrument that was used in collecting useful information for this study is a questionnaire entitled "Factors Responsible for Marital Conflicts Questionnaire (FRMCQ) which was designed by the researcher.

The instrument has two sections namely: Section A dealt with demographic data and B focused on factors responsible for marital conflicts.

2.4 Psychometric Properties of the Instrument

The psychometric property is determined by establishing the validity and reliability of the instrument.

2.5 Procedure for Instrument Administration and Data

The questionnaire was administered by the researcher. In the process, the researcher first seeks their informed consent in order to abide by ethical rules.

2.5.1 Procedure for scoring the instrument

The questionnaire items were scored based on the format of each of the section.

Section 'A' was scored using frequency counts and percentages. While

Section B with 20 items was scored using four Likert-type rating scales as follows:

Strongly Agree (SA) means 4 Points; Agree (A) means 3 Points; Disagree (D) means 2 Points; Strongly Disagree (SD) means 1 Point

2.5.2 Method of Data Analysis

The data generated was analyzed using appropriate statistical analysis, thus percentages and mean scores were used to analyze the data obtained from the demographic section and the main research question. The t-test and Analysis of Variance (ANOVA) were used to test the research hypotheses. All hypotheses were tested at 0.05 alpha level.

3 RESULTS

This research presents the result of the study. The data collected were analyzed using both descriptive and inferential statistics. For the demographic data; percentages were employed, the major research questions were answered using mean and rank order analysis, while t-test and Analysis of Variance (ANOVA) statistical tools were adopted to analyze the hypotheses at 0.05 level of significance.

3.1 Demographic Data Analyses

This section presents the results of data obtained on the respondents in frequency counts and percentages.

Table 1 Percentage Distribution of Respondents Based on Gender

Gender	Frequency	Percentage
--------	-----------	------------

Male	100	50.0
Female	100	50.0
Total	200	100

Table 1 presents the percentage distribution of respondents based on gender. The table shows the distribution of respondents by gender, the table shows that 100 (50.0%) of the respondents were male and female respectively.

Table 2 Percentage Distribution of Respondents based on Age

Age	Frequency	Percentage
18-23 Years	58	29.0
24-30 Years	64	32.0
31 Years & above	78	39.0
Total	200	100

Table 2 presents the percentage distribution of respondents based on age. The table indicates that 58 (29.0%) of the respondents are between 18-23 years, 64 (32.0%) of the respondents are between 24-30 years and 78 (39.0%) of the respondents are between 31 years and above.

Table 3 Percentage Distribution of Respondents Based on Educational Qualification

Edu. Qual.	Frequency	Percentage
SSCE	28	14.0
NCE/OND	62	31.0
First Degree/HND	95	47.5
Postgraduate	15	7.5
Total	200	100

Table 3 presents the percentage distribution of respondents based on educational qualification. the table shows that 28 (14.0%) of the respondents were SSCE holders, 62 (31.0%) of the respondents were NCE/OND holders, 95 (47.5%) of the respondents were first degree/HND holders and 15 (7.5%) of the respondents were postgraduate degree holders.

Research Question: What are the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State?

Table 4 Mean and Rank Order on the Respondents' Expression on Factors Responsible for Marital Conflicts

Item No.	As far as I am concerned, the following are factors responsible for marital conflicts:	Mean	Rank
9	friend's interference into the marital affairs of the couple	3.62	1 st
13	poor home background of either spouse	3.56	2 nd
10	lack of parenting skills	3.26	3 rd
5	inability to satisfy the sexual demands of the spouse.	3.11	4 th
14	lack of proper guidance before marriage	3.10	5 th
1	poor communication between couples	3.03	6 th
6	infidelity on the part of the couples	2.87	7 th
2	immature age at marriage	2.86	8 th
7	interference by in-laws in family matters	2.73	9 th
11	inability of the wife to conceive within a reasonable period of time	2.60	10 th
12	jealousy between spouses	2.55	11 th
3	ignorance of individual differences	2.53	12 th
8	marrying outside one's cultural boundary	2.52	13 th
19	disagreement on number of children	2.51	14 th
20	substance abuse by either of the couple	2.50	15 th
4	noticeable gap in educational attainment	2.50	15 th
16	inadequate knowledge of conflict resolution in marriage	2.47	17 th
17	disagreement on family menu	2.31	18 th
18	disagreement of financial obligation	2.25	19 th
15	disagreement on religious matters	2.14	20 th

Table 4 presents the mean and rank order of respondents' expressions on factors responsible for marital conflicts among newly married couples. The result in the table revealed that item 9 which states that friends interfere in the marital affairs of the couple was ranked 1st with a mean score of 3.62, item 13 which states that the poor home background of either spouse was ranked 2nd with a mean score of 3.56, and item 10 which states that lack of parenting skills was ranked 3rd with a mean score of 3.26. On the other end, item 17 which states that disagreement on the family menu was ranked 18th with a mean score of 2.31, item 18 which states that disagreement of financial obligation was ranked 19th with a mean score of 2.25, and item 15 which states that disagreement on religious matters was ranked 20th with a mean score of 2.14. The table indicates that most of the items have mean scores that are above the mid-cut-off point of 2.50; this indicates that the respondents attested to factors responsible for marital conflicts among newly married couples listed above.

3.2 Hypotheses Testing

Three null hypotheses were postulated and tested for this study. The hypotheses were tested using t-test and ANOVA statistical methods at 0.05 level of significance.

3.2.1 Hypothesis one

There is no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on gender.

Table 5 Mean, Standard Deviation and T-value on the Respondents' Expression of Factors Responsible for Marital Conflicts based on Gender

Gender	N	Mean	SD	df	Cal. t-value	Crit. t-value	p-value
Male	100	40.85	2.61	198	0.97	1.96	.336
Female	100	41.21	2.52				

Table 5 indicates that the calculated t-value of 0.97 is less than the critical t-value of 1.96 with a corresponding p-value of .336 which is greater than 0.05 level of significance. Since the calculated t-value is less than the critical t-value, the hypothesis which states that there is no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on gender is therefore not rejected.

3.2.2 Hypothesis two

There is no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on age.

Table 6 Analysis of Variance (ANOVA) showing the Respondents' Expression on Factors Responsible for Marital Conflicts based on Age

Source	SS	Mean Squares	Df	Cal. F-ratio	Crit. F-ratio	P-value
Between Groups	7.941	3.971	2	0.61	3.00	.546
Within Groups	1288.779	6.542	197			
Total	1296.720		199			

Table 6 indicates that the calculated F-ratio of 0.61 is less than the critical F-ratio of 3.00 with a corresponding p-value of .546 which is less than 0.05 level of significance. Since the calculated F-ratio is less than the critical F-ratio, the null hypothesis is therefore not rejected; thus, there is no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on age is therefore not rejected.

3.2.3 Hypothesis three

There is no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on educational qualification.

Table 7 Analysis of Variance (ANOVA) showing the Respondents' Expression on Factors Responsible for Marital Conflicts based on Educational Qualification

Source	SS	Mean Squares	Df	Cal.F-ratio	Crit.F-ratio	P-value
Between Groups	12.361	3.971	3	1.48	2.60	.421
Within Groups	1284.359	6.542	196			
Total	1296.720		199			

Table 7 indicates that the calculated F-ratio of 1.48 is less than the critical F-ratio of 2.60 with a corresponding p-value of .421 which is less than 0.05 level of significance. Since the calculated F-ratio is less than the critical F-ratio, the null hypothesis is therefore not rejected; thus, there is no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on educational qualification is therefore not rejected.

4 DISCUSSION

The study revealed that the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State are friend's interference in the marital affairs of the couple, poor home background of either spouse and lack of parenting skills among others. The findings were in line with Ani [2] who stressed that crises are crucial times, the turning point in a marriage, that is a decision moment that varies from person to person according to individual experiences and the way people view situations. Stressed couples may suffer inadequate experience on the dimensions of marital conflicts and therefore result in physical attacks in which the husbands in most cases exercise masculinity to perpetrate wife battering. The extent of such assault will define the enormity of wife battering perpetrated.

Another finding revealed that there was no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on gender. This was supported who stressed the lifetime pattern of intimate partner violence in women and its association with gender, age, education, and living in rural vs. urban areas.

Findings also revealed that there was no significant difference in the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on age. This was in line with that about 50% of women have been battered by their husbands. Shockingly, women within the first 10 years of marriage (newly married) accounted for 65% against 35% of the older. The findings corroborated those who opined that all hostile acts committed by any family member against another, spouse, parents, child, siblings, grandparents, in-laws, etc, differ in status, race, age, religion, or emotional state.

Another finding revealed that there was no significant difference in factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on educational qualification. This was corroborated by those who posited that when there is a wide educational gap between spouses, their approaches to life will be at variance a problem may arise as the less educated person may be more superstitious, traditional, or conservative and there may be difficulty in reasoning together and when these disparities exist in wedlock it is often difficult to maintain peace and stability. Many studies have revealed a negative relationship between the education of both partners and intimate partner violence.

5 CONCLUSION

The study investigated factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State. The study revealed that the factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State are friends' interference in the marital affairs of the couple, poor home background of either spouse, and lack of parenting skills among others. Also, there were no significant differences in factors responsible for marital conflicts among newly married couples in Ilorin, Kwara State based on gender, age, and educational qualification.

6 RECOMMENDATIONS

Based on the findings of this study, it is recommended that:

- i. Counsellors in collaboration with other agencies should set up campaigns on the need to prevent marital conflicts particularly denying wives the right to interact with friends, financial starvation, use of derogatory words on the wives, and inflicting physical injury (assault) and others.
- ii. The government and stakeholders in society should establish counselling centers in strategic locations where couples can be educated on different patterns of marital conflicts and how to prevent perpetrating them.
- iii. Counsellors and other agencies should synergize to educate couples on how to get committed, avoid conflicting on the issue of fertility, and develop a lasting attraction to their wives in order to prevent domestic violence.
- iv. While sensitizing society on factors responsible for marital conflicts, special attention should be paid to the educational qualification of the individuals because this could bring variation in their preparation.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Vincent-Osaghae G. Marriage and the Nigerian family. In Idahosa, S. Nigerian peoples and culture. (Benin: Benson Idahosa University. G.S.T. Unit), 2017.
- [2] Ani D M. Failed marriage crises in Nigeria: A case study of married indigenes of Benin City. Unpublished thesis, University of Benin, 2019.
- [3] Rubio J H. A Christian theology of marriage and family. Paulist Press, 2013.
- [4] Ezeokoli R N. An empirical assessment of the utilization of voluntary counselling and testing services among university students. Babcock University Journal of Education (BUJED), 2015, 3: 23-31.

- [5] Grych JH, Fincham FD. Inter-parental conflict and child development: Theory, research, and applications. New York: Cambridge University Press, 2011.
- [6] White JM, Klein DM. Family theories (2nd ed.). California: Sage, 2012.
- [7] Whiteman SD, McHale SM, Crouter AC. Longitudinal changes in marital relationships: The role of offsprings pubertal development. *Journal of Marriage and Family*, 2007, 69: 1005-1020.
- [8] Onyechi K C. Some correlates of family stability among couples in Anambra State. Unpublished Ph.D. Thesis. Department of Educational Foundations. University of Nigeria, Nsukka, 2013.
- [9] Chris M H, Tekin E. The impact of child care subsidies on child well being: evidence from geographic variation in the distance to social service agencies (working paper, National Bureau of Economic Research, Cambridge, MA, 2010, August.
- [10] Dew J P, Dakin J. Financial disagreements and marital conflict tactics. *Journal of Financial Therapy*, 2011, 2(1): 2342.
- [11] Eva Melis, Victoria Esquivel-Korsiak. Engaging citizens through mediation in Kaduna State, Nigeria. the World Bank, IBRD-IDA, 2016.
- [12] Samani S. The important factors of marital conflict between married students in Shiraz University. *Journal of Family Research*, 2008, 3(3): 657–68.
- [13] Okorie G O. Relationship between personal factors and marital conflict resolution strategies among married people in Enugu State, Nigeria. A thesis submitted to the Department of Guidance and Counselling Unit Faculty of Education, University of Nigeria Nsukka, 2009.

ATTITUDES AND SOCIAL RESEARCH DISPOSITION AMONG ACADEMIC IN NIGERIA

Inioluwa Racheal Ogungbemi^{1*}, Samson Remi Ajiboye², Ayodele Bamidele Ogungbemi³

¹*Department of Counsellor Education, Faculty of Education, University of Ilorin, Nigeria.*

²*Department of Social Sciences, School of Liberal Studies, Yaba College of Technology, Yaba, Lagos Nigeria.*

³*Department of Economics, College of Social and Management Sciences, Tai Solarin University of Education, Nigeria.*

Corresponding Author: Inioluwa Racheal Ogungbemi, Email: Inioluwaajiboye74@gmail.com

Abstract: An empirical study on attitudes and social research disposition among academics (lecturers) in Nigeria was carried out to find out the impacts of attitudes on levels of disposition to social research among academics. The objectives of this study are to; analyze the impacts of flexible attitudes on academics; examine the impacts of inflexible attitudes on academics; and find out the level of impact differences among academics. Two hypothetical statements were made which are, (i) there will be a significant difference between the impacts of flexible attitudes and inflexible attitudes among academics, and (ii) academics with flexible attitudes will have a high level of disposition to social research. A survey design was used to carry out the study in which a sample was drawn from the population of the study through a simple random sampling technique. A total of 200 respondents were given a questionnaire of 30 items to elicit their responses. Four institutions of higher learning were involved: Lagos State University, Adeniran Ogunsanya University of Education, Yaba College of Technology, and the University of Lagos. Descriptive and inferential statistics were used to analyze data from the respondents' findings the results of the data analysis show that respondents from Yabatech (X₃) and AQUE (X₂) are more homogenous than the respondents from LASU (X₁) and Unilag (X₄) who are heterogeneous. More respondents have inflexible attitudes than others who have flexible attitudes. In all only about 25% of the lecturers are disposed to social research meaning that the majority of the lecturers are not research-oriented. There are significant differences between the impacts of flexible and inflexible attitudes among academics. The staff of Yaba College of Technology are more disposed to social research than their colleagues from other institutions. Consideration of participant size and the number of institutions will be of high value for research on disposition to social research and the impacts of attitudes.

Keywords: Flexible; Inflexible; Disposition; Comparative registry and research

1 INTRODUCTION

Several research studies are critical to both knowledge advancement and industrial growth in every human society. Academics are to develop social concepts and theories that could be transformed into practical purposes hopefully for industrial growth and development. Sustainable development is equally a function of social research studies to a very large extent. In light of the above attitudes of academics are critical to the levels of social research studies among academics. Academics as researchers are supposed to be seeing forming attitudes that increase their levels of disposition to research throughout their career periods. Some of the challenges facing academic institutions and economic sectors of Nigeria are the cases of low-level research capacity among academics, low level of funding for social research needs, low level of government (local, state, and Federal) interest in research, and low level of financial power by the individual researcher.

Attitudes obviously play significant roles in an individual's thoughts, feelings, and actions on any subject of consideration. It is a confirmed position that people who exhibit less openness and receptivity to ongoing thoughts and feelings exhibit activation in limbic system structures when they rapidly label thoughts and feelings as either negative or positive [1]. Attitude has to do with a mental or emotional disposition towards something. Attitude could be defined as the tendency to respond to a phenomenon positively or negatively in a consistent and evaluative manner. A positive attitude is optimistic, enthusiastic, and supportive. Negative attitudes are pessimistic critical and resistant. Meanwhile, a neutral attitude is indifferent, important, and unemotional. Attitude can influence behavior, perceptions, relationships, decision-making, and well-being. Attitude can be changed and developed through self-awareness, experience, influence, practice, and mindfulness. Research disposition in this study has to do with attitudes, values, and benefits that individuals hold towards research and the research process and orientation. For the purpose of this study, two types of attitudes are considered. The two types of attitudes are flexible attitude and inflexible attitude or open-minded and close-minded respectively.

Flexible attitude refers to being adaptable, open-minded, and willing to adjust to new or changing situations, ideas, or perspectives. Flexible is a personality trait that describes the extent to which a person can cope with changes in circumstances and thinking about problems and tasks in novel, creative ways. With a flexible attitude, an individual is within to acknowledge and explore different ideas, cultures, perspectives, and concepts. The benefits of a flexible attitude are improved problem-solving, enhanced relationships, increased productivity, better stress management, and personal growth. An inflexible attitude refers to an individual who is not open to new ideas experiences, or perspectives. This individual tends to be stubborn, rigid, and resistant to change, often dismissing or reflecting information that

contradicts his beliefs or values. This individual is intolerant of other's beliefs or values, refuses to listen to opposing viewpoints, is highly defensive, and believes that his ideas or beliefs are always right and unquestionable. Emotions associated with an inflexible attitude are arrogance, ignorance, stubbornness, fear of the unknown, prejudice, and resistance to change.

1.1 Purpose of the Study

The purpose of this study is to find out which of these two types of attitudes (flexible and inflexible) is common and academics and the impact on their level of social research disposition in Nigeria.

1.2 Research Objectives

The specific objectives of this empirical study will be to analyze the impact of flexible attitudes on academics; examine the impact of inflexible attitudes on academics find out the level of impact difference among academic's hypothetical statements for this study:

- a. There will be a significant difference between the impacts of flexible attitudes and inflexible attitudes among academics.
- b. Academics with flexible attitudes will have a high-level disposition to social research.

2 LITERATURE REVIEW

The literature review is done through a conceptual framework, theoretical framework, and comparative analysis of the past work done by well-known authors globally

There are several ways in which being inflexible could have effects on relationships. Inflexible people struggle to see other people's perspectives and may dismiss or belittle their ideas or opinions inflexible individuals struggle to form deep connections with others as they are less likely to be open to new experiences. A flexible attitude in the workplace facilitates learning and connection-building, reduces conflict, and boosts professional image. Flexible individuals are characterized by curiosity, humility, the ability to provide constructive criticism, empathy, and fairness in treating everyone's ideas as valuable. Positive emotions and thoughts, strengths, and the satisfaction of basic psychological needs for belonging, competence, and autonomy have been the cornerstone of psychological health. Exact formulas for health have surfaced with an ideal ratio of at least three positives to each negative experience and substantial problems exist when there is a ratio of more than two negatives to each positive experience [2].

There is work suggesting that the key to psychological health, and sustainable well-being is commitment to meaningful challenges that accord with a person's self-concept and varied life domains [3,4]. Considering the links between flexibility and health as well as evidence that an absence of flexibility is linked to certain variants of psychopathology is paramount. These psychological processes span cognitive rigidities such as rumination and worry [5]. Stressful life experiences have a significant influence and individual functioning, which may result in anxiety, confusion, withdrawal, depression, and heightened vulnerability [6]. In respect of the above, vulnerability means that some people are more affected by stressful life events than others [7]. Researchers found that psychological vulnerability was positively associated with anxiety stress [8], self-alienation [9], and social vulnerability [10]. On the contrary, psychological vulnerability had negative correlations with social competence, mindfulness, insight, and resilience factors like social support, and self-efficacy [11,12,13]. Experimental and daily diary research There are impressive longitudinal studies of ego-resilience from childhood to adulthood [14]. A series of studies by Rottenberg, and colleagues has revealed a more complex pattern in depression, with this disorder associated with lower resting [15].

Flexibility refers to several dynamic processes that unfold over time. This could be reflected by how a person; (i) adapts to fluctuating situational demands, (ii) reconfigures mental resources, (iii) shifts perspective, and (iii) balances competing desires needs, and life domains.

3 METHODOLOGY

A survey design was used in this study in which the population of the study is academics (lecturers) from higher institutions of learning in Nigeria. The four institutions in which the sample was selected are all located in Lagos, South West, Nigeria. A questionnaire was designed along the Likert scale of 30 items reflecting the two independent variables (flexible attitude and inflexible attitude). 50 respondents were randomly selected from each of the four universities. A total of 200 respondents from the four higher institutions of learning were contacted with the questionnaire for their responses on all the items of the questionnaire. Lagos State University (LASU), Adeniran Ogunsanya University of Education (AOUE), Yaba College of Technology (Yabatech), and University of Lagos (Unilag).

Statistical tools used for data analysis are descriptive statistics (measures of central tendency and percentages and t-test analysis for the level of difference between two means.

Key: LASU (X₁), AOUE (X₂), Yabatech (X₃) and Unilag (X₄)

The questionnaire was designed on a scale of Strongly Agree (SA) 3 points, agree (A) 2 points, and Disagree (D) 1 point.

4 DISCUSSION

Discussion is based on the measure of central tendency table, descriptive analysis table, table of difference, and the hypotheses stated under the introduction.

Table 1 Measures of Central Tendency

Statistics Institutions	\bar{X}	Md	Mo
LASU (x_1)	2.3	2	3
AOUE (x_2)	1.6	2	2
Yabatech (x_3)	2.5	3	3
Unilag (x_4)	2.4	2	3

From the above table 1, respondents from LASU show a heterogeneous group in which each of the respondents has divergent opinions on social research disposition. However, respondents from their remaining three institutions show a homogenous group in which they have similar views on social research disposition.

The majority of the respondents are of the view that attitude types have a significant impact on the levels of social research disposition.

From the above table, academics from Yaba College of Technology and the University of Lagos are disposed to social research because the majority of them are in support of flexible attitude as a major factor of consideration when we talk of social research disposition.

Table 2 Descriptive Analysis Table

Statistics Institutions	$\sum x$	n	\bar{X}	$\sum x^2$	$(\sum x)^2$	%
LASU (x_1)	115	50	2.3	295	13225	26
AOUE (x_2)	80	50	1.6	150	6400	18
Yabatech (x_3)	125	50	2.5	335	15625	29
Unilag (x_4)	120	50	2.4	310	14400	27

From table 2 results of the analysis majority of the respondents are individuals with inflexible attitudes translating into saying that they are close-minded individuals who are open to new ideas, experiences, or perspectives. These individuals tend to be stubborn, rigid, and resistant to change, often dismissing or rejecting information that contradicts their beliefs or values. Only 26% from LASU, 18% from AOUE, 29% from Yabatech, and 27% from Unilag have flexible attitudes thus the level of their disposition to social research. These individuals who are favorably disposed to social research are willing to acknowledge and explore different ideas, cultures, perspectives, and concepts. This position is a testimony to the lower number of lecturers than indeed researchers.

The above result supports hypothesis two that says: academics with flexible attitudes will have a high level of disposition to social research. Although they are in lower percentages they confirmed the qualities of social researchers in our higher institutions of learning. People who exhibit less openness and receptivity to ongoing thoughts and feelings (low mindfulness) exhibit activation in limbic system structures when they rapidly label thoughts and feelings as either negative or positive. It takes an individual with a flexible attitude to be emotionally interested in social research.

Table 3 Table of Differences between Groups

Statistics Institutions	n	\bar{X}	α	t-cal	t-tab	Remarks
LASU (x_1) Vs AOUE (x_2)	50	2.3	0.05	4.781	2.785	Significant difference
AOUE (x_2) Vs. Yabatech (x_3)	50	1.6	0.05	6.667	2.785	Significant difference
AOUE (x_2) Vs Unilag (x_4)	50	2.5	0.05	5.970	2.785	Significant difference
Unilag (x_4) Vs LASU (x_1)	50	2.4	0.05	1.359	2.785	No Significant difference
LASU (x_1) Vs Unilag (x_4)	50	2.3	0.05	0.683	2.785	No Significant difference
Yabatech (x_3) Vs Unilag (x_4)	50	2.5	0.05	0.741	2.785	No Significant difference

From the table 3 above there are significant differences between AOUE and other institutions. This shows that there is a wide gap between academics with flexible attitudes from the remaining institutions against those from Adeniran Ogunsanya University of Education.

In other words, we have more researchers from Yabatech, LASU, and Unilag than we have in AOUE. The differences among LASU, Yabatech, and Unilag are not significant in translating into sources they almost equal number of academics that have flexible attitudes with a high-level disposition to social research. This position is in line with hypothesis two which says there will be a significant difference between the impacts of flexible attitudes and inflexible attitudes among academics.

Findings from this study show clearly that:

- a. Majority of academics (lecturers) have inflexible attitudes;
- b. We have a lower number of academics who are of a high disposition to social research
- c. A smaller number of academics (lecturers) have a flexible attitude
- d. The academic staff of Yaba College of Technology are more disposed to social research than their course sorts from other institutions.

This study can be replicated by increasing the number of participants and more institutions. The findings of academics on attitude formulation and change are of the essence to performance on the job and commitment to research activities.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Creswell JD, Way BM. Eisenberg N I, et al. Neural correlates of dispositional mindfulness during affect labeling. *Psychosomatic Medicine*, 2007, 69: 560 – 565.
- [2] Fredrickson BI, Losada M F. Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 2005, 60: 678 – 687.
- [3] Csikszentmihalyi M. *Flows: The psychology of optimal experience*. Harpear Row; New York, 1990.
- [4] Vallerand R J. On obsessive and harmonious passion. *Journal of personality and social psychology*, 2003, 85: 756 – 767.
- [5] Nolen – Hoeksema S, Wisco BF, Lyubomirsky S. Rethinking rumination. *Perspectives on Psychological Science*, 2008, 3: 400 – 424.
- [6] McDonnell S, Semkovska M. Resilience as a mediator between extraversion, neuroticism and depressive symptoms in University Students. *Journal of Positive Psychology and Well-being*, 2020, 4(1): 26-40.
- [7] Levine C. The concept of vulnerability in disaster research. *Journal of Traumatic Stress*, 2004, 17(5): 395-402.
- [8] Cox B J, Enns M W, Walker JR, et al. Psychological vulnerabilities in patients with major depression vs. panic disorder. *Behaviour Research and Therapy*, 2001.
- [9] Satici S A, Kayis A R, Akin A. A Predictive role of authenticity on psychological vulnerability in Turkish university students. *Psychological Reports*, 2013, 112(2): 519-528.
- [10] Shenk C E, Putnam F W, Rausch T R, et al. A longitudinal study of several potential mediators of the relationship between child maltreatment and posttraumatic stress disorder symptoms. *Development and Psychopathology*, 2014, 26(1): 81-91.
- [11] Akin U. The predictive role of self-compassion on psychological vulnerability in Turkish University Students *International Journal of Social Sciences and Education*, 2014, 3: 693-701.
- [12] Gruebner O, Lowe S R, Sampson L, et al. The geography of post-disaster mental health, spatial patterning of psychological vulnerability and resilience factors in New York City after Hurricane Sandy. *International Journal of Health Geographics*, 2015, 14 (1): 16.
- [13] Kiamarsi A, Abalghasem A. The relationship of procrastination and self-efficacy with psychological vulnerability in students. *Procedia – social and behavioral Sciences*, 2014, 124; 858 – 862.
- [14] Bond F W, Hayes S C, Baer R A, et al. Preliminary Psychometric Properties of the Acceptance and Questionnaire ii: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy*, 2011, 42(4):676-688.
- [15] Rottenberg J. Control in depression: A critical analysis. *Biological Psychology*, 2007, 4: 200– 211.

SOCIAL MEDIA AND PROTEST ON THE NIGERIA ECONOMY AND DEMOCRACY: A CASE STUDY OF END SARS AND BAD GOVERNANCE PROTEST

Nathan Udoinyang^{1*}, Osajie Justina Nwazuni²

¹*Department of Economics, Ignatius Ajuru University of Education, Rumuolumeni, Port Harcourt, Rivers State 500102 Nigeria.*

²*Department of Religion and Human Relations, University of Agbor, Delta State, 321281, Nigeria.*

Corresponding Author: Nathan Udoinyang, Email: nathannathanudoinyang@gmail.com

Abstract: This research explored the effects of social media and protests on the Nigerian economy and democracy, focusing on the #EndSARS and end bad governance protests. The study utilized primary and secondary data, with a sample size of 400 participants. The findings revealed numerous negative impacts, including decreased work hours, disruption of economic activities, spread of misinformation, reduced job-seeking efforts, weakened currency, and strained government resources. Social media and protests also led to division within Nigerian society, intimidation of opposing voices, threats to national unity, and erosion of democratic norms. The study emphasized the need for government regulations on social media, promotion of digital literacy, responsible online usage, addressing socio-economic issues driving protests, and fostering dialogue for democratic reforms. Overall, while acknowledging the benefits of social media, it warned against its negative impacts on the economic and political systems of a country and stressed the importance of mitigating these effects to maintain stability and progress.

Keywords: Democracy; Economy; End SARS; Governance; Protest; Social Media; Nigeria

1 INTRODUCTION

The ENDSARS protests that began on 3rd October 2020 were series of widespread, mass protests in Nigeria. The purpose of this protests was to ensure that the Federal Government of Nigeria enforce the end of police brutality, undue harassment and extortion meted against the masses, especially the youths in Nigeria. The dominant participants of these protests were the Nigerian youths from all walks of life. What ‘ordinarily’ started on Saturday, October 3, 2020, with a video showing a SARS police officer shooting a Nigerian youth in front of a hotel in Ughelli town, Delta State of Nigeria on the internet; and another report on Monday, October 5, 2020, of the same sect killing a 20-year-old upcoming musician in Woji town Port Harcourt City, Rivers State turned into an outrage by the youths. This was such that on Thursday, October 8, 2020, the most populous African nation was thrown into an unprecedented social unrest, represented by all manner of demonstrations, online activism, protests, civil disobedience, and many others. Though the Nigeria Police Force (NPF) attempted to disrupt these protests in some cities, the protests began to attract the sympathy of international community. This was as a result of the Nigerian youths in Diaspora and other nationals lent their unreserved voices in solidarity for the mass protests. Sadly, in about three weeks, the protests recorded the loss of lives by the various parties and destruction of inestimable properties. The spread of these protests was believed to have been facilitated by the internet, especially the social media. This is given the fact that the various social media platforms have tended to globalize the world, especially with the internet driven generation. Though these protests culminated in a remarkable success represented by the disbandment of the SARS unit of the NPF on Sunday, October 11, 2020, and the eventual setting up of panels of judicial inquiry for compensation and prosecution by various states. According to Aakash [1], he pointed out that these same social media platforms were also responsible for instilling fear, creating panic and inciting the unsuspecting, ignorant and gullible Nigerians into decisions and actions that endangered their lives and the corporate existence of Nigeria as a result of lies being spread and issues being over exaggerated. Advancement in technology brings major impacts on information management in a democratic rule. Many citizen reporters use social media for promotion, research work, interacting with the audience and reporting the affairs of the government. The use of social media as reporters brings a sense of belonging to their audience. It can bring the reporter closer to the people since the internet nature of communication is such that individuals are more likely to source information from each other rather than traditional news agencies. Thus, information dissemination has become decentralized and news reporting has become deregulated. Jost and Hipolit [2] observe that social media platforms reduce the influence of the elites and institutions, thus allowing wider public participation and greater interactivity. The Nigerian print media, which has always been in the forefront of the country’s political struggles before and after the country’s independence is experiencing a boost from citizen reporters who provide an alternative source of news to them, which had over the years suffered different forms of repression from successive Nigeria governments. Although citizen reporters do not contribute news directly to print media (but exclusively to digital media) the migration of most of Nigerian newspapers and magazines online and the ever increasing Nigerian citizen news websites have tremendously impacted the process on news delivery by the Nigerian print media [3]. Now the use of social media is not limited to discussing family events, and sharing photos and videos, it can actually create history and make a difference

in the real world. During the 2019 and 2023 general elections in Nigeria social media was used by the different political parties and their candidates to campaign for the citizens votes and sympathy. Journalists use social media to inform the public about the happenings of the elections through the various social media platforms that Nigerians in diasporas can access news about the elections as it unfolds. Social media brings us closer to government and the rest of the world at large. The press was instrumental to the attainment of Nigeria independence in 1960. At that time, the press was vocal but it still maintained decorum. The press was not using its power to run down any ethnic group against the other, it was fighting for the liberation of the oppressed. However, under the present democratic dispensation, the use of social media by the citizens calls for concern in comparison to the traditional media. With the social media, caution is thrown overboard on the extent of criticism that can be levelled against the government and the ruling political. On the 1st - 10th of August, 2024 Nigeria witness a nationwide protest from the youth which was tagged 'End Bad Governance'. The protest was triggered as a result of high cost of governance, hike in fuel price, increase in cost and standard of living, increase in the price of goods and service, corruption in government, unemployment, hunger etc. which were organized through the help of social media platform such as Facebook, WhatsApp, Twitter/X, Instagram, Telegram, Tiktok etc. which made it difficult for the government to identify the sponsors of the protest. Within those 10 days of protest in the country, economic activities were totally shut down nationwide just like it was done during the EndSars protest of 2020. Though no specific amount of money nor the actual evaluation of the worth of property lost during the Endsars protest but record shows that at least 51 civilians, 11 policemen, 7 soldiers lost their lives while properties, infrastructure and businesses worth billions of Nigeria currency was lost during the period of the protest. According to Centre for Promotion of Private Enterprise (CPPE), Nigeria lost about N400 billion worth of goods on a daily basis during the End bad governance protest of August 1st-10th, 2024. Could it be that the youth were angry with the way the NPF were handling matters relating to them or they are not comfortable with the economy situation of the nation and also how the political class are governing the country lackadaisically by spending the nation's money on irrelevant things and for personal/family usage. Based on these premise this study attempts to examine the impacts of social media and protest on the Nigeria economy and democracy using the endsars protests and end bad governance protest in Nigeria as a case study.

2 CONCEPTUAL CLARIFICATIONS

2.1 Social Media

Bailly [4] defined Social media as the means of interactions through web-based technology among people in which they create and exchange ideas and opinions in virtual communities and networks. The term 'social media' encompasses the various internet-based applications or platforms that enable people to communicate and disseminate information. These platforms include Facebook, WhatsApp, Twitter/X, Tiktok, YouTube Channels, Instagram, Blogs, and so on. These can be accessed with the use of electronic devices such as computers, smart phones, among others. Since the turn of the century, social media handles have made possible, the previously disconnected people, who had no systemic way of communicating their persuasions and agitations across nations of the world, to instantly share these perspectives of theirs. Lopes [5] noted that as a result of technological trend, the masses mostly the youths in particular now have increased ability to obtain information from the unique perspectives of others rather than relying solely on the existing media establishments such as Television Stations, Radio Stations, and Newspapers.

Hari [6] noted that the concept of social media generally refers to internet or web based tools, applications and services that enable users to engage with each another generate content, share and search for information online.

Kietzmann et al. [7] contend that social media leverages mobile and web-based technologies to create dynamic platforms where individuals and communities can share, co-create, discuss, and modify user generated content.

2.2 SARS

According to Amnesty International [8], the Special Anti-Robbery Squad (SARS) used to be a sub-unit of the Nigeria Police Force under the State Criminal Investigation and Intelligence Department (SCIID). Established in the early 1990s, SARS saddled with the responsibility of tracking, arresting, detaining, investigating and prosecuting armed robbers, kidnappers and other violent criminals

2.3 Democracy

According to Oxford Dictionary, democracy can be defined as a system of government in which the people of a country can vote to elect their representatives and are involved in making decisions about its affairs, typically by voting to elect representatives to a parliament or similar assembly.

Though in real democracy everybody must be allowed to participate in decision making (direct democracy). Democracy is generally defined as "the government of the people by the people and for the people. A government in which the supreme power is vested in the people and exercised by them directly or indirectly through a system of representation usually involving periodically held free elections. In any democracy, the press helps in actualizing and making known to the public, the affairs of the government by serving as the watchdog of the society.

3 THEORETICAL LITERATURE

3.1 Public Sphere Theory

This study is grounded in the public sphere theory, originally developed by German sociologist Jürgen Habermas in the 1980s. Habermas conceptualised the public sphere as a space between civil society and the state where individuals engage in critical discussions about issues of general interest. This sphere is characterised by open discourse, where people exercise their rights to free speech, association, assembly, and the dissemination of ideas without undue interference from political or economic powers. The advent of Web 2.0 has enabled non-experts to contribute to discussions, interact with diverse viewpoints, and garner support, thus reinforcing Habermas's theory. Given this background, amateurs gain a level of influence that was once the preserve of experts and professionals. Some scholars argue that this broadening of participation is particularly significant in political discourse and other societal issues. The public sphere theory is pertinent to this study as it elucidates how social media provides a platform for young people to engage in public debates about governance, particularly in the framework of EndSars and the August 2024 EndBadGovernance protests in Nigeria. Thus, the theory is instrumental in understanding how social media facilitates youth participation in discourse on the necessity for improved governance.

3.2 Technological determinism

The theory was coined by Thorstein Veblen, (1857-1929), an American sociologist and economist in the 20th century. It was further developed by Marshall McLuhan in 1964. Technological determinism explains how innovation in communication technology helps to engineer some forms of change in society or in the ordering of things. The core message of the theory is the effects technology has on people. Considering that technology shapes the way people think, feel, act, and how society operates. To this end, Baran and Davis assert that the theory is a collection of lots of intriguing ideas bound together by some common assumptions. The most central of these assumptions is that changes in communication technology inevitably produce changes in cultural, social, and political order within a society. For instance, the radio requires us to only listen and develop our sense of hearing, television engages both our audio and visual senses. On the other hand, social media engages not just our audio-visual senses. It induces people to participate in an ongoing discussion, and process irrespective of geography and time. This suggests that social networking platforms have revolutionised the way society operates by bringing about a paradigm shift in political behaviour at both individual and group levels. The point to note is that as information and communication technology develops from writing to print, television, computer, and presently social media, social interactions also change with it. The importance of technological determinism theory is that technology has effects on the society. The above assertion is true of social media in our present day; it has affected the lives of the people most especially the youths. Information and ideas on politics and social events are now shared freely on social media space. Again, geography is no longer a limitation when it comes to mobilisation for socio-political protests. Use of social media of various social networking sites and platforms such as Facebook, Twitter, Instagram, YouTube, WhatsApp, blogs, and so on, greatly conditions the actions, reactions, perception, and intentions of many youths. Most people today depend on social media platforms and networks for information, on trending issues. This provides sufficient opportunity for social media to condition and direct groups and individual minds and actions on issues.

3.3 Agenda Setting Theory

According to Zhu and Blood [9], the agenda theory “is the process whereby the media leads the public in assigning relative importance to various public issues”. This is because the action of the media is towards influencing people’s perception of what is important, acceptable, or desirable.

3.4 Media Dependency Theory

Media Dependency Theory Sandra Ball-Roach and Malvin De Fleur propounded dependency theory in 1976. The explanation of the relationship between the contents of the mass media, the nature of society, and the communication behaviour of the audiences is called dependency theory. People are dependent on the media for their information needs. People in all societies need information in order to make decisions about such matters as food, shelter, employment, transportation, political issues, entertainment, and other aspects of family life. In traditional societies, people tend to pursue similar ways of life and are linked by word of mouth networks of extended families, deeply established friendships long-term neighbours, and other social ties from which they obtain the information that they need. In urban industrialized societies, populations are composed of unlike people brought together through internal migrations and immigrants from outside. They are greatly differentiated by such factors as race, ethnicity, occupational specialization, and economic class and depend solely on information gotten from social media whether verified or not. This theory was used to explain people’s perception of what they can get from the media rather than what the media can get from them. Many people depend solely on the media to get news and gather information online rather than the traditional media.

3.5 Empirical Literature Review

Anthony and Edward [2] investigate the role of social media in mobilizing Nigerian youths during the #EndSARS Protests. This study investigates how Nigerian youth effectively utilized platforms like Facebook, X (Twitter), WhatsApp, and Instagram to organize and sustain their peaceful protests. By drawing insights from the strategic use of social media during the #EndSARS movement, we explore the impact on government decisions, security policies, and social discourse. Additionally, we consider the abrupt end of the protests and the implications for future social media activism. This research sheds light on the potential of youth-led social media movements to inspire change globally. The study found out that social media also played a key role in garnering international support and sympathy for the cause. Tweets and posts from celebrities, diplomats, and influencers worldwide helped amplify the message of the protestors. Also, the study highlights how social media was used to pressure the Nigerian government. By sharing graphic images and videos of SARS's brutality, protestors used social media to expose the unit's atrocities and force the government to act, despite initial resistance to their demands. The study reveals that social media played a crucial role in mobilizing and motivating young Nigerians to participate in the #EndSARS protests and also make young people felt compelled to take a more active role in fighting for and building a better Nigeria.

Sherman and Rivera [3] investigated "Social Media Use and Pathways to Protest Participation: Evidence from the 2019 Chilean Social Outburst." This study hypothesised that individuals who use social media for political purposes are more likely to engage in protests compared to those who use social media for other reasons. Employing a survey research method, data were collected from 1,000 respondents. The findings indicated that Facebook was the predominant platform used by respondents to participate in protests. The study also highlighted a strong correlation between political activity on social media and protest participation, whereas using social media for information gathering or sharing common interests did not show the same level of impact. The also study explored the indirect effects of social media on protest participation through interpersonal conversations, revealing that Instagram, widely used among young Chileans, facilitated discussions on personal issues, which in turn increased protest participation. The study concluded that social media remains a powerful force in shaping political behaviour and activism despite evolving patterns of use.

Chiamogu [4] conducted an investigation titled "Social Media and Group Consciousness in Nigeria: Appraising the Prevalence of Socio-Political Protests". This study focused on prominent Nigerian protests, including #BringBackOurGirls, #RevolutionNow, and #EndSars. Employing a qualitative research design and secondary data sources, the researchers applied social movement theory to frame their analysis. The findings indicated that prolonged marginalisation and lack of accountability among certain societal groups led to the emergence of social media-driven movements. The study highlighted that social media platforms facilitated the organisation of groups expressing discontent and advocating for change. The authors concluded that social media was instrumental in mobilising people, fostering political consciousness, and driving protests against poor governance. They recommended continued use of social media for demonstrations, campaigns, and holding government officials accountable.

Usman and Oghuvbu [10] investigate the impact of the media on the Endsars protests in Nigeria. These protest were targeted at the Federal Government of Nigeria to enforce the end of police brutality, undue harassment and extortion meted against the masses, especially on the Nigerian youths. The protests were carried out in some parts of the country, especially the major cities and abroad. Many scholars and commentators believe that these protests were facilitated by the social media. The study however, was an attempt to critically examine the impacts of social media on the protest. To do this, the study relied mainly on secondary sources, such as journal articles, newspapers, news magazines and commentaries. Owing to the nature of the development, it was appropriate to deploy the analytic method of historical reconstruction. The study discovered that while social media cannot be dismissed to have been utilized at some point in mobilizing the protesters and creating international awareness as to the state of the nation, the (social media platforms) created more panic in the society and tended to be more divisive and destructive due to fake, unverified and amateur presentation of information and over exaggeration of situations. The study therefore concludes that Nigerian youths could have been sponsored by ambitious politicians and that is why the Nigerian government needs to address the issues of concern, it also behoves on it to enforce strictly, the extant rules and regulations guiding what goes into the air.

Babaleye et. al [11] examine the influence of social media on democratic governance in Nigeria. This article examines the role played by the social media to enhance democratic rule in the country. A population of 200 respondents from both staff and students of Ekiti State University, Ado-Ekiti was used to gather data. The article was framed on the uses and gratification and dependency theories. The Survey research method was used to determine the influence of social media on democratic rule in Nigeria. It was found that majority of respondents (95%) believed that social media, in spite of their excesses play positive roles to ensure and enhance durable democracy in Nigeria. From the related literature reviewed, many scholars have talked about various protest in Nigeria but fail to look at the economic and democratic implication of these protest in Nigeria. Based on these premise this study attempts to examine the impacts of social media and protest on the Nigeria economy and democracy using the endsars protests and end bad governance protest in Nigeria as a case study.

4 Methodology

This paper aim to investigate the impacts of social media and protest on the Nigeria economy and democracy using the endsars protests and end bad governance protest in Nigeria as a case study. This study adopted survey method to examine the impacts of social media and protest on the Nigeria economy and democracy using the endsars protests and end bad governance protest in Nigeria. Primary and secondary data were used in the research. The population of this study includes the entire population of Nigeria. Its total population was estimated at 140,003,542 according to 2006

census, while National bureau of Statistics estimates it to be 221,769,883 by the third quarter of 2023. Through the use of Taro Yamane formula, a sample size of 400 was generated and distributed of which 331 of the distributed questionnaire returned. The research instrument used in this study is a closed self-administered questionnaire titled Social Media and Protest on Nigeria Economy and Democracy (S.M.P.N.E.D). It allows the researchers to access important information for the study. Data are presented using descriptive statistics tools such as tables, and percentages. On the other hand, the research questions were analysed using 5 Likert scale, mean and standard deviation for descriptive statistics, Cronbach alpha method was used to determine the reliability coefficient of the instrument after which Social Science Statistical Software (SPSS) was employed. The research questions were analysed on a mean scale of 3.0; A total score below 3.0 indicated that the participant disagreed with the research question, while a total score above 3.0 indicated that the participant agreed with the research questions. Purposive sampling techniques were used in the study. To be clear, the sample size of 400 will be distributed to a state per region in Nigeria [North (Kano), South (Port Harcourt), East (Anambra) and West (Lagos)]. Purposive sampling was chosen for use in this study because it provides a nonprobability of sample selected based on characteristics present in specific populations and across the study practices. It can also help researchers identify common misconceptions within each group.

4.1 Data Presentation and Analysis

The data was presented based on the research objectives. Primary and secondary data were reviewed and questionnaire was distributed based on region, state, specific demographic characteristics such as age, gender, status and all other demographic variables are calculated using percentages.

Table 1 Regional, State and LGA Distributions of the Questionnaires

Region	No. of State in Region	Names of State Selected	No. of Questionnaires Distributed	No. of Questionnaires Returned
North	18	Kano	100	79
South	6	Rivers	100	9
East	5	Anambra	100	85
West	7	Lagos	100	82
			400	336

Source: authors compilation (2024)

Table 2 Respondents Socio-Demographic Characteristics

Socio-Demographic Characteristics	Frequency	Percentage
Gender		
Male	197	58.6
Female	139	41.4
Total	336	100
Status		
Single	215	64.0
Married	121	36.0
Total	336	100
Age Range		
20-30 years	145	43.1
31-40 years	105	31.3
41-50 years	86	25.6
Total	336	100
Highest Educational Qualification		
FSLC/WAEC	96	28.5
NCE/ND	74	22.0
HND/BSC	104	31.0
MSC/PHD	62	18.5
Total	336	100
Total	336	100

Source: Authors Survey, 2024.

In Table 1 and 2, we can see the details of the regional and state distribution of the population. The population was distributed equally (100) to each region which a state was selected from each of these region. Among the 336 respondents, the majority are single accounted for 64.0% of the total. The gender distribution is 139 females (41.4% of the total) and 197 males (58.6% of the total). In terms of age, most respondents are over 20-40years of age; Similarly, when asked about their educational status, the highest respondents have HND/BSC (31.0%) and the lowest respondents have MSC/PHD.

4.2 Data Analysis

In order to determine the appropriateness of the research questions, the data of this study are presented and analysed below using standard deviation, SPSS software and Crombach alpha correlation test of 0.05 coefficient level.

4.3 Research Question

What are the impacts of social media and protest on the Nigeria economy?

Table 3 Respondents' Views on the Impact of Social Media and Protest on the Nigeria Economy

S/N	Factors	Mean	Standard Deviation	Decision
1	Social media lead to cybercrime and online fraud.	4.2	3.8	Agreed
2	Excessive usage of social media decrease work hours and productivity.	4.1	3.5	Agreed
3	Disruption of economic activities.	3.6	3.4	Agreed
4	Protests result to destruction of public and private infrastructure.	3.3	3.7	Agreed
5	The use of social media lead to the spread of misinformation, fake news and propaganda that harm businesses and the economy.	4.4	4.0	Agreed
6	Over-reliance on social media reduce job-seeking efforts thereby leading to unemployment and decrease in labour force of the country.	3.8	3.5	Agreed
7	Protests reduce consumer confidence and spending.	3.5	3.3	Agreed
8	Social media advertising revenues are often repatriated abroad, depleting Nigeria's foreign exchange reserves.	3.8	3.4	Agreed
9	Frequent protests can deter foreign investment and undermine economic stability.	4.5	4.1	Agreed
10	Protests lead to insecurity thereby harming tourism and business.	3.2	3.3	Agreed
11	Social media-fuelled protests can create economic instability and uncertainty.	3.9	3.7	Agreed
12	Repeated protests and economic instability can lead to emigration of skilled Nigerians to other countries of the world.	3.4	3.3	Agreed
13	Social media transactions can facilitate tax evasion and undermine government revenue.	4.2	3.8	Agreed
14	Social media platforms can facilitate copyright infringement and intellectual property theft.	3.8	3.4	Agreed
15	Social media and protest weakened naira (Nigerian currency).	3.7	3.4	Agreed
16	Protests can disrupt businesses, markets, and transportation.	3.1	3.1	Agreed
17	They strained government resources.	3.8	3.4	Agreed
	Aggregate Mean	3.8	3.9	Agreed

Source: Authors survey, 2024.

Table 3, 1-17. The research question aims to discuss the impacts of social media and protest on the Nigeria economy. From table 3 above, it can be deducted that cybercrime and online fraud, decrease work hours and productivity, disruption of economic activities, destruction of public and private infrastructure, spread of misinformation, fake news and propaganda that harm businesses and the economy, reduce job-seeking efforts thereby leading to unemployment and decrease in labour force, reduce consumer confidence and spending, deter foreign investment and undermine economic stability, increase in insecurity thereby harming tourism and business, economic instability and uncertainty, emigration of skilled Nigerians to other countries of the world, facilitate tax evasion and undermine government revenue, facilitate copyright infringement and intellectual property theft, weakened naira (Nigerian currency), disrupt businesses, markets, and transportation and strained government resources are all the impacts of social media and protest on the Nigeria economy. The aggregate mean criterion is 3.8 which is above the mean criterion of 3.0 and the aggregate standard deviation is 3.9 which is above the standard deviation of 3.0 indicating that all the respondents anonymously agreed on the impacts of social media and protest on the Nigeria economy.

Research Question Two

What are the impact of social media and protest on Nigeria democracy?

Table 4 Respondents' Perceptions on the Impact of Social Media and Protest on Nigeria Democracy?

S/N	Factors	Mean	Standard Deviation	Decision
1	Social media platforms can facilitate the spread of false information thereby damaging Nigeria's democratic process.	4.4	4.0	Agreed
2	Protests disrupt government operations and hinder democratic processes.	3.8	3.5	Agreed
3	Social media algorithms create echo chambers, exacerbating divisions within Nigerian society.	3.7	3.4	Agreed
4	Violent protest lead to damaging of property and harming of citizens.	3.8	3.7	Agreed
5	Social media are most times used to intimidate and silence opposing voices.	3.9	3.6	Agreed
6	Protests create divisions within Nigerian society thereby serving as a treat to Nigeria democracy.	4.3	3.9	Agreed
7	Social media perpetuate negative narratives about the democratic institutions	4.1	3.7	Agreed

	of Nigeria.			
8	Protests pose security risks for citizens and government officials which hinders them from carrying out their duties.	4.0	3.8	Agreed
9	Social media are used to manipulate public opinion.	3.8	3.5	Agreed
10	Social media and protests can pose threats to Nigeria's national unity.	3.9	3.6	Agreed
11	Social media and protests can discourage civic engagement.	3.1	3.1	Agreed
12	Social media and protests can increase tensions between different groups.	3.4	3.3	Agreed
	Social media and protests can undermine trust in electoral processes.			
13	Social media-fuelled protests can erode democratic norms and values.	3.3	3.7	Agreed
14		3.8	3.4	Agreed
Aggregate Mean		3.8	3.6	Agreed

Source: Authors survey, 2024.

Data in Table 4, 1-14. The research question focus to discuss on the impact of social media and protest on Nigeria democracy. Looking at table 3 above, it can be seen that the spread of false information thereby damaging Nigeria's democratic process, disrupt government operations and hinder democratic processes, algorithms that create echo chambers, exacerbating divisions within Nigerian society, damaging of property and harming of citizens, intimidation and silencing of opposing voices, divisions within Nigerian society that serve as a treat to Nigeria democracy, perpetuate negative narratives about the democratic institutions of Nigeria, pose security risks for citizens and government officials, manipulation of public opinion, threats to Nigeria's national unity, discourage civic engagement, increase tensions between different groups, undermine trust in electoral processes and eroding democratic norms and values are all the impacts of social media and protest on Nigeria democracy. The aggregate mean criterion is 3.8 which is above the mean criterion of 3.0 and the aggregate standard deviation is 3.6 which is above the standard deviation of 3.0 indicating that all the respondents anonymously agreed on the impacts of social media and protest on Nigeria democracy.

5 DISCUSSION OF FINDINGS

Responses to the research questions one in table 3 revealed the impacts of social media and protest on the Nigeria economy and democracy using the endsars protests and end bad governance protest in Nigeria as a case study. Nigeria as a country have all witness: fake news and propaganda that harm businesses and the economy which is in line with the findings of Usman and Oghuvbu [10] that social media create more tension in the society and also means of division and destruction due to fake, unverified and amateur presentation of information and over exaggeration of situations etc. and also the finding is in line with the empirical theory of the study. Again as seen in Table 4 (1-14) the findings is against that of Anthony and Edward [2], Chiamogu P. Ameobi [4], Sherman and Rivera [3] and Babaleye et. al [11] that social media, in spite of their excesses play positive roles to ensure and enhance durable democracy in Nigeria. Consequently, through the findings of the research question and the associated empirical literatures evidence, this study has been able to highlight impacts of social media and protest on the Nigeria economy and democracy using the endsars protests and end bad governance protest in Nigeria as a case study.

6 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Though social media is one of the modern technology enjoyed by man in all works of life but the negative impact must be carefully avoided so as not to disrupt the economic and political system of governance in a country.

6.2 Recommendation

The study recommended that for government of Nigeria to mitigated the negative impact of social media and protest on Nigeria economy and democracy, the following should be put in place and enforce:

1. Develop social media regulations and guidelines.
2. Promote digital literacy and online safety.
3. Encourage responsible social media usage.
4. Address underlying socio-economic issues driving protests.
5. Foster dialogue between government, citizens, stakeholders and democratic reforms.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Aakash S. Role of social media in social mobilization (with Special Reference to Shahbag and Hakkolorob Movements). Global Media Journal-Indian Edition, 2016, 7: 1-2.

- [2] Anthony Chukwuebuka Okoye and Tokpo Coronation Edward. The role of social media in mobilizing Nigerian youths during the #EndSARS Protests. *Niger Delta Journal of Library and Information Science*, 2023, 4(2), 91-105. DOI: <https://105281/zenodo.11218076>
- [3] Sherman and Rivera "Social Media Use and Pathways to Protest Participation: Evidence from the 2019 Chilean Social Outburst." *Social Media + Society*, 2021, 1-13 DOI:10.1177/20563051211059704
- [4] Chiamogu P. Amobi conducted an investigation titled "Social Media and Group Consciousness in Nigeria: Appraising the Prevalence of Socio-Political Protests". *Open Journal of Political Science*, 2021, 4(11), <https://doi.org/10.4236/ojps.2021.114043>
- [5] Jost K, Hipolit MJ. Blog explosion. Retrieved May 28, 2016 from CQ Researcher Online, 2006.
- [6] Aborisade O. *The Citizen Reporters, How Technology Transforms News Gathering, Reporting and Distribution*; Lambert Academic Publishing, 2012.
- [7] Bailly. *The impact of social media on social movements: A case study of the 2009 Iranian green movement and the 2011 Egyptian revolution.* Washington State University, 2012.
- [8] Lopes A R. *The impact of social media on social movements: The new opportunity and mobilizing structure.* (USA: Creighton University, 2014).
- [9] Oxford Dictionary 2011a, Oxford Dictionaries, Oxford, UK, 2014.
- [10] Hari S I. *The Evolution of Social Protest in Nigeria: The Role of Social Media in the “#OccupyNigeria” Protest*, 2014.
- [11] Kietzmann J H, Hermkens K, McCarthy I P, et al. Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 2011, 54(3): 241-251.
- [12] Amnesty International. *You have signed your death warrant, torture and other treatment by Nigeria’s special anti-robbery squad.* AFR, 2016.
- [13] Zhu J H, Blood D. Media Agenda Setting Theory Telling the Public What to Think About, In G. Kovacic (Ed.) *Emerging Theories of Human Communication*. Albany NY: Sunny Press, 1997.
- [14] Usman Ch, Oghuvbu EA. The Impact of the Media on the Endsars Protests in Nigeria. *International Journal of New Economics and Social Sciences*, 2021, 2(14): 155 - 165 DOI 10.5281/zenodo.5973151
- [15] Babaleye Taye, Ibitoye Pius Odorume, Akpobo Emokiniovo. Influence of Social Media on Democratic Governance in Nigeria. *International Journal of Media, Journalism and Mass Communications*, 2020, 6(1): 13-20.

THE CHOICE PREFERENCE OF PUBLIC SERVICE AGENCIES IN CHINESE AFFORDABLE HOUSING COMMUNITIES: AN EXPLANATORY FRAMEWORK OF WELFARE MANAGEMENT

YanRunYu Liang, YaQian Zhao, ShiYu Xie*

School of Elderly Care Services and Management, Nanjing University of Chinese Medicine, Nanjing 210023, Jiangsu, China.

Corresponding Author: ShiYu Xie, Email: 540001@njucm.edu.cn

Abstract: Welfare management aims to foster a balance of power and cross-disciplinary synergy between the public sector and welfare actors at the macro level, while at the micro level, it seeks to create a synergistic impact on welfare outcomes. This logic is relevant to analyzing whether China has developed a public service system that prioritizes those most in need of support while integrating welfare quality with administrative performance in the process of outsourcing public services. As a community with both security and administrative needs, the sheltered housing community faces the dilemma of a lack of a welfare system in terms of its own welfare, public welfare, and the complexity of its residents. This thesis examines the extent to which the purchase of public services by the Public sector as a welfare delivery tool can avoid the "welfare trap" that breeds the new urban poor, using one of the largest subsidised housing communities in Eastern China as a case study. The study finds that the community as a whole is characterised by a mismatch between the supply and demand of public services, a lack of professionalism in social organisations and a constant iteration of old and new projects.

Keywords: Welfare management; Public service system; Public Service Agencies; Affordable housing community

1 INTRODUCTION

The U.S. Department of Housing and Urban Development's (HUD) measure is the most widely used and conventional indicator of housing affordability. It serves as a core operational tool to identify and assess affordability concerns, leveraging easily accessible data from sources like the U.S. Census Bureau's American Housing Survey [1].

An analysis of HUD rental assistance programs shows they are insufficient for auto-dependent, sprawling areas, often leaving remote renters with high transportation costs [2]. The study suggests directing subsidies toward compact, transit-accessible locations for greater affordability, offering insights into welfare and management issues in dispersed U.S. settings, and informing China's development of large-scale secure housing communities.

China has recently shifted to constructing large-scale affordable housing communities, centralizing vulnerable populations instead of district-level rehousing. The community is crucial to social management, making public services within the community equally essential. This highlights the institutional and professional roles of multi-stakeholder management. To address resource constraints and management challenges, China now purchases public services, enabling professional social agencies and skilled social workers to provide targeted welfare and security services within these communities.

This study examines whether Public sector procurement of public services can meet the security and administrative needs of Chinese affordable housing communities within a Welfare management framework. It explores if such purchases can help avoid the "welfare trap" that may foster new urban poverty as affordable housing expands. By defining a "logic of Welfare management," this framework aims to guide future welfare service policy values.

2 LITERATURE REVIEW

2.1 The Development and Transformation of Public Service Agencies in Welfare management

Esping-Andersen's third sector redefines Welfare management, emphasizing a shift from Public sector-led reform to a deregulated, market-oriented, and citizen-focused welfare partnership for more efficient social policy [3].

While the concept of Welfare management is widely used to interpret welfare reform since the 1970s [4], academic consensus on its operationalization remains elusive due to its complexity. Research typically divides into macro and micro perspectives: macro-level management highlights the shift from state-led welfare to market-integrated policies [5], reducing Public sector responsibility [6]. As Amenta notes, Welfare management aims to reduce risk, eliminate inequality, and ensure security, reflecting conceptual shifts in response to demands for social stability. Rather than signaling the collapse of the welfare state, it represents a transformation in Public sector power, focusing on balancing interests and building a social safety net through multi-actor collaboration.

Micro-level Welfare management seeks cross-sectoral collaboration among multiple actors through decentralization within a given welfare context [7]. Achieving satisfactory outcomes with a purely technical or risk-prevention model is challenging due to the increasing complexity and frequency of cross-border risks [8]. Involving multiple actors in

welfare provision can open new avenues for improvement and clarify the institutional costs associated with welfare spending and risk response. The focus lies not only on defining power and responsibility relationships but also on how the transformation of power mechanisms and actor involvement can improve welfare outcomes [9].

The focus is on both defining power and responsibility relationships among actors and assessing how the transformation of power mechanisms and actor involvement can enhance welfare outcomes.

The rise of New Public Management (NPM) emerged as a response to Welfare management, influenced by modern economics and private sector management theory [10]. Gaining prominence in the 1980s in developed Western nations [11], NPM advocates external standards, outcome-based approaches, and reduced public sector responsibility to promote competition and resource efficiency [12]. This paradigm encourages private sector involvement and the creation of public-private partnerships, where power, responsibility, and resources are shared [13]. In response to calls for "regulated Public sector contracting" [14], the 1950s and 1960s saw the emergence of public service procurement in the UK and US [15], evolving into a mainstream framework by the 1990s, impacting both developed and developing countries.

The rise of New Public Management (NPM) addressed the institutional need for Welfare management and led to policies focusing on purchasing public services for the deserving poor. Since 2006, the transformation of the public service system has been central to building a service-oriented Public sector in China, with the purchase of public services becoming a key output. Given China's transitional Welfare management between totalitarianism and devolution, it is important to assess whether its public service system effectively targets those most in need and balances welfare quality with management performance.

Durkheim argues that as traditional forms of social solidarity erode, intermediary associations should replace local institutions in providing welfare services like social security and public health, with a more sophisticated division of labor [16]. Drawing on the purchaser-provider split (PPS) concept, the purchasing relationship occurs between the public sector and qualified private service providers. Through "precise identification" of competent sellers, the Public sector acts as a "rational buyer" to transfer welfare service competence via contracts. Consequently, Welfare management has become a prevalent model, with Public sector funding public service organizations [17], making the purchase of public services a key focus of research in Welfare management [18].

2.2 The Development and Transformation of Public Service Agencies in Welfare management

In the United States, Public Service Agencies is referred to as purchase of service contracts or contract outsourcing, a concept equivalent to subvention or outsourcing of social welfare services in Hong Kong, China. Scholars in welfare studies view this practice as the allocation of social welfare funds to service agencies or the procurement of social services via public tenders.

Global approaches to Public sector service purchasing vary: the U.S. emphasizes a market model with extensive procurement regulations; France and Germany adopt a limited market approach; East Asia prioritizes Public sector provision; and Scandinavia relies on high taxes. Payment structures include grants, fiscal categories, vouchers, and loans. Despite differences, purchasing services via social organizations remains effective.

China's 2013 "Guidance on the Public sector's Purchase of Services from Social Forces" marked a shift toward expanding service purchases, reducing direct Public sector involvement, and fostering public-private partnerships under meta-management principles.

The international community has extensive experience in shifting Public sector power from public sector control to external actors, creating mechanisms to accommodate this change [19]. Private sector methods were developed to address public sector inefficiencies, but market-based delivery of social services has led to failures, such as in the UK healthcare sector, where providers focused on low-risk, high-return services to maximize profits [20].

Since the 1990s, the UK has increasingly relied on public-private hybrids and the third sector to complement Public sector welfare services, emphasizing trust in the welfare market. Information asymmetry can lead to profit-driven behaviors, such as inflated service prices. The "Reinventing Public sector" initiative, adopted across Europe, recognized the third sector's contribution to Welfare management, improving effectiveness by at least one-third.

Despite five waves of public service reforms in the UK, influencing other countries, comparative studies on cross-sector welfare providers are scarce [21]. The rise of new organizations complicates traditional sector categorizations, and due to limited data, research on the third sector's characteristics and management mechanisms remains underdeveloped [22]. This study aims to examine the Welfare management performance of public service social organizations within specific community contexts.

2.3 The Welfare Dilemma of Affordable Housing Communities

Since 1995, China has established an institutional model for subsidized housing through land allocation, funding large-scale affordable housing projects, including low-cost, public rental, and policy rental housing as part of the Comfort Living Project.

Public sectors in the UK, US, Singapore, and Hong Kong have implemented social policies to promote affordable housing construction. The US, through the 1937 public housing plan and the 1968 Housing and Urban Development Act, established a subsidy-based framework for low- and middle-income families, ensuring 20% of new public housing units for low-income households [23]. The UK has enacted numerous laws, such as the 2003 Shared Ownership Scheme,

to protect citizens' housing rights and assist low-income homeownership. In Singapore, the Housing and Development Board's policy, initiated in 1959 and expanded by 2011, covers 82.4% of the population through affordable housing. Hong Kong's Public Housing Policy, introduced in 1954, provides affordable rental and purchasing options for low- and middle-income groups.

In summary, the relationship between Public sector intervention and privatization can be categorized as follows: Singapore applies strict income assessments, progressively privatizing housing based on household income. In the US, there is a trend toward reduced state intervention, with family planning assessments guiding living arrangements and guaranteeing both rental and ownership rights. The UK emphasizes the rule of law to promote housing privatization. Hong Kong has introduced flexible land leasing policies to activate a rental-based public housing market. This reflects a decreasing intensity of Public sector intervention and increasing flexibility in privatization approaches.

Affordable housing projects have created a homogeneous urban welfare space, but poor public service accessibility has led to fragmented welfare delivery, particularly in areas with limited resource capture. The land valuation system, driven by macro-control and market forces, has resulted in the centralization of affordable housing planning, leading to spatial segregation and the relocation of residents away from urban centers. Simultaneously, housing mobility has created welfare clusters among the middle and working classes.

This isolation and clustering can exacerbate relative deprivation and group isolation, contrary to the Public sector's intentions of equitable welfare redistribution. Low-income households, the elderly, sick, disabled, migrant workers, and newcomers are concentrated in these communities, facing significant welfare deficits. This situation, marked by welfare and institutional challenges, warrants further academic investigation into the public service mechanisms within affordable housing communities.

3 METHOD

The study categorized participants into three groups: (1) community staff involved in the Public Service Agencies, (2) professionals delivering public services, including agency staff and social workers, and (3) residents receiving these services in protected housing estates. A total of 28 interviewees were selected through purposive sampling, including four community staff, five social organization staff, and 19 residents. Intentional sampling was employed to identify participants who could provide the most detailed and informative responses. Informed consent was obtained to ensure comprehensive and accurate data.

3.1 Choice Logic and Strategic Preferences for Public Service Agencies in Subsidized Housing Communities

3.1.1 Fragmentation of supply and demand and fragmentation of services

Socially disadvantaged groups often have limited awareness of civic participation, their own rights, and the roles of Public sector and social organizations, resulting in a reliance on family for welfare provision and weak subjectivity within the welfare system. Among the 19 residents receiving services, only nine were aware that the services were Public sector-funded, and most lacked a clear understanding of the role and purpose of social organizations. This reflects a low awareness of Public sector-purchased public services and related policies. Interaction between residents and social organizations often involves gratitude from parents and elderly for low-cost services, with organizations playing a leading role. However, many community activities are Public sector-driven, with residents passively participating in Public sector-organized events.

As Amartya Sen argues [24], access to public services varies between disadvantaged and advantaged groups, with disadvantaged households facing greater barriers to consistent service access. This study found that community service users often cannot effectively access services, and some residents are dissatisfied with the current offerings. The community has a significant aging population, with 14,100 individuals over 60, including 2,662 over 80, 1,700 empty nesters, and 126 disabled or semi-disabled individuals. However, medical services are limited, with few service points, short durations, and low frequencies, making it difficult to meet the needs of the elderly.

"We love charity clinics, but this one is too infrequent. A few doctors have come to Nanjing Chinese Hospital before, to take pulses, blood pressure, and so on, which is good. But they only came once and stayed for two days. I only found out the next day that there were a lot of people in the queue." (Mr Z, community resident, information code: QX-1018)

"Before that an old sister of mine said that there was a free clinic in their area to look at teeth and also give children what free dental cleaning and fillings to send toothpaste, that regardless of whether it costs money or not, so many of these medical type resources we don't have here." (Ms L, community resident, information code: QX-1012)

The community offers several elderly services, such as "Saijinbao Helpers" and "15-minute meals," but participation is low and the services are highly homogeneous. During the research period, the reading and calligraphy rooms were largely unused, with sign-in sheets showing usage rates below 50%.

"Activities for the elderly are now a lot more, basically singing and dancing volunteering, a while ago the fan dance team and square dance team even performed, just us old sisters." Then the old men are just generally sitting at chess and cards, but there's not much in the reading and writing room; it's basically empty." (Ms C, community resident, information code: XS-1104).

In recent years, the community has prioritized youth development through public service purchases, establishing family education guidance stations and programs such as "Care for Children in Distress," "Youth Development," "Parents' Salon," and "Parenting Forum." While these initiatives focus on after-school care, school support, and volunteering,

they lack sufficient interest classes for children and youth, failing to address the education resource deficit in peripheral protected housing communities.

"There are so many lectures on the weekends, or classes with mum, it's not fun. Other people have fun playing with Lego puzzles, crafts, and roller skates." (Student L, community resident, profile code: QX-1207)

The D-affordable housing community has a complex demographic, including over 400 individuals with mental illness, 140 with depression, as well as drug addicts, AIDS patients, and former prisoners. Social services in the community are primarily purchased through public bidding, with projects divided into five categories: "community management," "cultural services," "women and children's services," "elderly services," and "youth services." However, there are no specialized services for these vulnerable groups, and no relevant project indicators have been included in recent tender announcements. Interviews with social workers highlighted the need for more targeted public service provision that addresses the specific needs of large housing communities.

"Going to do a needs assessment survey is something that should be done before coming in, and it's all for naught if the project application doesn't come down." At the moment, communities like D are tendering for public services in the same way as ordinary commercial housing communities, and the projects are all relatively mainstream. "There is not yet a refined program for different groups in different communities at the time of the annual tender, but the welfare needs of community residents are definitely still different from others." (T Organisation Social Worker, Resource Code: QX-1025).

The welfare needs of disadvantaged groups in sheltered housing communities require more precise service responses. However, existing public services fail to address these needs, with issues such as poor alignment between service design and user needs, a lack of social worker support, and service groups' inward focus. As a result, there is little engagement between residents and community services, and special groups lack compensatory services. This highlights a "gap in awareness" regarding the distinct needs of sheltered housing communities. Such communities often reflect a city's welfare ideology and service capacity, necessitating management strategies that prioritize need fulfillment, risk avoidance, redress, and protection. However, the absence of effective welfare need mapping and risk group identification by social organizations undermines their role in these communities, leading to weak management and misallocated resources.

3.1.2 Organisational resource dependency and lack of autonomy

The fragmentation of public service supply and demand in housing communities stems from the weak autonomy and dependency of social organizations. Primarily funded by the Public sector and lacking social capital, these organizations face a Public sector-driven "preference for choice" in service provision. This power-autonomy dynamic is constrained, leading to paradoxical underfunding. Limited Public sector allocations and the absence of authority for fee-based projects leave social organizations in a vulnerable position, reliant on insufficient resources and long-term dependence.

"A lot of the residents are recruited directly by the community to come out and participate in the activities, it's mainly about community support. We are still under pressure, we have been doing activities throughout the year to catch up on assessments and reports, and their [the community's] affirmation is most important." (Organisation X social worker, file code: QX-1103)

Social organization A in this study relies on the Nanjing Public Welfare Investment Programme and is in its early stages of development. Its annual funding is around 400,000 yuan, of which it only charges for after-school tutoring and weekend extensions in the "community youth services" track. The resource situation is concentrated and homogeneous. In this situation, organization A is highly dependent on Public sector resources, both tangible resources such as financial support and intangible resources such as substantive legitimacy. When a social organization in the community has a new idea or wants to hold an event, it must report to the community to inform them in advance, and the community's support is needed for the construction of the service platform, the approval of the venue for holding the event, and the mobilization of publicity.

"Each organization holds regular meetings every month and invites the community to attend. They are, after all, led by the community, and the organization will dovetail with us in time if it has new ideas. Whether it is a grassroots organisation led by the community or a professional organisation introduced, since it serves in my community, we must have constraints on it for the sake of the community and the residents, it is impossible to introduce it and then let it carry out its services. It is inevitable to regulate and to be accountable to the community and its residents." (Community Director H, Information Code: QX-1214)

As Gareth notes(2009) [25], "most Public sector purchases of public services require communities as the vehicle for their delivery, and one of the attractions of social organizations providing public services is their potential to shape the social capital of communities." In China's current social housing communities, there is a strong welfare character, and in a "strong Public sector-weak society" institutional environment, the Public sector is always the institutional power that holds the purchasing power. In the local context, the organizations outside the institutional fence are largely confined to a phased survival strategy and lack professionalism. In this context, it is clearly a paradox to place hopes on the incubation of a capital market among community residents as a possible alternative to Public sector contracting, and therefore the development of a service market is not yet suitable to be at the forefront of the logic of welfare-based management if a hierarchy of needs is attempted by means of a precise needs assessment.

3.1.3 Competitive logic and the paradox of sustainability

Since the adoption of tendering for social service allocation, Public sector purchasing has become embedded in a logic of administrative contracting, emphasizing efficiency, competition, and outsourcing in the Public sector-social organization relationship. While this aligns with New Public Management principles, scholars increasingly recognize

that competitive logic can lead to market failure in the Public sector/non-profit organization relationship.

The research found that public-service social organizations are both project-driven and fatigued by project demands, leading to management focusing on higher-level priorities and neglecting grassroots needs. The shift from addressing needs to prioritizing evaluation has turned these organizations into "delivery-based" or "assessment-based" entities. In addition to daily documentation, organizations must meet numerous performance metrics, including regular reports, publicity, and case documentation. With rising project application thresholds and performance standards, social workers are increasingly trained in report writing and project applications, while volunteers handle basic services, resulting in a potential loss of focus on core service delivery.

China's decentralization encourages local Public sectors to compete for growth, prioritizing short-term, high-visibility projects due to the lack of standardized performance appraisals and appeal mechanisms. However, for disadvantaged groups and professional social organizations, continuity in public services is crucial for enhancing well-being and ensuring quality. In a market with tight timelines and annual project cycles, maintaining continuity of professional services is persistently challenging.

Project funding is disbursed in three instalments: 30% at the start, 40% after passing the mid-term assessment, and the remaining 30% upon successful completion, based on the final assessment. If the project fails the assessment, it is terminated and must be resubmitted the following year or withdrawn if no new project is available.

"Our organization is mainly dependent on the Public sector, now they are more in favor of the group and community work, these can leave a trace, run activities have an impact good publicity, for us or to produce results to write a case, the case is too small the cycle is long, you are not good every time to take pictures to promote what, and the evaluation of the effectiveness of not significant to be cut in the middle, that is better not to do, so we basically did not." (Organization Y social worker, information code: XS-1109)

Attention to the welfare needs of disadvantaged groups should necessarily be an ongoing, long-term, and dynamic mechanism, and whether their welfare needs can be effectively communicated also depends on whether they can receive continuous supportive support. Annualised cycle projects can hardly provide in-depth long-term follow-up services, and services for disadvantaged groups need even longer cycles to show results. However, the current performance-based, fast-paced, market-based competition model inevitably leads to a significant loss of quality in public services, resulting in the failure of long-cycle, high-quality services. In this way, social housing communities are more a synonym for geopolitical than functional, an intermediary vehicle for a Public sector-commissioned social organization to act as an agent for service projects, while at the level of service effectiveness, they are mostly in a state of impatience where old and new projects are constantly iterated. This state of impatience will, I am afraid, spread to a collective anxiety in China's public-service social organizations, a developmental cage that will be difficult to break free from in the short term.

4 DISCUSSION AND CONCLUSIONS

Based on a theoretical perspective of Welfare management, this paper analyses the logic of choice and strategic preferences of Public Service Agencies in the practice of D-sheltered housing communities. The study finds that the untimely and weak access to public services has led to a secondary risk pattern of "welfare delivery disconnect" in the affordable- housing communities, where the welfare needs of a large number of special groups have not been included in the welfare redistribution.

The plight of residents in China's affordable- housing communities stems not only from insufficient welfare resources but also from the mismatch between the supply and demand for public services. This issue is rooted in the current institutional design of welfare resource transfer and social organization development. Social organizations, reliant on Public sector funding, face an asymmetrical dependency that limits their autonomy in work content, finances, decision-making, and operations. The "commission-agent system" has constrained their institutional power, weakening their ability to shape community social capital. This results in ineffective service delivery, a stagnant professional workforce, and an over-reliance on volunteers, leading to a situation of "amateurism in philanthropy" and "market failure."

Based on the above analysis, this paper further puts forward effective countermeasures and suggestions for the Public sector's purchase of public services from the levels of system, subject and financial guarantee, as follows: First, based on the current situation that China's existing laws and regulations and the construction of a large number of guaranteed housing are relatively lagging behind, it is necessary to carry out corresponding system construction. It should be based on the basic principle of safeguarding the welfare needs of the disadvantaged groups, improve the system related to Public Service Agencies as the goal, and pay more attention to the sustainability of work with the disadvantaged groups. The project cycle can be extended to an appropriate extent, reserving room for competition for public services with long and in-depth cycles. Secondly, in order to change the passive participation role of residents and encourage them to express their needs, it is necessary to incubate residents' autonomous organisations and collect community residents' needs in the form of grassroots organisations, so as to achieve specialisation and customisation in the provision of community public services and seek a dynamic balance between welfare demand and supply. On the one hand, we can learn from the characteristics of community groups and from the advanced experience of other communities to form community psychological counseling centers and community anti-drug associations to cope with the special needs of depressed people and drug addicts; on the other hand, we can guide the current ad hoc community organizations to develop into mature community autonomous organization, for example, by consolidating the now established illegal pyramid scheme self-defense teams in the community and improving their institutional, financial, and personnel

structures. The third social organization should develop multiple sources of funding. Thirdly, social organizations should develop multiple sources of funding. They can seek support from enterprises, club donations, relevant foundations, and public welfare organizations by building up their social reputation and branding their organizations in order to draw in diverse resources and take more ownership.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

FUNDING

This research was sponsored by the Special Research Project of School of Elderly Care Services and Management, Nanjing University of Chinese Medicine (NJUCM), "Research on the Risk Avoidance Mechanism of the House-for-Pension Scheme in the Context of Social Governance for the Elderly (2024YLFWYGL006)".

REFERENCES

- [1] Bogdon AS, Can A. Indicators of local housing affordability: Comparative and spatial approaches. *Real Estate Economics*, 1997, 25: 43-80.
- [2] Hamidi S, Ewing R, Renne, J. How Affordable is HUD Affordable Housing? *Housing Policy Debate*, 2016, 226(3): 437-455.
- [3] Brown K, Kenny S, Turner B, et al. *Rhetorics of welfare: Uncertainty, choice and voluntary associations*. Springer, 2000.
- [4] Henman, Fenger M. *Administering Welfare Reform: International Transformations in Welfare management*. Bristol: The Policy Press, 2006: 287.
- [5] Dornan P, Hudson J. *Welfare management in the Surveillance Society: A Positive-realistic Cyber Criticality View*. *Social Policy and Administration*, 2003, 37: 468-482.
- [6] Glendinning C, Powell M, Rummery K. *Partnerships, New Labour and the governance of welfare*. *Policy pr*, 2002: 113.
- [7] Johnson N. Amherst: The University of Massachusetts Press. 1987: 58.
- [8] Kuhnle S, Selle P. *Government and Voluntary Organizations: A Relational Perspective*, in Kuhnle.S.; Selle, P.*Government and Voluntary Organizations*. London: Avebury, 1992: 1-33.
- [9] Kim J W. Dynamics of the Welfare Mix in the Republic of Korea: An Expenditure Study between 1990 and 2001. *International Social Security Review*, 2005, 58: 1-26.
- [10] Gurran N, Whitehead C. Planning and affordable housing in Australia and the UK: A comparative perspective. *Housing studies*, 2011: 26,7-8, 1193-1214.
- [11] Milligan V, Phibbs P, Gurran N. et al. *Approaches to Evaluation of Affordable Housing Initiatives in Australia*. National Research Venture 3: Housing Affordability for Lower Income Australians. Research Paper, 2007, 7.
- [12] Hood C. A public management for all seasons. *Public Administration*, 1991, 69: 1, 3-19.
- [13] Domberger S. Contracting out by the public sector: theory, evidence, prospects. *Oxford Review of Economic Policy*, 1997, 13(4): 67-78.
- [14] Le Grand J, Bartlett W. *Quasi-markets and Social Policy*. Basingstoke: Macmillan, 1993: 168.
- [15] Kettl D F. *Sharing power: Public governance and private markets*. Brookings Institution Press, 2011.
- [16] Durkheim É. *De la division du travail social*. F. Alcan, 1922: 135.
- [17] Siverbo S. The purchaser-provider split in principle and practice: experiences from Sweden. *Financial Accountability & Management*, 2004, 20(4): 401-420.
- [18] Gottschalk P, McLanahan S, Sandefur GD. The dynamics and intergenerational transmission of poverty and welfare participation. *Social Stratification*, Routledge, 2019: 378-389.
- [19] Salamon L M. *Global Civil Society: Dimensions of the Nonprofit Sector*, Baltimore: The Johns Hopkins Center for Civil Society Studies, 1999: 34.
- [20] Koning P, Heinrich C J. Creaming-skimming, parking and other intended and unintended effects of high-powered, performance-based contracts. *Journal of Policy Analysis and Management*, 2013, 32(3): 461-483.
- [21] Bovaird T. The ins and outs of outsourcing and insourcing: what have we learnt from the past 30 years? *Public Money & Management*, 2016, 36(1): 67-74.
- [22] Damm C. The third sector delivering employment services: an evidence review. Working Paper, University of Birmingham, 2012.
- [23] Susin S. Rent vouchers and the price of low-income housing. *Journal of Public Economics*, 1999, 83(1): 109-152.
- [24] Sen A. *Development as freedom. The globalization and development reader: Perspectives on development and global change*. 2014: 525.
- [25] Gareth S, *Political marketing: segmentation, brand and competitive strategies in the UK*, Optical. Engineering, 2009, 41(7): 1586-1602.

THE ROLE AND IMPACT OF MUSIC EDUCATION IN THE CULTURAL INDUSTRY

XinJie Lyu

School of Management, Sichuan Film and Television College, Sichuan 611331, China.

Corresponding Email: lvxinjie2001@163.com

Abstract: This paper explores the important influence and positive role of music education on the cultural industry in the context of globalization. Music education not only shapes the individual's artistic accomplishment and innovation ability, but also plays an irreplaceable role in cultural inheritance, industrial development and social harmony. The article analyzes the relationship between music education and cultural industry, explains the definition and importance of music education, and its role in cultivating talents for cultural industries, promoting innovation of cultural products, enhancing the economic benefits of cultural industries, promoting cultural exchanges and integration, and promoting the inheritance and innovation of rural cultural industries. The article emphasizes that music education plays a vital role in the cultivation of talents in cultural industries, the innovation of cultural products, the improvement of economic benefits, and cultural exchanges and integration, and also has a positive impact on the development of rural cultural industries.

Keywords: Music education; Cultural industry; Talent cultivation; Cultural innovation; Economic benefits

1 INTRODUCTION

In the current wave of globalization, the cultural industry, as an important force in promoting economic growth and facilitating cultural exchanges, is flourishing at an unprecedented speed. Music education, as one of the cornerstones of the cultural industry, not only shapes individuals' artistic cultivation and innovation capabilities but also plays an irreplaceable role in cultural heritage, industry development, and social harmony across multiple dimensions. This article aims to explore the profound impact and positive role of music education in the cultural industry by analyzing the relationship between music education and the cultural industry.

1.1 Music Education

Throughout the long river of human civilization, music, as an art form that transcends time and space, has always nourished people's souls and inspired unlimited creativity with its unique charm. Music education, as a bridge for the inheritance and innovation of this art, is not merely about learning to play musical instruments or sing; it is a comprehensive educational approach aimed at cultivating students' artistic literacy, creativity, cognitive abilities, and emotional expression.

1.2 Definition of Music Education

Music education refers to the process of imparting knowledge and skills through musical activities, including but not limited to music theory, music history, composition, performance, and music appreciation. It is also a vital pathway for the inheritance and dissemination of musical culture. The purpose of music education is to more perfectly develop one's moral thinking, aesthetic ability, emotional expression, and self-identity [1]. In "Music Education and Teaching Methods" [2], it is pointed out that music education is an important foundation and activity base for the inheritance and development of social music culture. Therefore, music education has a significant impact on music culture, which in turn affects the development of the music cultural industry.

1.3 The Importance of Music Education

The importance of music education is reflected in many aspects, not only profoundly influencing individual growth but also actively promoting the development of society and culture.

From the perspective of individual growth, music education promotes intellectual development, emotional expression, creativity, and teamwork abilities. Music education can stimulate the vitality of the brain and promote intellectual development. Learning music requires memory, understanding, and application of complex music theories and techniques, which helps to enhance an individual's cognitive abilities and problem-solving skills. Music is also a way of emotional expression; through music education, people can better understand, express, and regulate their emotions. This helps to cultivate emotional intelligence and interpersonal skills. At the same time, music education encourages individuals to use their imagination and creativity, attempting new forms and expressions of music. This spirit of innovation can be transferred to other fields, promoting individual innovation and development in academics, careers, and life. In addition, teamwork and social skills are also promoted in music education. Music activities often involve

teamwork, such as bands and choirs. These activities help to cultivate a spirit of cooperation and social skills, learning to play one's role in a team and respect the contributions of others.

From the perspective of societal and cultural impact, music education plays a significant role in inheriting and promoting national culture, promoting cultural diversity and inclusiveness, and community cohesion and cultural construction. Music education is an important way to inherit and promote national culture. By learning national music and musical instruments, people can better understand and appreciate their cultural traditions, enhancing national pride and a sense of belonging. Secondly, music education also promotes the exchange and integration of different cultures. By learning music from around the world, people can view different cultures more openly and inclusively, enhancing the understanding and respect for global multiculturalism. In addition, music education plays an important role in community cultural construction. By organizing music activities and concerts, it can enhance the connection and interaction between community residents, improving community cohesion and cultural atmosphere.

It can be seen that music education has an irreplaceable impact on individual growth and the development of society and culture. It not only can cultivate well-rounded talents but also affects the inheritance, exchange, and integration of social culture.

2 CULTURAL INDUSTRY

2.1 Definition and Origin

The term "cultural industry" first appeared in the early 20th century and was first proposed by Adorno and Horkheimer in their 2006 publication "Dialectic of Enlightenment" [3]. They emphasized the difference between the cultural industry and mass culture, pointing out that the cultural industry uses technological means and economic and managerial centralization to fuse the old and familiar into a new quality, producing cultural products suitable for mass consumption on a planned basis. UNESCO defines the cultural industry as a series of activities, including production, production, production, storage, distribution, and according to industry standards. The cultural industry covers a wide range, not limited to the performing arts industry. News media, broadcasting, film and television, publishing, education, audio-visual production and sales, advertising, exhibition industry, and more complex entertainment industry can all be included in the category of the cultural industry.

2.2 Characteristics of the Cultural Industry

The cultural industry, as a special form of culture and a special form of economy, has many characteristics that reflect its uniqueness and complexity and also affect its development and operation.

The cultural industry is creative and innovative. The core of the cultural industry is creativity, and its products and services usually have high creativity and artistry. The cultural industry needs to attract the audience and consumers through creative forms of expression, so creativity is one of its most significant characteristics. At the same time, the cultural industry is an innovative industrial field. Its products and services need to be continuously updated, absorbing new ideas, technologies, and cultural elements to adapt to market and audience needs. Innovation is the key driving force for the continuous development of the cultural industry.

The cultural industry has cultural characteristics. The products and services of the cultural industry usually have obvious cultural attributes and are closely related to social culture. They reflect the cultural identity, emotions, and values of different social groups and are important carriers for cultural inheritance and dissemination, playing an important role in the inheritance, development, and dissemination of social culture, helping to shape the social cultural atmosphere and improve the level of social culture.

The cultural industry is knowledge-intensive. The production and operation process of the cultural industry usually requires a lot of knowledge and skills. The cultural industry covers a wide range of content and forms, including literature, art, music, film, publishing, design, games, and more. This diversity allows the cultural industry to meet the needs of different audiences, showing a diversified industrial structure and product form, and also involves cultural creativity, art design, market marketing, and other fields, with a high degree of knowledge intensity. Therefore, the development of the cultural industry cannot be separated from high-quality talents and professional teams [4].

The cultural industry has dual attributes. The cultural industry has both economic and cultural attributes [5]. It must pursue economic benefits while paying attention to cultural value. The economic attribute provides the driving force and material basis for the development of the cultural industry, while the cultural attribute endows the cultural industry with unique charm and value. The two promote each other and jointly promote the prosperous development of the cultural industry. This dual attribute makes the cultural industry need to achieve a balance between economy and culture in the development process to achieve sustainable development.

In summary, the characteristics of the cultural industry reflect its uniqueness and complexity, and also provide a broad space and opportunities for its development. With the development of technology and changes in market demand, the cultural industry will continue to maintain its innovation and diversity, making a greater contribution to the inheritance and development of social culture. Music, as an important part of culture, will inevitably affect the development of the cultural industry under the promotion of music education.

3 THE ROLE AND IMPACT OF MUSIC EDUCATION IN THE CULTURAL INDUSTRY

Music education plays multiple roles in the cultural industry, and its role and impact are reflected in the following aspects.

3.1 Promoting the Training of Cultural Industry Talents

Music education plays a crucial role in promoting the cultivation of talents in the cultural industry.

Music education provides professional talents for the cultural industry. Through systematic curriculum settings and rigorous professional training, music education has cultivated a large number of professionals with musical literacy, professional skills, and innovative capabilities. These talents not only master the core skills of music creation but also have the ability to integrate music into the cultural industry and promote its innovative development. They can play an important role in various fields such as music creation, music production, music performance, music education, and music therapy, providing a continuous driving force for the development of the cultural industry.

Music education enhances the aesthetic literacy of talents in the cultural industry. While cultivating students' musical skills, music education also focuses on improving their aesthetic literacy. By appreciating classic music works and learning music theory and history, students can better understand and feel the beauty of music, thereby forming unique aesthetic concepts and tastes. This enhancement of aesthetic literacy not only helps students achieve better results in the field of music but also injects more aesthetic elements into the development of the cultural industry, enhancing the quality and connotation of cultural products.

Music education promotes the innovative ability of talents in the cultural industry. Music education emphasizes innovation and creation, encouraging students to try new forms and styles of music, and cultivates their innovative thinking and creativity. This innovative ability is particularly important in the cultural industry, as it helps practitioners to continuously introduce new ideas, creating cultural products with unique charm and market competitiveness. Music education is an activity that stimulates human creativity and imagination and is an inexhaustible driving force for the development of the cultural industry. Music education enhances the cross-field cooperation ability of talents in the cultural industry. Music education not only focuses on the cultivation of musical skills but also emphasizes cross-field cooperation and communication. In music education, students need to cooperate with classmates from different professional backgrounds to complete music works, which helps to cultivate their team spirit and cross-field cooperation ability. In the cultural industry, this ability is particularly important because the cultural industry often involves the integration and intersection of multiple fields, requiring practitioners to have a cross-field vision and cooperation ability.

Music education promotes the international vision of talents in the cultural industry. With the acceleration of globalization, the cultural industry also shows an international trend. Music education helps students broaden their horizons and understand the musical expressions of different cultural backgrounds by introducing music styles and traditions from around the world. This cultivation of international vision helps cultural industry talents better integrate into the international market and promote the international dissemination and exchange of cultural products.

In summary, music education plays a crucial role in promoting the cultivation of talents in the cultural industry. It not only provides a large number of professional talents for the cultural industry but also enhances their aesthetic literacy, innovative ability, cross-field cooperation ability, and international vision. The cultural industry also puts forward higher requirements for the cultivation of talents in music education [6]. Therefore, we should attach great importance to the important role of music education in the cultivation of talents in the cultural industry, continuously strengthen the reform and innovation of music education, and cultivate more outstanding talents for the development of the cultural industry.

3.2 Promoting Cultural Product Innovation

Music education plays a crucial role in promoting cultural product innovation. Music education can stimulate creativity and imagination, significantly enhancing students' creativity and imagination. Creating and performing music requires continuous innovation and expression, a process that can stimulate students' innovative thinking, making them dare to try new ideas and forms. This creativity is not limited to the field of music but can also extend to the innovation of other cultural products, promoting the diversification and personalization of cultural products.

Music education cultivates aesthetic taste and artistic cultivation, promoting cultural product innovation. By guiding students to appreciate and understand music works of different styles and periods, music education cultivates their aesthetic taste and artistic cultivation. This ability enables creators of cultural products to more keenly capture elements of beauty and integrate them into their works, thereby enhancing the artistic value and appeal of cultural products.

Music education can promote cultural inheritance and innovation, playing an important role in cultural inheritance. By integrating intangible cultural heritage such as traditional music, folk songs, and folk instrument performances into music education courses, the younger generation can understand their national music culture through learning, achieving the living inheritance of traditional culture. At the same time, music education can stimulate students' innovative spirit, allowing them to create new cultural products based on tradition, achieving cultural innovation and development.

In summary, music education plays an important role in promoting cultural product innovation. It not only stimulates students' creativity and imagination, cultivates aesthetic taste and artistic cultivation, but also promotes cultural inheritance and innovation. Therefore, we should value the role of music education in cultural product innovation and

provide strong support for the innovation and development of cultural products. Under the guidance of music education, creators can explore and create more music works with unique styles and connotations. These works not only enrich the types and forms of cultural products but also enhance the artistic value and market competitiveness of cultural products, bringing new growth points to the cultural industry.

3.3 Enhancing the Economic Benefits of the Cultural Industry

Music education plays an important role in enhancing the economic benefits of the cultural industry, not only directly promoting the prosperity of the music cultural industry but also driving the development of related industries. For example, music education requires a large number of teaching resources such as musical instruments, music textbooks, and music software. The production and sales of these resources bring considerable economic benefits to related industries. At the same time, music education also promotes the development of related industries such as music performances and music tourism, injecting new vitality into the economic benefits of the cultural industry.

Music education can stimulate the vitality of the cultural consumer market. By cultivating people's musical literacy and aesthetic ability, it stimulates the vitality of the cultural consumer market. With the improvement of people's living standards, more and more people begin to pursue the satisfaction of spiritual and cultural life, and music education is an important way to meet this demand. Through music education, people can understand and appreciate music culture more deeply, and thus are more willing to consume cultural products and services, providing a strong market support for the economic benefits of the cultural industry.

Music education can promote the innovation and development of the cultural industry, focusing more on the inheritance of traditional music culture, and also encouraging innovation and exploration. In the process of music education, students are encouraged to try new forms, styles, and skills of music. This spirit of innovation not only promotes the innovation and development of music culture but also provides a continuous driving force for the innovation of the cultural industry. Through the cultivation of music education, more and more music talents begin to enter other fields of the cultural industry, such as film and television, animation, and games, making contributions to the diversified development of the cultural industry.

Music education enhances the international competitiveness of the cultural industry by cultivating music talents with an international vision and cross-cultural communication ability, enhancing the international competitiveness of the cultural industry. These talents can not only promote their country's music culture to the world but also absorb and learn from the essence of other countries' music culture, providing a strong talent guarantee for the international development of the cultural industry. At the same time, music education also promotes international cultural exchanges and cooperation, providing a broad space for the cultural industry to expand in the international market.

In summary, music education plays an important role in enhancing the economic benefits of the cultural industry. Through efforts such as promoting the prosperity of the music cultural industry, driving the development of related industries, stimulating the vitality of the cultural consumer market, promoting the innovation and development of the cultural industry, and enhancing the international competitiveness of the cultural industry, music education has made a positive contribution to the economic benefits of the cultural industry.

3.4 Promoting Cultural Exchange and Integration

The role of music education in the cultural industry is crucial for promoting cultural exchange and integration, serving as an important bridge for cultural dissemination. Through teaching music works and styles from different cultural backgrounds, music education enables learners to directly access and understand the musical cultures of various countries and regions. This cross-cultural music education experience helps to break down cultural barriers and enhance understanding and respect for different cultures. As learners engage with and learn about different musical cultures, they gradually develop an open attitude towards multiculturalism, making them more willing to participate in cultural exchange activities and promoting understanding and integration between different cultures.

Music education can promote cultural integration and innovation. While imparting musical knowledge and skills, it also encourages learners to engage in music creation and performance. In the creative process, learners may incorporate elements from different cultures into their works, resulting in music pieces with unique styles and cultural connotations. This cultural integration not only enriches the diversity and expressiveness of music works but also brings new ideas and inspiration to the cultural industry. Additionally, music education provides a platform for musicians from different cultural backgrounds to exchange and collaborate through events such as concerts and music festivals, further promoting cultural integration and innovation.

Music education plays a significant role in promoting international cultural exchange and cooperation. By organizing international music festivals, competitions, and exchange programs, music educational institutions can invite musicians and scholars from various countries and regions to engage in exchange and cooperation. These activities not only help to enhance understanding and friendship between different cultures but also bring an international perspective and global resources to the cultural industry. Through exchanges and cooperation with the international music community, music educational institutions can learn advanced music education philosophies and methods, improve their educational quality and standards, and promote the international dissemination and exchange of their country's musical culture.

In summary, the role of music education in promoting cultural exchange and integration in the cultural industry cannot be overlooked. It is not only a bridge for cultural dissemination but also an important source of cultural innovation.

Through music education, we can better understand and respect musical arts from different cultural backgrounds, promote exchanges and integration between different cultures, inject new vitality and creativity into the development of the cultural industry, and promote music exchanges between different countries and regions, driving the inheritance and innovation of musical culture.

3.5 Promoting the Inheritance and Innovation of Rural Cultural Industry

In rural areas, music education also plays a role in aiding the inheritance and innovation of the cultural industry. Through music education, rural youth can better understand and embrace local culture, fostering a sense of pride and mission towards rural culture. At the same time, music education can stimulate internal vitality in rural areas, promoting the inheritance and innovation of rural culture and injecting new momentum into rural revitalization. With the advancement of music education in rural areas, new cultural industries related to music, such as rural music festivals, folk performances, and music tourism, may emerge. These emerging cultural industries not only bring new growth points to rural economic development but also promote the dissemination and innovation of rural culture. Moreover, cultural industry activities driven by music education, such as music festivals and concerts, can significantly enhance the visibility and reputation of rural areas. This image enhancement helps attract more tourists and investors, further promoting the development of the rural economy. The role of music education in the cultural industry in promoting the inheritance and innovation of rural culture is multifaceted. It not only helps maintain the diversity and uniqueness of rural culture but also stimulates internal vitality, driving the prosperity and development of the rural economy. Therefore, we should place greater emphasis on the popularization and promotion of music education in rural areas, providing more high-quality music educational resources and support for rural schools and communities.

4 CONCLUSION

In summary, music education plays an irreplaceable role in the cultural industry. It is not only an important pathway for talent cultivation in the cultural industry but also a significant driving force for cultural product innovation, economic benefit enhancement, cultural exchange and integration, and the inheritance and innovation of rural cultural industry. Therefore, we should place greater emphasis on the development of music education in the cultural industry and make a greater contribution to the prosperity and development of the cultural industry.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCE

- [1] Lu S S. Music education philosophy centered on music culture. *Xinghai Conservatory of Music Journal*, 2020(03): 112-120.
- [2] Xie J X. *Music Education and Teaching Methods*. Higher Education Press, 2006.
- [3] Horkheimer M M. *Dialectics of Enlightenment*. Shanghai People's Publishing House, 2006.
- [4] Zhang W. (Doctoral dissertation). The development of the cultural industry under the promotion of urban renewal in the West and its enlightenment to China's related practices. Shandong University.
- [5] Chang L C. Analysis of the characteristics of the cultural industry from a global perspective. *Aba Normal College Journal*, 2014(01): 90-92.
- [6] Fan M L. Analysis of the integration of music education and the cultural industry in colleges and universities in the new era. *Contemporary Music*, 2022(01): 65-67.

CULTIVATION OF UNDERGRADUATE PHYSICAL EDUCATION TALENTS UNDER THE “INTEREST CLASS-MORNING EXERCISE-CLASS TUTOR” TRINITY EDUCATION MODEL: THE CASE OF CHENGDU UNIVERSITY

XingShuo Xu^{1#}, XinXuan Chen^{2*#}, JingWen Jiang³

¹International Football Academy, Tongji University, Shanghai 200092, China.

²Chengdu Gaoxin District Qing'an Primary School, Chengdu 610093, Sichuan, China.

³Physical Education Department, Tongji University, Shanghai 200092, China.

[#]These authors contributed equally to this work and should be considered co-first authors.

Corresponding Author: XinXuan Chen, Email: 1186528664@qq.com

Abstract: With the development of social economy, the society's ability requirements and quality standards for sports students are getting higher and higher, and "one specialty and multiple abilities" has become the most important part of the training mode. However, the current training mode has deficiencies in the mastery of advanced technology and ideological and political education. To solve this problem, Physical Education College of Chengdu University has implemented the trinity education model of "Interest Class-Morning Exercise-Class Tutor". This model combines skills teaching with students' academic planning, value orientation and three views, and realizes curriculum ideology and politics. The research results show that this model can stimulate students' learning initiative and enthusiasm, break the passive and single mode of traditional education, play a positive role in guiding students' career planning, and is of great significance for strengthening the construction of undergraduate physical education and innovating the training mode of talents.

Keywords: Talent training; Interest class; Morning exercises; Class tutor; Trinity education model

1 INTRODUCTION

As the society demands more and more diversified abilities of students majoring in physical education, Physical Education College of Chengdu University has actively explored and implemented the trinity education model of "Interest Class-Morning Exercise-Class Tutor". This model aims to break the limitations of the traditional education model, and realize the comprehensive improvement of students' skills and qualities through the organic combination of interest guidance, daily exercise and professional guidance. The purpose of this study is to analyze the implementation effect of this model and provide reference for further optimizing the training of undergraduate physical education talents.

2 IN-DEPTH ANALYSIS OF THE TRINITY EDUCATION MODEL OF "INTEREST CLASS-MORNING EXERCISE-CLASS TUTOR"

2.1 Core Concept and Composition of the Model

The trinity education model of Interest Class-Morning Exercise-Class Tutor" is a comprehensive education system innovatively proposed by Physical Education College of Chengdu University in order to cope with the challenges of sports talent training in the new era. The core of this model is to build an all-round and multi-level talent cultivation ecology through the deep integration of interest stimulation, daily exercise and professional guidance, aiming at cultivating sports talents with solid professional skills, good comprehensive quality and a high sense of social responsibility[1].

2.2 Interest Class: a Platform for Personalized Skill Enhancement

Interest classes are an important part of the model, and their design is based on a deep understanding of students' individual needs[2]. According to the latest trends in the sports industry, students' interests and future career plans, the school has carefully set up badminton, tennis, aerobics, sports dance, Taekwondo, martial arts, free combat, outdoor, jump rope, Frisbee, Chinese archery and happy physical fitness. These interest classes not only enrich students' after-school life, but more importantly, they provide a platform for students to deeply explore their potential and improve their professional skills. Through the professional training twice a week, under the guidance of the class instructor, students not only master the difficult new technical movements, but also realize self-transcendence driven by interest.

2.3 Morning Exercise: the Cultivation of Daily Exercise Habits

As a regular part of daily physical exercise, morning exercise has been given a new connotation. In the mode of "Interest Class-Morning Exercise-Class Tutor", morning exercise is no longer just a simple collective running or gymnastics, but closely combined with the content of interest classes, becoming an important way to consolidate the skills learned in interest classes and cultivate good exercise habits. The class tutor is responsible for supervising the implementation of morning exercises, ensuring that every student can actively participate in them, and flexibly arranging the morning exercises content according to the interest class project, so that students can consolidate and improve their skills in a relaxed and happy atmosphere.

2.4 Class Tutor: the Key Role of All-Round Education

The class tutor is the soul of this model. They are not only the teacher of professional skills, but also the all-round guide of students' thought guidance, academic planning, life care and psychological guidance[3]. Through the organization and management of morning exercises and interest classes, the class mentor has a deep understanding of each student's interests, strengths and development potential, and provides students with personalized growth path planning. At the same time, the class teacher also undertakes the heavy responsibility of ideological and political education, guiding students to establish a correct world outlook, outlook on life and values through words and deeds, and cultivating students' sense of social responsibility and mission[4].

2.5 Operation Mechanism and Effect of the Model

Through the professional training of interest classes, the daily exercise of morning exercises and the all-round guidance of class instructors, this model has formed a virtuous cycle of mutual promotion and common development. On the one hand, under the encouragement of interest classes, students actively participate in morning exercises and form good exercise habits; On the other hand, the careful guidance of the class instructors not only improves the students' professional skills, but also gives the students great help and support in ideology and study. The implementation of this model has not only significantly improved the level of students' professional skills, but also achieved remarkable results in terms of comprehensive quality and social adaptability, laying a solid foundation for cultivating sports talents with "one specialty and multiple abilities"[5].

3 FEEDBACK AND ANALYSIS OF THE EFFECT OF THE TRINITY EDUCATION MODEL OF "INTEREST CLASS-MORNING EXERCISE-CLASS TUTOR"

3.1 Participation of Each Project

According to Table 1, it can be concluded that the total number of participants last semester was 224 (sample collection), and the interest class offered a total of 12 projects, including ball games, gymnastics and various emerging projects, which met the requirements of undergraduate training objectives of the College of Physical Education of Chengdu University. In general, the number of participants of each event is relatively average, among which the number of participants of badminton, tennis, free combat and Frisbee is more than that of other events, while the number of participants of sports dance, outdoor and fun fitness is less than that of other events.

Table 1 Questionnaire Survey on the Trinity Education Mode of "Interest Class-Morning Exercise-Class Tutor" in the Training of Physical Education Undergraduates of Chengdu University (previous)

Project	Number of participants	Percentage
Badminton	20	8.9%
Tennis	23	10.3%
Aerobics	17	7.6%
Dancesport	13	5.8%
Taekwondo	18	8.0%
Martial Arts	19	8.5%
Free Combat	25	11.2%
Outdoors	16	7.1%
Jumping Rope	19	8.5%
Frisbee	20	8.9%
Chinese Archery	18	8.0%
Happy body fitness	16	7.1%

According to the data in Table 2, 136 valid samples were recovered in the next semester, and 9 items were offered in the next semester, 3 less than that in the last semester, namely, aerobics, sports dance and happy physical fitness. Martial arts were also replaced by table tennis. The first item was deleted for the college in response to the changing situation and reasonable optimization of resource allocation. The other is that the pre-selection of aerobics, sports dance and happy physical fitness in this semester is too small, which may cause the cancellation. From the overall questionnaire of the next semester, there is a slight imbalance in each event, among which badminton and Taekwondo have the largest number of participants, tennis and skipping are normal, and the number of sanda and the newly opened table tennis is slightly insufficient.

Table 2 The Basic Situation of the Number of Participants of Each Project in the Trinity Education Model of "Interest Class-Morning Exercise-Class Tutor" in the Training of Physical Education Undergraduates of Chengdu University (next)

Projects	Number of participants	Percentage
Badminton	24	17.6%
Tennis	18	13.2%
Bodybuilding	16	11.8%
Taekwondo	24	17.6%
Free boxing	8	5.9%
Table tennis	8	5.9%
Jumping rope	15	11.0%
Frisbee	12	8.8%
China Shooting Arts	11	8.1%

3.2 Feedback and Analysis of the Effect of Education Model

3.2.1 The promotion of sports interest and affection

From Figure 1 to Figure 2, it can be concluded that no matter in the first semester or the second semester, the students' love degree of the selected interest class is not as high as their love degree of the selected interest class after learning it. Moreover, the proportion of students who dislike the selected interest class is greatly reduced after learning it, and the overall love degree is improved. It shows that students have a better understanding of the project after one semester of study, and feel the charm of the project from the persistence of one semester, so that it can achieve the purpose of the interest class, learn what they love and love what they learn.

Figure 1 Statistics of Middle School Students' Love Degree of the Selected Program before Learning during the Trinity Education Model of "Interest Class-Morning Exercise-Class Tutor" in the Training of Physical Education Undergraduates of Chengdu University (next issue)

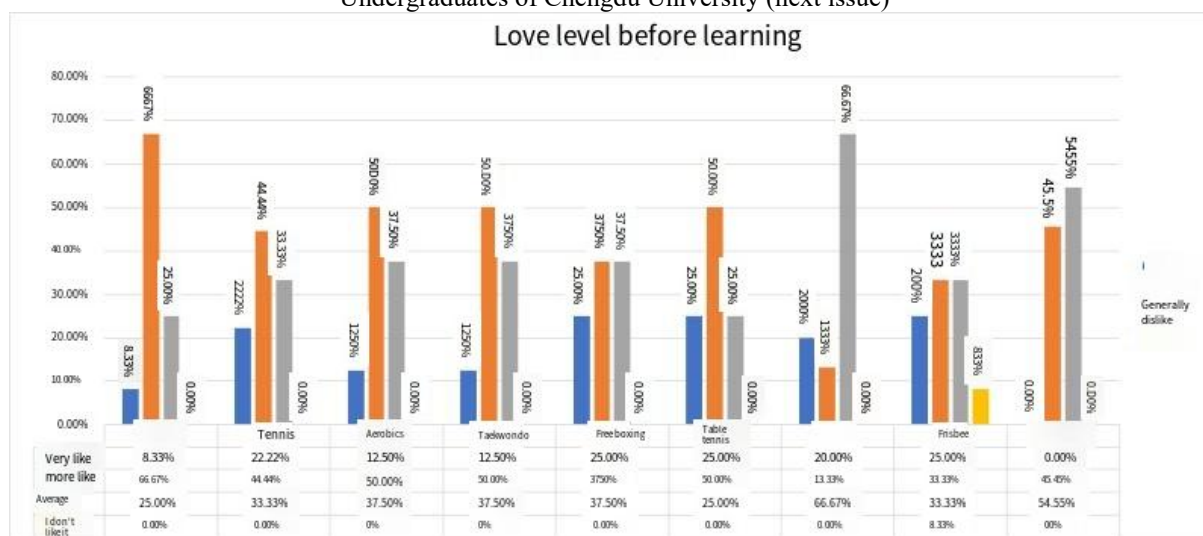
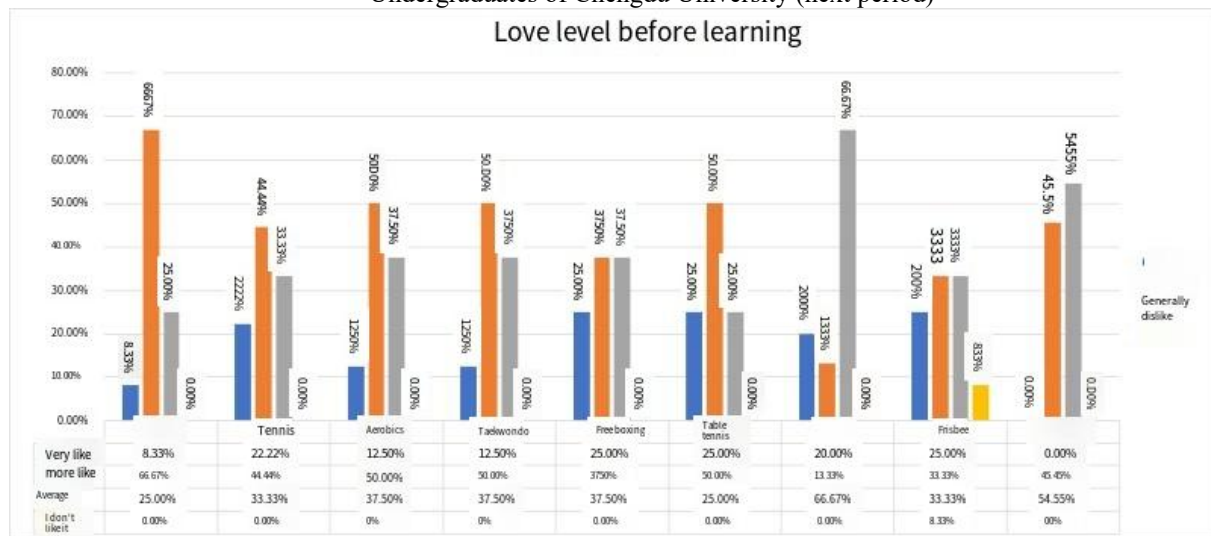


Figure 2 Statistics of Middle School Students' Love Degree before Learning the Selected Project in the Process of Carrying out the "Interest Class-Morning Exercise-Class Tutor" Trinity Mode in the Training of Physical Education Undergraduates of Chengdu University (next period)



3.2.2 The connection and consolidation of morning exercises and interest classes

According to the survey results in Table 3, most of the students believe that the skills they have learned in interest classes have been effectively consolidated through morning exercises. However, there are also some students who think that the reason for the lack of consolidation is that the content of morning exercises is inconsistent with what they have learned in the interest class. In addition, with the increase of academic difficulty and the shortage of time, some students need to use the morning exercise time to practice basic skills, resulting in the content of morning exercise and the content of interest class is not closely connected.

Table 3 In the Process of Carrying out the Trinity Education Model of "Interest Class-Morning Exercise-Class Tutor" in the Training of Physical Education Undergraduates of Chengdu University, Whether the Middle School Students Think that the Learning Content of the Morning Exercise Class has been Effectively Consolidated

Whether the learning content of the interest class has been effectively consolidated	Number of participants (previous/next)		Proportion (previous/next period)	
is	121	68	54%	50%
Not	29	40	12.9%	29.4%
A bit	74	28	33.1%	20.6%

3.2.3 The influence of interest classes on students' future development

Table 4 shows that most students believe that what they learn in interest classes will be helpful to their future employment. At the same time, the instructors of interest classes also play a good leading role in other aspects besides the teaching of professional skills. This includes moral education, help to set learning goals, professional development, college development, postgraduate entrance examination and learning confusion guidance. This shows that the trinity education model of "interest class-morning exercise-class tutor" not only helps to improve students' professional skill level, but also has a positive impact on students' future development.

Table 4 Survey Feedback on the Guidance of Interest Class Instructors in the Trinity Education Model of "Interest Class-Morning Exercise-Class Tutor" in the Training of Physical Education Undergraduates of Chengdu University in addition to Professional Skills Teaching

In addition to professional skills, other aspects of guidance	Number of people (previous/next)		Proportion (previous/next period)	
Lide education	143	103	63.8%	75.7%
Help set learning goals	120	88	53.6%	64.7%
Professional Development	177	94	79.0%	69.1%

College Development	56	37	25.0%	27.2%
Take a postgraduate exam	19	21	8.5%	15.4%
Learning Confusion Leading	66	65	29.5%	47.8%
Other (Remarks)	7	5	3.1%	3.7%

4 ADVANTAGES AND DISADVANTAGES OF THE “INTEREST CLASS-MORNING EXERCISE-CLASS TUTOR” TRINITY PARENTING MODEL

4.1 The Advantages of the “Interest Class-Morning Exercise-Class Tutor” Trinity Education Model

(1) In this mode of education, breaking the unitary and passive nature of the traditional sports teaching mode, so that students can give full play to their own initiative, highlighting the personalised cultivation of students, take the initiative to choose their own favourite projects as their own direction of development, and to learn their own needs of professional skills.

(2) The training of the interest classes in this model of nurturing mainly makes use of the students' spare time and is flexibly arranged by the class instructors, which is more flexible compared to the previous traditional courses that set fixed class times.

(3) The nurturing model fully brings the role of the class tutor into full play, in the interest class, the class tutor can give full play to his or her own strengths, a more complete grasp of the structure of the teaching materials and teaching characteristics, so as to continue to improve the class tutor's own teaching skills, thereby constantly improving the teaching effect.

(4) The nurturing model combines morning exercises, interest classes and class instructors, making it a trinity of links. Ji Liu in the study ‘China's basic education physical education curriculum reform on the reform of the professional curriculum of physical education in colleges and universities’, proposed that: basic education physical education curriculum in the curriculum concept, curriculum content, teaching methods, teaching evaluation, teacher behaviour, etc. have undergone great changes, and these changes on the construction and development of the professional curriculum of physical education in colleges and universities has put forward new requirements and challenges[6]. Each part of the Chengdu University undergraduate training programme and requirements as the fundamental guiding principle, but each part of the curriculum and the actual situation of the students to make the corresponding adjustments, morning exercises to practice the interest class after-school homework or the content of the basic skills, and then learn the new content in the interest class training, the class instructor on the movement technology of the key points of the targeted guidance, the class instructor to set up the interest class after-school training, so that the interest class The techniques learnt in the interest class are constantly repeated and consolidated, and the whole training programme and the progress of practice are under the control of the class tutor, so the class tutor is more aware of the students' mastery of the contents learnt, and is able to get twice the result with half the effort.

(5) The model of human education will be the ideological and political education throughout, Zheng Junling pointed out that the characteristics of the professional teachers in the subject determines the penetration of moral education in their teaching, which is conducive to the internalisation of the professional moral education into the ideological and moral qualities of the students. Therefore, professional teachers carry out ideological and political education in teaching, and their teaching effect is bound to be more significant[7].

4.2 Disadvantages of the “Interest Class-Morning Exercise-Class Tutor” Trinity Parenting Model

(1) The training time arrangement is unreasonable. The opening of the interest class takes up a lot of time after school, especially some projects interest class training time arrangement is not reasonable set in the professional arts class is more concentrated, students body consumption is too large, affecting the teaching effect of the arts after.

(2) the lack of school venues and equipment facilities. In the survey we found that there are many students believe that the interest class activity venues and teaching equipment is not enough, and the lack of school financial support, such as badminton interest class training will sometimes be affected by the school large-scale activities, will take up the gymnasium professional venues, resulting in students are unable to carry out training, thus affecting the overall progress, and fewer venues, it seems that the activities of the venue is very limited, and some of the sports teaching equipment in disrepair, can not meet the teaching requirements.

(3) The College and individual classes in the latter part of the year will be affected by the impact of large-scale activities on the gymnasium.

(4) The problem of lax management of the College and individual class tutors exists in the later stages of the programme. The increase in the proportion of instructors who do not teach on time and in good faith shows that there were some problems in the management of the college during this period, and the class instructors did not strictly require themselves, and the college did not introduce specific measures to effectively supervise the class instructors, so that the students could not learn too much in some interest classes.

5 CONCLUSIONS

- (1) In the three links of the education model, the core link is the interest class, the interest class to learn difficult new knowledge, consolidating and reviewing the morning exercise, the class tutor plays a leading role in the whole process, and ideological and political education.
- (2) The number of participants in the whole academic year is relatively average, among which the traditional small ball and emerging sports are the most popular, such as badminton and Frisbee. The programs are adjusted according to the needs of students in the next semester, and more than half of the students have adjusted the programs. The biggest reason for the adjustment is out of interest and future employment consideration; And the questionnaire also reflects that many students have a better understanding and love of the selected project after learning the interest class than before learning; During the implementation of this model, the students also believe that morning exercise can effectively consolidate the knowledge and skills they have learned, which is beneficial to their study and future employment. At the same time, students also have a high evaluation of the class instructors, they think that most of the class instructors are serious and responsible, and students with excellent skills can benefit a lot in the interest classes.
- (3) This education mode can stimulate students' initiative and enthusiasm in learning, break the passive and single nature of traditional education mode, and learn more knowledge and skills; In ideological and political aspects, it can play a positive guiding role in students' career planning; In life, it can enhance the friendship between classmates, broaden their social scope, physical and mental pleasure. For the class teacher, the class teacher in the interest class can give full play to their strengths, the structure of the teaching materials and teaching characteristics can have a more unique understanding, so as to constantly improve their teaching skills. However, there are still some problems that need to be solved in the implementation of this model, such as occupying students' spare time, making the training time of interest classes contradict their own arrangements, lax management in the later period of the school, and the lack of necessary teaching facilities and equipment. This model has both advantages and disadvantages, but in general, the advantages outweigh the disadvantages, and it also plays an important role in the reform of the education mode of colleges and universities.

CONFLICT OF INTEREST

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Zhang Xiao. Research on Training Mode of innovative talents for Physical education major in colleges and universities in Shandong Province. Soochow University, 2013.
- [2] Wang Xiaohui. Research on Individualized Talent Training Model of First-class Universities. Central China Normal University, 2014.
- [3] Wu Xiaoxia. Problems and Countermeasures of Class Tutor Work in Colleges and universities. China Electric Power Education, 2010, (07): 46-47.
- [4] Zhao Zhu. Give full play to the Function of Undergraduate Class Tutors as moral mentors. China Higher Education, 2008, (17): 38-39.
- [5] Yang Lei, Zhang Bingxiang. A Comparative Study and Analysis on the Cultivation of Physical education professionals in 8 colleges and universities in Anhui Province. Journal of Xichang University. Natural Science, 2013, 9, 21-23.
- [6] Ji Liu. Revelation of physical education curriculum reform of China's basic education on the curriculum reform of physical education in colleges and universities. Journal of Beijing Sport University, 2004, (06): 799-801.
- [7] Zheng Junling. Analysis of large ideological and political education mode in colleges and universities--Another discussion on the problem of collaborative education between professional teachers and ideological and political workers. Macroeconomic Management, 2017, (S1): 157-158.

RESEARCH AND PRACTICE ON THE CULTIVATION MODE OF COMPOSITE TRANSLATION TALENTS IN AGRICULTURE UNIVERSITIES UNDER THE BACKGROUND OF NEW LIBERAL ARTS

Fei Deng

School of Foreign Studies, South China Agricultural University, Guangzhou 510642, Guangdong, China.

Corresponding Author: Fei Deng, Email: faydra@126.com

Abstract: With the introduction of the New Humanities Studies concept, higher education faces new challenges and opportunities. Agricultural colleges bear the responsibility of providing high-level talents for agricultural modernization, making the cultivation of complex translation talent particularly important. This study takes the translation master's program at South China Agricultural University as an example to explore the cultivation mode for agricultural translation talent under the New Humanities context. Research indicates that by optimizing professional settings, improving course quality, innovating teaching models, and strengthening international cooperation, the comprehensive abilities of translation master's graduates can be effectively enhanced, providing strong support for the internationalization of agriculture.

Keywords: New liberal arts; Agriculture-related universities; Composite translation talents; Cultivation mode; Master of Translation and Interpreting (MTI)

1 INTRODUCTION

With the acceleration of globalization and the rapid development of modern agriculture, the demand for high-quality translation talent in agriculture-related fields is increasing. This demand not only encompasses basic language conversion abilities but also requires a deep understanding of professional terminology, cultural backgrounds, and industry trends. Meanwhile, recent data from the Ministry of Education shows that the employment rate of translation master's graduates in agricultural colleges reaches 94%, reflecting the market's urgent need for such talent. However, with ongoing innovations in new technologies like artificial intelligence, the traditional translation profession is undergoing profound changes, necessitating stronger technological adaptability from translation professionals.

In recent years, the concept of New Humanities education has gradually been introduced into higher education, emphasizing interdisciplinary integration and practice orientation, thereby providing theoretical support for further innovation in translation education. Many existing translation master's cultivation modes heavily emphasize language skills training, showing an insufficient combination with fields like agricultural science and information technology. The core issue of this study is how to strengthen interdisciplinary education for translation master programs under the New Humanities perspective to better meet the needs of modern agricultural development.

The goal of this study is to explore how to construct a new translation master's cultivation mode through the integration of constructivist learning theory and interdisciplinary education theory. Constructivist learning theory emphasizes that learners actively build knowledge systems through practice and reflection, which is suitable for real project operations in translation education. Meanwhile, interdisciplinary education theory advocates for knowledge integration, addressing complex problems through the convergence of different disciplinary perspectives, which holds significant application value in the training of agricultural translation talent.

This study intends not only to theoretically explore the feasibility of the new cultivation mode but also to showcase its practical effectiveness through empirical research. The hope is to provide feasible suggestions for agricultural colleges in terms of curriculum design, faculty development, and the expansion of practical opportunities in translation talent training, thereby enhancing students' comprehensive qualities and market competitiveness.

Through an in-depth analysis of existing translation education models and theoretical innovations, this study strives to provide a sustainable developmental path for the cultivation of translation master's graduates in agricultural colleges in the new era. This will help graduates stand out in the complex and dynamic environment of international agricultural cooperation. This not only contributes to the personal development of students but also aids in promoting the internationalization of Chinese agriculture.

2 THE DEMAND FOR AGRICULTURAL TRANSLATION TALENT IN SOCIETY

With the deepening of global agricultural cooperation, China's influence in the international agricultural market is continuously rising. This process has brought about a substantial demand for agricultural information exchange, driving the urgent need for high-quality translation talent with complex background knowledge and language skills [1-2]. This demand is not merely aimed at overcoming language barriers but also at promoting cross-cultural communication and business cooperation. Firstly, the international market's acceptance of Chinese agricultural products is steadily

increasing, which has effectively spurred the growth of agricultural product exports. As communication bridges, agricultural translation talent needs to possess knowledge of professional terminology and an understanding of the industry background to ensure accurate transmission and cultural adaptation of product information [3-4]. Such demand is not limited to language conversion but also involves a deep insight into the culture of target markets and consumer behavior [5]. Secondly, as key participants in global scientific research cooperation, Chinese agricultural research institutions urgently need high-quality translation services to share international academic achievements. Translation professionals need not only foreign language skills but also expertise in agricultural science to facilitate the publication of international journals, academic conference exchanges, and the smooth progression of scientific research cooperation projects [6]. This interdisciplinary demand has drawn widespread attention in recent years' research [7]. Additionally, the gradual integration of international agricultural policies has increased the demand for translating policy documents and legal regulations. The agricultural sector involves coordinating interests across multiple countries and regions, requiring translation professionals to have a sensitivity to policy backgrounds and a professional judgment ability to ensure the accurate transmission and implementation of policy information [8]. These demands have directly driven the transformation of translation talent cultivation modes in agricultural colleges, emphasizing the comprehensive utilization of interdisciplinary knowledge and the cultivation of high-level practical abilities [9]. Therefore, integrating the New Humanities educational ideology into translation education and highlighting its cultivation of students' interdisciplinary comprehensive qualities have become essential avenues to address these challenges [10]. Current market trends indicate that the demand for agricultural translation talent is not only steadily increasing in quantity but also setting higher standards for quality [11]. Employers are more inclined to seek comprehensive talent capable of accurately and efficiently conveying professional information in complex international environments [12]. Hence, agricultural colleges need to continuously adjust their educational strategies to ensure that graduates have the diverse abilities and innovative thinking required to meet the demands of the modern agricultural industry.

It is evident that social demand for agricultural translation talent is multifaceted and complex, especially emphasizing a deep integration of translation skills and agricultural science knowledge. This lays the foundation for new perspectives on the translation master's cultivation mode explored in this study and provides a reference basis for agricultural colleges to formulate market-oriented curriculum designs and practice-oriented approaches.

3 ANALYSIS OF THE CURRENT STATE OF AGRICULTURAL UNIVERSITY TRANSLATION MASTER'S PROGRAMS

Agricultural universities face numerous challenges in cultivating translation master's students, stemming from the ever-evolving international market and the increasing demands of interdisciplinary studies [13]. Currently, many agricultural universities need to adjust their cultivation models to better meet the market and society's demand for high-caliber interdisciplinary translation talent. First, regarding curriculum design, translation master's programs at agricultural universities tend to focus on developing language skills more than engaging with specialized agricultural science knowledge, which leaves students struggling with complex technical texts [14]. Tao Youlan (2021) pointed out that the lack of a multidisciplinary teaching strategy is a weak point in the current cultivation models. Secondly, practical teaching needs enhancement. The lack of practical elements prevents students from applying theory to real-world situations, weakening their immediate job-readiness in professional environments [8]. Murray (2020) mentioned that cooperation with international companies to increase internship and extracurricular opportunities can significantly improve students' practical abilities and intercultural communication skills [2]. Moreover, developing faculty is a critical concern. Some agricultural universities have an imbalanced professional background among their teaching staff, with some lacking enough exposure to agricultural areas to provide adequate professional guidance [15]. Therefore, strengthening teachers' professional training and international exchange is an effective way to enhance the results of master's translation programs [16]. Existing research also shows that many translation programs lack clear assessment mechanisms, making it difficult to effectively measure students' overall competence improvements [17]. Such a deficiency not only affects the evaluation of student learning outcomes but also hinders course design optimization and adjustments. Evidently, there is room for improvement in curriculum design, practical teaching, faculty development, and assessment mechanisms in the current cultivation of translation master's students at agricultural universities. Only through systematic reform and continuous resource investment can we meet the actual market demand for high-level agricultural translation professionals.

4 THEORETICAL FRAMEWORK

The theoretical foundation of this research is based on constructivist learning theory and interdisciplinary education theory. Together, these guide the innovation and practice of cultivation agricultural translation master's talent.

4.1 Constructivist Learning Theory

Constructivist learning theory, as an important branch of modern educational theory, has been further developed by contemporary scholars and centers around the active and contextual nature of learning. This theory posits that learning is an active process of constructing knowledge rather than merely receiving and storing information. In this process, students continuously build and refine their cognitive structures through practice, interaction, and reflection [18]. Educational practices advocated by constructivist learning theory encourage teachers to become learning facilitators by

designing teaching activities closely linked to real-life contexts, such as translation projects and case studies, to inspire students' curiosity and creativity. In the cultivation of agricultural translation master's students, the application of constructivist learning theory is particularly crucial. By simulating real translation scenarios, students can learn through trial and error, reflection, and adjustment, thereby deepening their understanding of translation techniques and enhancing their ability to solve real-world problems. This "learning by doing" approach not only facilitates the internalization of knowledge but also develops critical thinking, teamwork, and self-learning skills, laying a solid foundation for becoming well-rounded translation professionals.

4.2 Interdisciplinary Education Theory

Interdisciplinary education theory, elucidated by scholars like Repko (2008), serves as an effective strategy to address complex social issues by advocating breaking disciplinary boundaries and promoting the exchange and integration of knowledge from different fields to form a more comprehensive and in-depth understanding of problems [19]. In the context of cultivating agricultural translation talent, interdisciplinary education involves organically integrating knowledge from agricultural sciences, translation studies, and other related fields to create a comprehensive curriculum and teaching model. Through interdisciplinary education, students not only acquire solid translation skills but also gain a deep understanding of professional knowledge, industry standards, and cultural contexts in the agricultural field, allowing them to convey agricultural information more accurately in translation practice, thereby promoting international exchange and cooperation. Furthermore, interdisciplinary education contributes to developing students' innovative thinking and problem-solving skills, enabling them to flexibly apply multidisciplinary knowledge to propose innovative solutions when faced with complex and changing translation tasks.

4.3 Integration and Application of the Theoretical Framework

This research closely integrates constructivist learning theory with interdisciplinary education theory, aiming to establish a cultivation model for agricultural translation master's students that emphasizes both active learning and knowledge construction while also highlighting the integration and application of interdisciplinary knowledge. In this model, teachers serve as guides, designing a series of interdisciplinary translation projects based on real-world scenarios to lead students to learn through practice and grow through reflection. At the same time, through interdisciplinary courses set and integrated, students will comprehensively enhance their translation skills, agricultural knowledge, and overall competence, preparing them thoroughly for becoming well-rounded translation talents suited to the demands of the new liberal arts background.

5 RESEARCH ON THE CULTIVATION MODE OF COMPOSITE AGRICULTURAL TRANSLATION TALENTS UNDER THE BACKGROUND OF NEW LIBERAL ARTS

Guided by the three main strategies of "professional optimization," "course quality enhancement," and "model innovation" in the construction of new liberal arts, this study closely integrates the practice of cultivation translation master's students at South China Agricultural University. Based on constructivist learning theory and interdisciplinary education theory, it explores and discusses a systematic approach to cultivating interdisciplinary agricultural translation talents. This research aims to cultivate high-quality talents who possess both agricultural knowledge and translation skills by optimizing professional settings, enhancing course quality, and innovating teaching models, to meet the growing demands of modern agricultural development and international exchange.

5.1 Professional Optimization

Professional optimization is a key path to cultivating interdisciplinary agricultural translation talents. The strategy aims to clarify cultivation directions, strengthen interdisciplinary learning, and improve the overall quality of the teaching team. Through these measures, the goal is to nurture translation talents with multidisciplinary backgrounds, cutting-edge knowledge, and innovative capabilities to meet the urgent needs of social and economic development. The specific implementation plan is as follows:

5.1.1 Clarify the cultivation direction and set up interdisciplinary courses

Firstly, the cultivation direction of the "agricultural translation" major is clarified, focusing on cultivating talents with solid agricultural knowledge and high-level translation skills. This clear direction allows students to plan their learning path from admission, concentrating on translation practice and theoretical study in the agricultural field, laying a solid foundation for future career development. To achieve this goal, we have set up a series of interdisciplinary courses such as "Agricultural Engineering Technology and Translation" and "International Trade of Agricultural Products and Translation," closely integrating agricultural science with translation studies. These courses not only provide rich theoretical knowledge but also incorporate extensive practical opportunities to enhance students' practical skills and adaptability. For example, the "Agricultural Engineering Technology and Translation" course arranges for students to visit agricultural research institutions for field translation practice, combining theoretical knowledge with practical application. To maintain the adaptability and foresight of the major, we incorporate the latest industry developments and technological trends into the curriculum. By collaborating closely with agricultural enterprises, industry

associations, and research institutions, we jointly develop courses and training programs to ensure that course content is closely aligned with industry needs, enhancing students' professional competitiveness.

5.1.2 Building a high-quality teaching team to stimulate students' innovative thinking

The construction of the teaching team is an important support for professional optimization. We actively recruit high-level teachers with experience in agricultural translation and relevant research backgrounds to form an interdisciplinary teaching team. These teachers come from various fields such as agricultural science, translation studies, and international trade, providing students with broad and in-depth guidance. We regularly organize professional training and academic exchanges in agricultural translation for teachers to improve their professional level and teaching ability. Teachers are encouraged to participate in international cooperation projects and translation practices, integrating the latest information and experiences from the fields of agriculture and translation into teaching. For example, teachers regularly attend international agricultural translation conferences to learn about the latest translation technologies and industry trends and pass this new knowledge on to students. We also encourage teachers to combine teaching with research, promoting teaching quality through research projects. A special project on "Applied Research in Agricultural Translation" is established, where teachers lead students in research practice, achieving mutual enhancement of teaching and learning. This teaching model not only cultivates students' research capabilities but also stimulates their innovative thinking.

In summary, through clarifying cultivation directions and strengthening interdisciplinary learning, the cultivation path for interdisciplinary agricultural translation talents becomes more systematic, scientific, and professional. These measures provide students with clear learning paths and a comprehensive knowledge system, ensuring they possess solid professional knowledge and translation skills, as well as high-quality educational resources and continuous academic support provided by a high-level teaching team. These efforts will effectively enhance the comprehensive quality and employment competitiveness of agricultural translation talents, meeting the development needs of modern agricultural internationalization.

5.2 Course Quality Enhancement

Course quality enhancement is a core aspect of improving the cultivating quality of interdisciplinary agricultural translation talents. By optimizing core courses, enhancing practical teaching, and promoting research cultivation, we have significantly improved students' professional capabilities and comprehensive qualities. The practice of cultivating translation master's students at South China Agricultural University in course quality enhancement is as follows.

5.2.1 Core course optimization

Core course optimization involves three aspects: basic translation courses, specialized translation courses, and cross-cultural communication courses. Firstly, the basic translation courses include "Introduction to Translation," "Interpretation," "Translation Theory and Techniques," "Applied Translation," and "A Brief History of Chinese and Western Translation," through which students can establish a solid foundation in general translation. Secondly, specialized translation courses focus on agricultural terminology and technical document translation. For example, courses like "Translation of Agricultural Scientific Literature" and "Reading and Translating Agricultural Economics Literature" teach students how to handle complex agricultural professional documents, developing their ability to accurately use specialized terminology. The course "Translation of Agricultural Policies and Regulations" helps students understand and translate agricultural policy documents and international agricultural regulations, improving their translation level of policy texts. By enriching the course case library and introducing diverse agricultural translation examples, students' understanding and application of professional knowledge are enhanced. Thirdly, cross-cultural communication courses develop students' communication skills in international agricultural exchanges and cooperation. For example, courses like "Comparative Study and Translation of Chinese and English Languages," "Chinese Language and Culture," and "Translation and Appreciation of Agricultural Culture" help students gain an in-depth understanding of Chinese culture and the agricultural cultures, trade habits, and communication methods of different countries and regions, enhancing their communication and expression skills on international platforms.

5.2.2 Practical teaching

The enhancement of practical teaching is mainly achieved through real-life translation courses, interpretation training, and the construction of internships and bases. By partnering with agricultural enterprises and research institutions, we provide genuine translation practice opportunities. For example, cooperating with agricultural firms to conduct "Agricultural Products Expo Translation Internships" allows students to act as translators at expos, enhancing their practical skills. Additionally, we work with professional interpretation agencies to offer interpretation training courses to improve students' on-site interpretation abilities. We also establish translation internship bases in agricultural enterprises and research institutions, providing long-term practice opportunities for students.

The enhancement is primarily realized through real-life translation courses, interpretation training, and internship base construction. Firstly, establishing real-life translation courses is crucial and requires cooperation with agricultural enterprises and research institutions to provide real translation practice opportunities. For instance, students can participate in the spring and autumn Canton Fairs annually, serving as translators for agricultural enterprises and companies, directly engaging with international agricultural product exchanges and trade, thus enhancing their practical skills. Secondly, through collaboration with professional interpretation agencies, interpretation training courses are set up. For example, selecting international agriculture conferences as training scenarios, simulating real interpretation

environments for practical exercises, enhances students' on-site interpretation capabilities. Moreover, establishing translation internship bases in agricultural enterprises and research institutions serves as an essential method for providing long-term practical opportunities. For example, partnering with large agricultural technology companies to set up an "Agricultural Technology Translation Internship Base" allows students to translate technical documents, product materials, and international collaboration files during their internships, accumulating rich practical experience.

5.2.3 Research cultivation

Research cultivation is achieved through project research, writing translation practice reports, and scientific research competitions and activities. Firstly, students are encouraged to participate in agricultural translation research projects, with a "Research on Application of Agricultural Translation" designated as a special topic. For instance, studying how to introduce agricultural technological achievements to the international community and translating agricultural policy documents. Through these projects, students not only gain in-depth understanding of the theories and practices of agricultural translation but also hone their research skills. Secondly, students are required to have their theses structured as translation practice reports, with topics focusing on translation tasks in the school's traditional agricultural specialties, covering fields like agriculture, forestry, veterinary medicine, animal science, and resource and environmental sciences, aiming to address and resolve specific practical issues in agricultural translation. Furthermore, students are encouraged to participate in various agricultural translation research competitions and academic activities. For example, participating in the "Agricultural Translation Competition" enables students to showcase their translation abilities, enhancing their professional levels.

Enhancing course quality is a key step in improving the cultivation quality of complex agricultural translation talent. By optimizing agricultural specialty courses, professional translation courses, and cross-cultural communication courses, we ensure students possess solid professional knowledge and cross-cultural communication skills. Furthermore, through introducing real-life translation, interpretation training, and establishing internship bases, we strengthen students' practical capabilities and real-world experience. Additionally, fostering student participation in research projects, specialized agricultural direction translation practice reports, and various research competitions also enhances their research capabilities and academic levels. Overall, course quality enhancement not only comprehensively elevates teaching quality but also nurtures high-quality agricultural translation talents with an international perspective, practical skills, and innovative spirit.

5.3 Model Innovation

To cultivate high-quality, interdisciplinary agricultural translation talents that meet the needs of modern society, the Translation Master's program at South China Agricultural University has implemented comprehensive innovation in its model. This innovation encompasses the renewal of educational and teaching concepts, the innovation of teaching methods, the construction of online teaching resources, and the exploration of integration models of industry-education and science-education.

5.3.1 Updating educational and teaching concepts

We emphasize a "student-centered" approach. The core of this strategy is to make students the main focus of the classroom, stimulating their active participation and ability for self-directed learning. For instance, in courses like "Reading and Translating Agricultural Economic Literature" and "Reading Ecological Environment Literature," interactive classrooms, group discussions, and case analysis are encouraged to enhance students' learning experience and depth of understanding. Additionally, course design focuses on interdisciplinary integration, combining basic knowledge of environmental science with agricultural translation skills, fostering students' interdisciplinary thinking abilities. This comprehensive learning model enriches students' knowledge structures and enhances their ability to solve complex problems.

5.3.2 Innovation in teaching methods

Innovative teaching methods are critical for improving students' practical application skills. The flipped classroom model integrates traditional classroom teaching with online learning, promoting students' self-learning and practical capabilities. For example, in the "Agricultural Science and Technology Translation" course, students watch instructional videos on an online platform, while classroom time is reserved for problem-solving and teacher-student discussions. Project-based learning enhances students' ability to comprehensively apply knowledge through participation in real projects, such as the "Agricultural Product Export Translation Project," where students experience the translation practice and market analysis process, thus accumulating practical experience. The use of case-based teaching can help students better grasp translation skills and practical application through analysis of real cases.

5.3.3 Online teaching resource construction

Building a rich online teaching resource is a vital part of model innovation. By establishing an online course platform for agricultural translation, we provide professional agricultural knowledge, translation skills, and case analysis, enabling students to learn independently, expand their knowledge, and improve learning efficiency. Moreover, we compile and publish digital textbooks that integrate multimedia interactive content, meeting different learning needs and enhancing learning outcomes. The introduction of virtual reality (VR) technology, such as developing a virtual agricultural translation teaching system, offers real-world scenario exploration and translation practice, further enhancing students' practical skills.

5.3.4 Integration of industry-education and science-education models

We strengthen cooperation with agricultural enterprises and industry associations to provide students with internship and practical opportunities. Additionally, we emphasize improving students' scientific research capabilities and innovative thinking through participation in research projects. For example, in the "Agricultural Science and Technology Translation Research" course, students participate in actual research projects, which not only hone their research abilities but also translate scientific research outcomes into practical applications. In summary, model innovation through the renewal of educational concepts, improvement in teaching methods, and resource diversification comprehensively enhances the quality of cultivating agricultural translation talents [20]. This innovation not only significantly improves students' professional abilities and comprehensive qualities but also better adapts them to the developmental needs of modern society, promoting the modernization and internationalization of talent cultivation. Through these efforts, we can effectively cultivate highly competitive agricultural translation talents with global competitiveness.

6 CONCLUSION

This study proposes a series of innovative measures for cultivating interdisciplinary translation talents in agricultural universities under the background of new humanities disciplines, including professional optimization, course quality improvement, and model innovation. The research indicates that these measures can effectively enhance the comprehensive quality and international competitiveness of translation master's graduates in agricultural universities, meeting the needs of modern agricultural internationalization. Future research can further explore the application effects of these models in different agricultural universities to continually advance the cultivation of agricultural translation talents.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

FUNDING

The 14th Five-Year Plan Project of Guangzhou Municipal Philosophy and Social Science, "Research on the Media Construction and Communication of Guangzhou's International Image" (Project No. 2023GZGJ230); 2021 Guangdong Provincial Undergraduate University Teaching Quality and Educational Reform Project: Exploration and Practice of Integrating Cross-cultural Ideological Education with Professional Application Abilities in the New Era for Foreign Language Majors (Project Number: 77); 2021 Annual Quality Engineering and Teaching Reform Projects of South China Agricultural University: Exploration and Practice of Integrating Cross-cultural Ideological Education with Professional Application Abilities in the New Era for Foreign Language Majors (Project Number: JG21025).

REFERENCES

- [1] Zhang X, Li Y. Global Agricultural Cooperation and Translation Talents Demand. *Journal of Modern Agriculture*, 2021, 12(4): 235-247.
- [2] Mu lei. An In-depth Study of the Demand for Agricultural Translation Talent. *Journal of Translation and Culture*, 2020, 6(2): 113-125.
- [3] Wang L, Liu Q, Chen H. Translation Needs for Agricultural Export Products. *Journal of Agricultural Trade*, 2020, 5(2): 89-95.
- [4] Tao Y. Language Transformation and Cultural Adaptation in the Export of Agricultural Products. *International Journal of Language and Cultural Exchange*, 2021, 10(3): 297-305.
- [5] Chen J, Hu Y. Cultural Insights in Market Translation. *International Journal of Business Linguistics*, 2019, 7(1): 101-110.
- [6] Liu J, Gao W. The Role of Translation in Chinese Agricultural Research Collaboration. *Academic Exchange Quarterly*, 2020, 14(3): 345-351.
- [7] Huang Z. Understanding Multidisciplinary Needs in Translation. *Translational Studies Review*, 2021, 9(5): 456-467.
- [8] Zhao Y. Enhancing Practical Training in Translation Education. *Journal of Applied Education*, 2020, 5(2): 115-124.
- [9] Yang S, Xu L. Reforming Translation Education in Agricultural Universities. *Journal of Education Reform*, 2021, 8(4): 276-289.
- [10] Li X, Zhang F, Tang M. Integration of Interdisciplinary Education in Translation Studies. *Journal of New Humanities*, 2022, 7(3): 367-378.
- [11] Guo Y, Wang T. Trends in Translation Talent Demand in Agriculture. *Market Analysis and Insight*, 2023, 10(2): 143-152.
- [12] Sun B. Employer Expectations for Translators in Agriculture. *Career Development Quarterly*, 2023, 9(1): 213-219.
- [13] Wu H, Yang L. Challenges in the Cultivation of Translation Graduates in Agriculture Universities. *Journal of Modern Education*, 2021, 15(1): 23-34.

- [14] Li X, Cheng D. Cross-disciplinary Challenges in Agricultural Translation Programs. *Journal of Education & Culture*, 2021, 26(2): 87-98.
- [15] Zhang T, Huang X. Faculty Development in Translation Studies: Current Situations and Suggestions. *Journal of Language & Translation*, 2019, 8(4): 245-262.
- [16] Wang L, Li R, Sun J. Professional Development and Cross-cultural Communication Skills in Translation Education. *Journal of Higher Education Studies*, 2022, 12(1): 90-102.
- [17] Yang S, Xu F, Zhao L. Assessing Translation Programs: Developing Effective Evaluation Mechanisms. *Translation and Higher Education Quarterly*, 2022, 14(2): 192-205.
- [18] Schunk D H. *Learning theories: An educational perspective* (6th ed.). New York: Pearson, 2012.
- [19] Repko A F. *Interdisciplinary Research: Process and Theory*. Sage Publications, 2008.
- [20] Zhao K. Legal and Policy Translation in Agricultural Integration. *Journal of International Law and Policy*, 2022, 11(6): 521-534.

