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Dr. Manoj Kumar

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FOREWORD

I am pleased to put into the hands of readers Volume-7; Issue-4: 2025 (July-August 2025) of “**Journal of Humanities and Education Development (JHED)** (ISSN: 2581-8651)”, an international journal which publishes peer reviewed quality research papers on a wide variety of topics related to, Humanities and Education development. Looking to the keen interest shown by the authors and readers, the editorial board has decided to release print issue also, journal issue will be available in various library also in print and online version. This will motivate authors for quick publication of their research papers. Even with these changes our objective remains the same, that is, to encourage young researchers and academicians to think innovatively and share their research findings with others for the betterment of mankind. This journal has DOI (Digital Object Identifier) also, this will improve citation of research papers.

I thank all the authors of the research papers for contributing their scholarly articles. Despite many challenges, the entire editorial board has worked tirelessly and helped me to bring out this issue of the journal well in time. They all deserve my heartfelt thanks.

Finally, I hope the readers will make good use of this valuable research material and continue to contribute their research finding for publication in this journal. Constructive comments and suggestions from our readers are welcome for further improvement of the quality and usefulness of the journal.

With warm regards.



Dr. Manoj Kumar

Editor-in-Chief

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Application of the Framework of Reference for Intercultural Competence Teaching in China's Foreign Language Education in Senior High School English Reading Instruction: A Case Study

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Abstract

Cultivating intercultural competence is a critical objective in English language teaching. This paper explores the practical application and pedagogical reflections of integrating the Framework of Reference for Intercultural Competence Teaching into senior high school English reading instruction. By employing backward design aligned with the framework, the study aims to foster students' deep comprehension of texts, enhance their intercultural awareness, cultivate positive intercultural attitudes, and ultimately develop their intercultural competence.



Keywords— *English teaching, instructional design, intercultural communication competence, reading instruction.*

I. INTRODUCTION

With the accelerating trend of globalization, international exchanges have become increasingly frequent. As a global lingua franca, English serves as a vital tool for communication, facilitating the integration of science, technology, and cultural exchanges worldwide. Consequently, mastering English has become more crucial than ever. In response to this global shift, China's current English curriculum standards—the Compulsory Education English Curriculum Standards (2022 Edition) and the Senior High School English Curriculum Standards (2017 Edition, Revised 2020)—explicitly emphasize that “learning and using English helps students understand diverse cultures, compare cultural similarities and differences, and draw upon cultural strengths. This process fosters the development of intercultural communication awareness and competence”, “One of the core principles of English teaching is to guide students in learning, comprehending, and appreciating outstanding Chinese and foreign cultures, nurturing patriotism, reinforcing cultural confidence, broadening international perspectives, enhancing global understanding, and progressively improving intercultural communication skills to form correct worldviews, outlooks on life, and values.”

Over the past four decades, academia has conducted extensive research on defining Intercultural Communication Competence (ICC) and developing assessment tools (Zhang & Yao, 2020). However, practical guidance for high school English teachers on implementing ICC instruction remains insufficient. Many educators lack experience in applying intercultural foreign language teaching principles in classrooms, particularly in designing and executing ICC-aligned activities based on textbooks. To address this gap, in 2022, scholar Zhang H. L. and her research team developed the Framework of Reference for Intercultural Competence Teaching in China's Foreign Language Education—a comprehensive framework spanning primary, secondary, and tertiary education.

This paper presents a case study of an English reading lesson centered on Chinese cultural themes, illustrating the practical application and pedagogical reflections of integrating the Framework of Reference for Intercultural Competence Teaching into senior high school English reading instruction.

II. INTERCULTURAL FOREIGN LANGUAGE TEACHING

2.1 Intercultural Communication Competence

Byram (1997) defines intercultural communication competence as the ability of communicators to act as mediators between different linguistic and cultural groups, facilitating mutual understanding and coordination. Spitzberg (2000) describes ICC as the capacity to behave appropriately and effectively in specific communicative contexts. Bennett & Bennett (2004) characterize ICC as the ability to overcome ethnocentric tendencies, transform self-identity, integrate diverse cultural elements, and navigate cultural boundaries with ease. Scholars widely agree that ICC entails the capability to engage in appropriate and effective communication with individuals from different cultural backgrounds in various interactional settings (Deardorff, 2006; Dai, 2018).

2.2 Dimensions of Intercultural Communication Competence

Byram (1997) proposed the ABC model of ICC from the perspective of language and culture teaching, which remains the most widely accepted and applied foundational framework to date.

Affective Dimension: Refers to an individual's subjective willingness to understand, appreciate, and accept cultural differences.

Behavioral Dimension: Encompasses the ability to accomplish tasks and achieve communicative goals in intercultural interactions.

Cognitive Dimension: Involves the understanding of salient features in one's own culture and others' cultures.

2.3 Intercultural Foreign Language Teaching

Scholars widely agree that the overarching goal of intercultural foreign language teaching is learner-centered, integrating language and culture instruction naturally to cultivate learners' ICC. This requires aligning pedagogical approaches with the evaluative dimensions of ICC. According to the ABC model, cognitive development primarily relies on knowledge transmission, which can be acquired in the short term. In contrast, affective and behavioral dimensions necessitate cumulative practical experience.

China's current English curriculum standards present vague and ambiguous objectives for ICC teaching. This ambiguity leads many foreign language teachers to neglect ICC development in classrooms, undermining the educational value of intercultural instruction. To address these challenges, scholar Zhang H. L. developed the Framework of Reference for Intercultural Competence Teaching in China's Foreign Language Education, which provides clear guidelines across all educational stages. The specific requirements for senior high school are outlined in

Table 1.

administered pre- and post-lesson to evaluate changes in students' ICC.

III. METHODOLOGY

3.1 Questionnaire

This study adapted Zhang and Wu's (2022) ICC teaching framework to design a questionnaire assessing knowledge, attitudes, and skills related to ICC. Each questionnaire contained 18 AI-generated items covering foreign cultural knowledge, Chinese cultural knowledge, general cultural knowledge, cultural awareness, national identity, global awareness, intercultural experiences, intercultural dialogue, and intercultural exploration. The questionnaire served as an intercultural competence assessment tool,

3.2 Interviews

Following the lesson, researchers conducted semi-structured interviews with students based on a predefined interview outline. These interviews aimed to capture students' perceptions of intercultural competence instruction and provide deeper insights into their intercultural attitudes and skills.

3.3 Reflective Journals

Post-lesson, researchers maintained reflective journals documenting classroom observations, student challenges, and the feasibility of the framework.

Table 1 Framework of Reference for ICC Teaching in China's Foreign Language Education (senior high school part)

Competence Dimensions		Senior High School Level
Knowledge	Foreign Cultural Knowledge	K-FCK-3 Basic understanding of the historical geography, sociocultural, political-economic, and literary-artistic knowledge of countries involved in the textbook and reading materials; comprehension of the cultural connotations of vocabulary, idioms, and allusions in the target language; in-depth knowledge of the lifestyles, communication styles, thinking patterns, and value systems of cultural groups covered in the textbook.
	Chinese Cultural Knowledge	K-CCK-3 Understand the historical timeline of China and its key events, representative figures, and classic literary and artistic works in each period; grasp the contemporary developments in Chinese society, politics, economy, and technological advancement; comprehend the communication styles and thinking patterns of diverse cultural groups in China, and gain a profound understanding of the core socialist values.
	General Cultural Knowledge	K-GCK-3 Deeply understand the connotation of culture and its interaction with language; grasp concepts such as stereotypes, ethnocentrism, and culture shock and their impact on intercultural communication; comprehend the notion of a global community of shared future and the shared cultural values of humanity.
Attitudes	Cultural Awareness	A-CA-3 Maintain a respectful and understanding attitude toward diverse cultures, appreciating cultural diversity; develop a strong sense of Chinese cultural identity through historical and cultural understanding; demonstrate willingness to interact and collaborate with people from different cultures, possessing basic empathy.
	National Identity	A-NI-3 Actively engage with contemporary China's role and challenges in global politics, economy, and technological development; enthusiastically use the target language to share Chinese narratives, reflecting cultural confidence.
	Global Mindedness	A-GM-3 Demonstrate enthusiasm for following global developments, understanding humanity's shared challenges, and enhancing international understanding and competitiveness through broadened knowledge of world cultures.
Skills	Intercultural Experiencing	S-IEr-3 Listen attentively to cultural narratives from others, observe carefully, and reflect actively to form informed understandings of different cultures; use the target language to describe and compare similarities and differences in cultural behaviors and thinking patterns among diverse cultural groups.
	Intercultural Dialogue	S-ID-3 Use the target language to narrate Chinese cultural stories and engage in in-depth exchanges of perspectives with individuals from different cultural backgrounds; when encountering misunderstandings or conflicts in intercultural communication, attempt to analyze and resolve issues from the perspective of cultural differences.
	Intercultural Dialogue	S-IEI-3 Independently seek and acquire information on cultural phenomena of interest, engaging in exploratory learning; through deep reflection on personal intercultural communication experiences and learning practices, grasp universal principles of intercultural communication and employ effective learning strategies.

IV. APPLICATION OF THE ICC FRAMEWORK IN SENIOR HIGH SCHOOL ENGLISH READING INSTRUCTION

4.1 Backward Design

Backward design, proposed by Wiggins and McTighe (2003) as “Understanding by Design (UbD)”, is a results-oriented instructional model. Wiggins and McTighe (2017) argue that teachers should define desired outcomes through four components: established goals, expected understandings, essential questions, and acquired knowledge and skills. This approach enables teachers to create English learning activities that highlight Cultural Awareness while assessing their implementation, perfectly aligning with the “teaching-learning-assessment integration” principle.

A hallmark of backward design is its performance assessment tasks—authentic, challenging assignments requiring students to apply knowledge comprehensively. These tasks provide real-world contexts where assessment criteria are transparent to students, allowing their performance to serve as evaluative evidence. Additional evidence may include quizzes, exams, classroom observations, homework, and learning logs. After establishing assessment methods, teachers must also facilitate student self-reflection and self-assessment.

The following section demonstrates a sample lesson plan for a senior high school English class that emphasizes Cultural Awareness, using the reading text *The Chinese Writing System: Connecting the Past and the Present* from Unit 5 Reading & Thinking part of the Compulsory Volume 1 of the People’s Education Press Senior High School English Textbook (full text in appendix).

4.2 Overall Introduction to this Unit

This unit centers on language development and language learning, covering topics such as the working languages of the United Nations, the development of Chinese characters, key differences between British and American English, challenges in English learning, and suggestions for overcoming these challenges. Students are expected to cultivate an international perspective while recognizing the importance of language learning from both national and personal development perspectives—specifically, the linguistic awareness required by the curriculum standards. They will explore the positive significance of Chinese characters in preserving and advancing Chinese culture, and engage in deep reflection on English learning strategies and methods.

This unit primarily involves the “History, Society, and Culture” theme group under the “People and Society” thematic context. Subtopics include ICC, tolerance and

cooperation; tangible and intangible cultural heritage; social progress and human civilization; technological development and IT innovation; scientific spirit; and information security.

Under this theme group, the unit covers:

- Teaching British/American English pronunciation
- Theme-related vocabulary instruction
- Grammar teaching on relative adverbs in attributive clauses
- Development of discourse competence, learning skills, thinking quality, and cultural awareness

This unit’s expressive skill objectives are:

1. Master communication techniques for requesting explanations
2. Express opinions on English learning methods in online communities

4.3 Teaching Materials

4.3.1 Teaching Materials Analysis

[What] The Chinese Writing System: Connecting the Past and the Present is an expository text about the development of Chinese characters, highlighting their historical role in connecting ancient and modern Chinese civilization. The text contains two main threads: The first is a chronological account of the writing system’s evolution over thousands of years, serving as the explicit narrative line. The second is an implicit thread echoing the core concept “connecting” in the title, illustrating four key roles the writing system played in preserving Chinese civilization across millennia.

[How] This expository text is divided into six paragraphs, with its structure shown in *Fig. 1*.

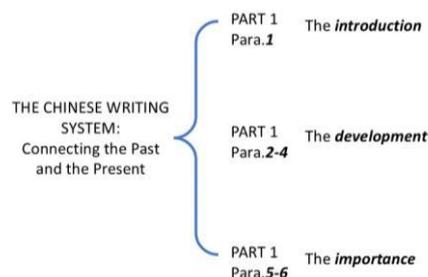


Fig. 1 The structure of chosen text

Linguistic Features:

Sentence Patterns: The text contains numerous modifiers in the form of relative clauses introduced by relative adverbs, laying the foundation for subsequent grammar learning.

Vocabulary: The text includes extensive dynasty-related terms.

Tense: Present tense is used when discussing the significance and functions of the Chinese writing system; past tense predominates when detailing its historical development.

[Why] Through this text, students will:

- Understand the developmental history of Chinese characters
- Explore their positive role in preserving Chinese civilization across millennia

- Reflect on the future evolution and functions of Chinese characters
- Genuinely experience the charm of Chinese characters
- Develop national identity
- Enhance cultural pride and cultural confidence

The following *Table 2* illustrates how this text aligns with the “ICC Teaching Reference Framework in Foreign Language Education (Senior High Section)” proposed by Zhang & Wu (2022):

Table 2 how this text aligns with the “ICC Teaching Reference Framework in Foreign Language Education

Competence Dimensions		The Chinese Writing System
Knowledge	Foreign Cultural Knowledge	K-FCK-3 None
	Chinese Cultural Knowledge	K-CCK-3 The Formation and Evolution of Chinese Characters
	General Cultural Knowledge	K-GCK-3 The Chinese language connecting the world embodies the vision of a Community with a Shared Future for Mankind.
Attitudes	Cultural Awareness	A-CA-3 Based on understanding the history of Chinese characters’ development, forming stronger awareness of Chinese cultural identity.
	National Identity	A-NI-3 Pay attention to the roles and challenges of Chinese characters in global political and cultural development, promoting Chinese cultural confidence.
	Global Mindedness	A-GM-3 Pay attention to the development dynamics of Chinese characters in today’s world, enriching knowledge of world cultures.
Skills	Intercultural Experiencing	S-IEr-3 Listen attentively to cultural stories, observe carefully and think actively, forming cognitive understanding of cultures across time and space.
	Intercultural Dialogue	S-ID-3 Use English to tell the story of the development of Chinese characters.
	Intercultural Dialogue	S-IEI-3 Independently search for and acquire information on cultural phenomena of interest, conducting exploratory learning; basically master ICC principles and certain learning strategies.

4.3.2 Student Profile

The students in this lesson are from a Grade 10 class at a high school in from a certain province in central China. The school has a strong academic atmosphere and robust teaching management. Cultivating ICC is also part of the district's research initiatives. This project will conduct teaching research using one class from this school as an example. The class has 60 students: 38 female and 22 males. Having studied English since Grade 3 (eight years total), they possess a solid language foundation.

To enhance their ICC, all students consented to participate in this lesson's research.

4.3.3 Teaching Objectives

Based on the unit's theme and instructional goals, the teacher will design lesson-specific objectives and implement rational lesson planning to facilitate students' achievement of intended learning outcomes, which are shown in *Table 3*.

Based on teaching objectives, the teacher needs to preset performance tasks. The key learning points and

difficulties of this lesson involve organizing key milestones and events in Chinese character development, clarifying the significance of Chinese characters, practicing scanning skills, and strengthening cultural confidence and national pride. Aligned with the unit's expressive objectives, this lesson's performance task is designed as: "Role-play as historical record compilers to conduct a leaderless group discussion on 'Supporting the King of Qin's Character Unification Policy'."

By deconstructing knowledge and skills required for the performance task, the teacher designs corresponding instructional activities. The teacher needs to determine which assessment methods to use and what evidence to collect to demonstrate students' acquisition of expected understanding and achievement of learning objectives.

The evaluation dimensions for this performance task are designed as in *Table 4* and *Table 5*.

Table 3 Teaching Objectives

Transfer (T)	
Students will be able to independently use their learning to: (1) Through exploring the relationship between Chinese characters and the inheritance of Chinese civilization, discover the unique charm of Chinese characters and strengthen confidence in learning language. (2) Enhance national pride	
Meaning (M)	
UNDERSTANDINGS (U) Students will understand that... (1) Key milestones and major events in the development of Chinese characters (2) The significant impact of Chinese characters on China and the world	ESSENTIAL QUESTIONS (Q) Students will keep considering... (1) Characteristics distinguishing Chinese characters from other languages (2) Why connecting ancient/modern and Chinese/foreign aspects through Chinese characters matters
Acquisition of Knowledge & Skill (A)	
Students will know... (1) Key vocabulary for this lesson: <i>symbol, carve, character, dynasty...</i> (2) Grammar focus: Attributive clauses introduced by relative adverbs (3) Key milestones and events in the development of Chinese characters (4) Significance of Chinese characters and its manifestations	Students will be skilled at... (S) (1) Skill in scanning to extract key information

Table 4 The evaluation dimensions for this performance task

Dimensions	Criteria	Corresponding Objectives
Content	Comprehensively and accurately present the timeline of Chinese characters' development; accurately assess the significance of their development	T1, T2 M: U1, U2, Q2 A: K1, K3.K4, S1,
Quality	Pronunciation accuracy, lexical and syntactic accuracy/variety, grammatical precision, clear and logical expression.	A: K1, K2, S1
ICC	Accurate mastery of cultural knowledge; open and inclusive affective attitudes; appropriate and proper behavioral skills.	T1, T2 M: U1, U2, Q1

Table 5 Detailed evaluation criteria for this performance task

Transfer (T)	
Students will be able to independently use their learning to:	
(1) Through exploring the relationship between Chinese characters and the inheritance of Chinese civilization, discover the unique charm of Chinese characters and strengthen confidence in learning language.	
(2) Enhance national pride	
Meaning (M)	
UNDERSTANDINGS (U)	ESSENTIAL QUESTIONS (Q)
Students will understand that...	Students will keep considering...
(1) Key milestones and major events in the development of Chinese characters	(1) Characteristics distinguishing Chinese characters from other languages
(2) The significant impact of Chinese characters on China and the world	(2) Why connecting ancient/modern and Chinese/foreign aspects through Chinese characters matters
Acquisition of Knowledge & Skill (A)	
Students will know...	Students will be skilled at... (S)
(1) Key vocabulary for this lesson: <i>symbol, carve, character, dynasty</i> ...	(1) Skill in scanning to extract key information
(2) Grammar focus: Attributive clauses introduced by relative adverbs	
(3) Key milestones and events in the development of Chinese characters	
(4) Significance of Chinese characters and its manifestations	

Additional evidence requiring attention

Beyond performance tasks, attention should be paid to students' other performance aspects using multiple assessment methods to obtain evidence of teaching objective attainment. Other evidence in this case includes:

(1) Classroom performance: Students' level in extracting/paraphrasing key points, summarizing information with diagrams, inferring implicit meanings,

interpreting themes, and applying expressions during activities, Q&A, and discussions;

(2) Peer evaluations and student self-assessments;

(3) Student performance in homework and in-class quizzes.

4.4 Teaching Procedures

Before class, students complete AI-designed ICC assessment questionnaire I for high school students. This serves as a reference for tracking changes in students' ICC.

Sample questions include:

Knowledge:

In Chinese communicative culture, which behavior is generally considered polite?

- A. Directly rejecting invitations
- B. Speaking loudly in public
- C. Respecting elders and using appropriate language
- D. Disregarding privacy and being inquisitive about others' affairs

Attitudes:

When interacting with people from different cultural backgrounds, which attitude best demonstrates respect and understanding?

- A. Believing your own culture is superior
- B. Showing curiosity and willingness to learn about others' customs
- C. Avoiding communication to prevent conflict
- D. Ignoring cultural differences and expecting universal behavior

Skills:

How can deeper cultural understanding be fostered when observing daily behaviors of different cultural groups?

- A. Focusing only on surface differences
- B. Directly comparing all customs to one's own culture
- C. Analyzing underlying cultural values through research and observation

D. Avoiding engagement with unfamiliar cultural practices

4.4.1 Clarify Teaching Objectives

In Learning and Understanding: activities, the teacher initiates the perception and attention phase by having students observe an oracle bone script image of "mountain", guess its meaning to activate prior native language knowledge. Students are then guided to explore "how pictorial characters evolved into written scripts." Subsequently, the lesson objectives are presented to clarify expected learning outcomes.

[Design Purpose]

Understand meaning: Characteristics distinguishing Chinese characters from other languages;

A-GM: Listen attentively to cultural stories, observe carefully and think actively, forming cognitive understanding of cultures across time and space.

4.4.2 Engage and Sustain Attention

The teacher guides students to view textbook images and the title, prompting predictions about the text content. Students then rapidly read the text to verify predictions—effectively stimulating reading interest.

Next, students quickly divide the text into paragraphs (*Fig. 2*). The teacher implements immediate feedback based on performance to maintain whole-class engagement.

[Design Purpose]

Acquisition of Knowledge & Skill: Learn key milestones and events in Chinese character development; cultivate scanning skills to extract key information.

A-CA: Based on understanding the history of Chinese characters' development, form stronger awareness of Chinese cultural identity.

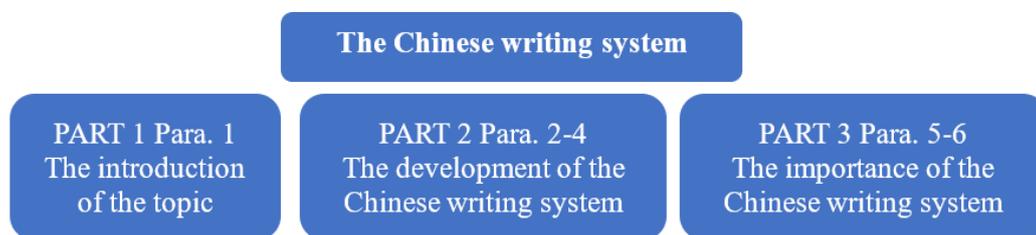


Fig. 2 The structure from students' worksheet

4.4.3 Experiencing, Exploring, Preparing and Enabling

The teacher guides students to organize the timeline and key events of Chinese character development using paragraph main ideas. Students carefully focus on time-related vocabulary to practice scanning skills. Next, they identify corresponding major events by locating temporal

markers to complete the fishbone diagram of character development (*Fig. 3*). This lays the knowledge groundwork for the subsequent performance task—the leaderless group discussion.

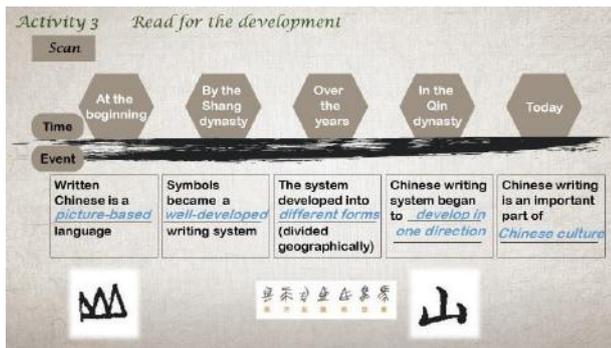


Fig. 3 the fishbone diagram of character development.

(Note: Italicized text indicates content to be completed by students.)

[Design Purpose]

Acquisition of Knowledge & Skill: Deepen understanding of key milestones and events in Chinese character development

K-CCK: Understand the formation and development of Chinese characters

A-CA: Based on understanding the history of Chinese characters' development, form stronger awareness of Chinese cultural identity.

4.4.4 Reflecting and Adjusting Learning Performance

The teacher guides students to reflect: The purpose of Qin Dynasty's character unification was (eliminating regional barriers to cultural exchange). Students then reconsider whether this is the sole significance of Chinese characters, transitioning exploration to Part 2—reading about the importance of Chinese characters.

Through scanning and group collaboration, students deeply analyze Chinese characters' significance—the "Four Connections"—and discuss why these connections matter under teacher guidance.

Students reflect and adjust their thematic understanding and learning performance based on peer and teacher feedback and self-assessment, developing critical thinking—viewing matters dialectically. This establishes knowledge and cognitive foundations for the performance task.

[Design Purpose]

Understand meaning: Characteristics distinguishing Chinese characters from other languages; their significant impact on China and the world. Why connecting ancient/modern and Chinese/foreign aspects through Chinese characters matters.

Transferring: Discover the unique charm of Chinese characters by exploring their relationship with Chinese

civilization inheritance, strengthening confidence in native language learning. Enhance national pride.

K-GCK: The Chinese language connecting the world embodies the vision of a Community with a Shared Future for Mankind

A-NI: Pay attention to the roles and challenges of Chinese characters in global political/cultural development, promoting Chinese cultural confidence

A-GM: Focus on development dynamics of Chinese characters in today's world, enriching world cultural knowledge

S-Ier: Listen attentively to cultural stories, observe carefully and think actively, forming cognitive understanding of cultures across time and space

4.4.5 Self-Assessment of Gains

The teacher requires students to self-evaluate classroom performance (e.g., completeness/accuracy of oral responses, mastery of lesson content, cultural understanding). Self-assessment helps students review content comprehensively and make holistic self-judgments.

[Design Purpose]

S-IEI: Independently search for/acquire information on cultural phenomena of interest for exploratory learning; basically master ICC principles and certain learning strategies

4.4.6 Tailored Learning

The performance task serves as the Transferring and Creating: activity. Students role-play as experts holding opposing views (unified characters' merits outweighing demerits/demerits outweighing merits) in a leaderless group discussion. They choose positions for polite oral exchanges and report outcomes to the class. The teacher evaluates using the aforementioned rubric. For homework, students write an argumentative essay reflecting on their in-class performance.

[Design Purpose]

S-ID: Use foreign languages to tell the story of Chinese characters' development

4.4.7 Optimized Instructional Design

This text's activities, aligned with the unit theme and core objectives, implement top-down integration of teaching-learning-assessment, emphasizing cultural knowledge acquisition and cultural awareness development. Students cultivate critical thinking through prior texts and deepen this thinking in new contexts to develop ICC. Activity design follows the English Learning Activity Concept, progressing through layers while

conducting multidimensional evaluations to bottom-up assess achievement of lesson objectives.

After class, students complete the AI-designed High School ICC Assessment Questionnaire II, with content and structure similar to Questionnaire I. The teacher then randomly selects students for interviews regarding ICC in foreign language teaching, including questions such as:

- (1) What differences do you perceive between current and previous English classrooms?
- (2) Do you enjoy this type of English class?
- (3) Do you find such English lessons helpful for your learning?
- (4) Do you believe your current ICC has improved? In which specific aspects?
- (5) What factors currently hinder your ICC development?

V. CONCLUSIONS

5.1 Findings

Integrating student questionnaires, interviews, and reflective journals, the study reveals—based on the ICC Teaching Reference Framework by scholars Zhang & Wu:

(1) Knowledge: Students thoroughly mastered the formation and evolution of Chinese characters and recognized that the Chinese language connecting the world embodies the vision of a Community with a Shared Future for Mankind.

(2) Attitudes: Formed stronger awareness of Chinese cultural identity through understanding character development history; Paid attention to the roles and challenges of Chinese characters in global political/cultural development, promoting Chinese cultural confidence; Focused on development dynamics of Chinese characters in today's world, enriching world cultural knowledge.

(3) Skills: Demonstrated attentive listening to cultural stories, careful observation, and active thinking to form cognitive understanding of cultures across time and space; Used foreign languages to narrate the development of Chinese characters; Independently searched for/acquired information on cultural phenomena of interest for exploratory learning; Basically mastered ICC principles and certain learning strategies.

5.2 Discussion

Applying the ICC Teaching Reference Framework to high school English reading instruction, this research demonstrates its practical operability. Analysis of questionnaires and interviews indicates improvement across all three dimensions of students' ICC, alongside positive reception of the lesson. This confirms the

framework's tangible efficacy in developing students' ICC.

However, this study's single-class implementation limits representativeness, necessitating further validation through longitudinal research.

The culturally prominent text selected aligns well with ICC knowledge acquisition, whereas effectiveness with less culturally explicit texts remains unverified.

5.3 Future Research

The ICC Teaching Reference Framework shows strong applicability in high school English education, aligning with students' current capabilities, cognition, and curriculum standards. Future research could:

- Apply the framework to culturally non-explicit texts;
- Extend implementation to other academic levels.

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APPENDIX: READING PASSAGE

The Chinese Writing System: Connecting the Past and the Present

China is widely known for its ancient civilisation which has continued all the way through into modern times, despite the many ups and downs in its history. There are many reasons why this has been possible, but one of the main factors has been the Chinese writing system.

At the beginning, written Chinese was a picture-based language. It dates back several thousand years to the use of longgu – animal bones and shells on which symbols were carved by ancient Chinese people. Some of the ancient symbols can still be seen in today's hanzi.

By the Shang Dynasty (around 1600~1046 BCE), these symbols had become a well-developed writing system. Over the years, the system developed into different forms, as it was a time when people were divided geographically, leading to many varieties of dialects and characters. This, however, changed under Emperor Qinshihuang of the Qin Dynasty (221~207 BCE).

Emperor Qinshihuang united the seven major states into one unified country where the Chinese writing system began to develop in one direction. That writing system was of great importance in uniting the Chinese people and culture. Even today, no matter where Chinese people live or what dialect they speak, they can all still communicate in writing.

Written Chinese has also become an important means by which China's present is connected with its past. People in modern times can read the classic works which were written by Chinese in ancient times. The high regard for the Chinese writing system can be seen in the development of Chinese characters as an art form, known as Chinese

calligraphy, which has become an important part of Chinese culture.

Today, the Chinese writing system is still an important part of Chinese culture. As China plays a greater role in global affairs, an increasing number of international students are beginning to appreciate China's culture and history through this amazing language.

Strategies and Challenges in Teaching and Learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic

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Abstract— The main objective of this proposed study was to investigate and determine the strategies and challenges in teaching and learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic during SY 2024-2025. This study had employed the descriptive research method with the survey questionnaire as the main tool of gathering data and information from teachers-respondents. The statistical treatment of this study utilized tools such as frequency, mean, and ANOVA. Based on the summary of the investigations, the researcher concluded that the respondent is a typical female; respondents are from mid-career professionals showed based on their age; majority were specialized in Business Education subjects and entrepreneurship; BS degree with masteral units and large proportion are positioned as part-time instructors and had been in teaching for almost a decade. The teacher respondents assessed “Very Highly Utilized” strategies in teaching and learning HOTS. While on the challenges in teaching and learning HOTS, teacher respondents assessed “Very Highly Challenging”. There is no significant difference in the utilization of strategies for teaching higher-order thinking skills (HOTS) when grouped according to age, sex, field of specialization, academic position, or highest educational attainment. More so, there were no significant differences in the perceived challenges of teaching and learning higher-order thinking skills (HOTS) when grouped according to teacher profile variables. The researcher consistently suggests a shared institutional commitment to promoting critical thinking skills through standardized pedagogical approaches; and that institutional culture and policy play a central role in fostering uniformity in instructional practices across faculty members; such uniform application underscores the effectiveness of institutional frameworks and professional development efforts in ensuring the broad adoption of HOTS-focused teaching methodologies in which implication is to significantly address the challenges in HOTS; that implementation should focus on systemic solutions rather than demographic-targeted interventions; and finally, to conduct a similar or parallel study with wider in scope so as to validate and confirm the findings obtained in the study.

Keywords— Higher Order Thinking Skills, Strategies, Challenges, Kolehiyo Ng Subic

I. INTRODUCTION

The goal of education has always been to teach students higher order and critical thinking abilities. The literature and academic interest in higher order thinking in education have occasionally increased throughout time. However, the researchers' dedication and growing interest in the literature did not guarantee that higher order/critical thinking skills would be successfully taught in classrooms. Research shows precisely that higher-thinking skills instruction in the classroom has proven challenging. Thinking skills have been clearly integrated into the

curriculum and teaching methods in classrooms to focus on instructing students to „know how“ rather than to „know what“. Data analysis revealed that promoting higher order thinking relied on classroom discussions, writing tasks, and inquiries, which were consistently highlighted in the literature as vital components. Researchers emphasized the significance of technological advancements and investigations into approaches for teaching critical thinking too. Nonetheless, it was also discovered that the significance of classroom environment or ambiance lacked substantial academic focus. Initiatives to encourage and enhance thinking skills ought to start at the foundational

education stage, as this period is viewed as the optimal time to establish the essential groundwork for advanced learning. To enhance teaching and learning methods and to guarantee that students can cultivate HOTS necessitated a thorough examination of existing practices in education.

The process of teaching and learning can be described as the transfer of knowledge from educators to learners. It is known as the integration of several components in the process where an educator recognizes and sets the learning goals, creates teaching materials, and executes the teaching and learning methods (Munna & Kalam, 2021). To guarantee a successful and effective teaching and learning process, higher order/critical thinking is significant. Higher Order Thinking Skills (HOTS) is a notion derived from the various learning taxonomies created by Benjamin Bloom. As stated by Hamzah, Hamzah, & Zulkifli (2022), Higher order thinking skills (HOTSs) are internationally prioritized abilities that have turned into a central emphasis of teaching in an increasing number of classrooms. HOTS is an essential skill that educators need to excel in to enhance student thinking and advance classroom learning by integrating it into their teaching methods. This idea extends beyond mere memorization and understanding. These are abilities that enhance a person's creativity, decision-making, and critical thinking. According to Gozali, Lie, Tamah, & Jemadi (2021) educational institutions where youth invest the majority of their time in formative years, play a vital role in fostering critical thinking habits among students. This indicates that the role of the teacher is important as they set as a role model and mentor of students. Based on study of Silfani, Basikin, & Hasan (2025), HOTS is one of the most important skills for students to have. Therefore, educators need to implement teaching methods that can help achieve this vital skill. Based on the previous studies in Thailand, indicated in the study of Kwangmuang, Jarutkamolpong, Sangboonraung, & Daungtod (2021), HOTS includes critical, logical, reasoning, decision-making, and creative thinking skills which focused on the cognitive processes namely analysis, evaluation, and creation. A significant literature towards the strategies utilized in teaching and learning Higher Order Thinking Skills which are: (1) discussions; (2) inquiry and asking questions; (3) use of technology; (4) role playing and simulations; and (5) case studies. Moreover, these teaching strategies are somehow concluded effective in fostering higher order thinking skills from the point of view of Shanti, Istiyono, & Munadi (2022) in their study, which revealed through instructional media strategies, related to the use of technology together with learning methods and assessments, typically attributed to the aforementioned utilized teaching and learning strategies in HOTS, there is effectiveness of learning improvement.

Educators encountered various challenges throughout teaching and learning experiences in education. Based on the research findings of Assaly & Jabarin (2024) in Israel, it indicates that there is a favorable view on teaching HOTS, yet it also shows they encounter multiple challenges. Factors obstructing HOTS implementation involve the educators, the learners, the framework, and specific societal norms. Hence, key elements such as teacher's perception, knowledge, and skills, planning and achievement of objectives aspects, interruption of teaching and learning processes, classroom management, and pupil's learning ability are recognized perceived challenges in teaching and learning higher order thinking skills. Therefore, it is pertinent to know about these utilized strategies and perceived challenges in order to frame the agenda of ensuring quality tertiary education. In this regard, it is timely and appropriate to investigate the proposed study. This study proposal aims to identify and analyze the strategies and challenges in teaching and learning higher order thinking skills in Kolehiyo Ng Subic.

Statement of the Problem:

The main objective of this study proposal is to determine the strategies and investigate the challenges in teaching and learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic.

The following specific questions are proposed to be answered:

1. How may the profile of the teacher-respondents be described as to:
 - 1.1 age;
 - 1.2 sex;
 - 1.3 field of specialization;
 - 1.4 academic position; and
 - 1.5 highest educational attainment?
2. How may the respondents utilize the following strategies in teaching and learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic?
 - 2.1 Discussions;
 - 2.2 Inquiry and asking questions;
 - 2.3 Use of technology;
 - 2.4 Role playing and simulations; and
 - 2.5 Case studies.
3. How may the respondents perceive the challenges in teaching and learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic be described?
 - 3.1 Teacher's Perception, Knowledge, and Skills;

- 3.2 Planning and Achievement of Objective Aspects;
- 3.3 Interruption of Teaching and Learning Processes;
- 3.4 Classroom Management; and
- 3.5 Pupil's Learning Ability.

4. Is there a significant difference on the utilization of strategies in teaching and learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic when group according to teacher's profile?

5. Is there a significant difference on the perceived challenges in teaching and learning Higher Order Thinking Skills (HOTS) in Kolehiyo Ng Subic when group according to teacher's profile?

II. METHODOLOGY

The study used descriptive design research and qualitative in its interpretation. According to Purdy & Popan (2023), descriptive research is a methodological approach aimed at detailing behaviors, situations, events, and outcomes without delving into theoretical predictions or cause-and-effect relationships. Researcher undertakes the process of gathering data, analyzing, classifying, and tabulating data. The teachers' perceptions and insights were solicited and aimed to accomplish the objective of the study which is to investigate the utilized strategies and perceived challenges in teaching and learning higher order thinking skills in Kolehiyo Ng Subic.

This study had a total of 60 teacher-respondents. The study was conducted among different programs or courses offered in Kolehiyo Ng Subic, Subic, Zambales, Philippines.

The researcher-made checklist was the main instrument used in gathering this data in this study. The contents of the survey checklist were crafted by the researcher itself. The survey checklist was submitted to the experts in the field for correction and suggestions. The researcher conducted SPSS v22.0 Reliability Test using Cronbach Alpha to assure the validity of the research instrument.

The first part of the survey checklist focused on the profile of the teacher-respondents which include age, sex, academic position, highest education attainment, and field of specialization. The second part dealt to investigate the utilization of strategies in teaching and learning higher order thinking skills. The final part dealt to assess the perceived challenges in teaching and learning higher order thinking skills. The respondents answered on the Likert-scale ranging from 5-strongly agree to 1-strongly disagree.

After making the final draft of the survey checklist, the researcher had sought permission and approval of the College President of Kolehiyo Ng Subic on the distribution of the instrument to teacher-respondents. A letter was prepared for every dean and chairperson of each courses/program for their support and cooperation. The researcher had allotted four weeks for the distribution and retrieval of the survey instrument. Also, the researcher assured the anonymity of the answers of the respondents. The statistical treatment of this study utilized descriptive statistical tools such as frequency counts and mean. The inferential statistics utilized was ANOVA.

III. RESULTS AND DISCUSSION

1. Profile of Respondents

1.1 Age

Table 1.1 Frequency and Percentage Distribution on the Respondents' Age Profile Variables

Profile Variables	Frequency (f)	Percentage (%)
Age		
25–34 years old	18	30.0
35–44 years old	28	46.7
45–54 years old	10	16.7
55 and above	4	6.6
Total	60	100.0

Out of the 60 respondents, the largest group—28 individuals (46.7%)—falls within the 35–44 years old range, followed by 18 respondents (30.0%) aged 25–34 years old. There are 10 respondents (16.7%) aged 45–54 years old, while only 4 respondents (6.6%) belong to the 55 and above age group.

The results indicate that the majority of respondents are mid-career professionals who may possess considerable teaching experience and are likely to have been exposed to evolving educational practices. Research suggests that educators in this age bracket often engage more actively with professional development and pedagogical innovation (Dela Cruz & Santos, 2022). Similarly, Johansson et al. (2019) found that mid-career professionals tend to show greater adaptability to technological integration in teaching.

1.2 Sex

Table 1.2 Frequency and Percentage Distribution on the Respondents' Sex Profile Variables

Profile Variables	Frequency (f)	Percentage (%)
Sex		
Male	27	45.0
Female	33	55.0
Total	60	100.0

Among the respondents, a slight majority—33 individuals (55.0%)—are female, while 27 individuals (45.0%) are male. This fairly balanced gender distribution reflects the inclusive composition of the teaching workforce in Kolehiyo ng Subic. According to Mendoza and Reyes (2021), the education sector in the Philippines continues to see increasing female participation, particularly in higher education. International trends similarly show gradual progress toward gender parity in academic settings (Smith et al., 2020).

1.3 Academic Position

Table 1.3 Frequency and Percentage Distribution on the Respondents' Academic Position Profile Variables

Profile Variables	Frequency (f)	Percentage (%)
Professor II	0	0.0
Associate Professor II	1	1.7
Associate Professor I	0	0.0
Assistant Professor I	1	1.7
Instructor I	17	28.3
Professor II	0	0.0
Full-time Instructor	3	5.0
Part-time Instructor	38	63.3
Total	60	100.0

The majority of the respondents hold part-time instructor positions (38 individuals, 63.3%). Instructor I follows with 17 respondents (28.3%). Very few respondents hold senior ranks: only 1 Associate Professor II (1.7%) and

1 Assistant Professor I (1.7%), with no respondents in Professor II or Associate Professor I ranks.

This distribution suggests a workforce heavily composed of part-time and entry-level instructors, a trend often observed in private higher education institutions where flexible staffing models are employed (Nguyen et al., 2021). A predominantly part-time teaching staff may face unique challenges in sustaining advanced pedagogical approaches like Higher Order Thinking Skills (HOTS).

1.4 Highest Educational Attainment

The largest proportion of respondents (28 individuals, 46.7%) hold a Masteral Degree Graduate qualification, followed by 14 Doctoral Unit Earners (23.3%), 9 Baccalaureate Degree Graduates (15.0%), 7 Masteral Unit Earners (11.7%), and 2 Doctoral Degree Graduates (3.3%).

Table 1.4 Frequency and Percentage Distribution on the Respondents' Highest Educational Attainment Profile Variables

Profile Variables	Frequency (f)	Percentage (%)
Field of Specialization		
Education, Social Sciences & Professional Education Subjects	11	18.3
Business Education Subjects & Entrepreneurship	19	31.7
Information Technology & Computer Sciences	14	23.3
Tourism, Hotel & Restaurant Management	16	26.7
Total	60	100.0

The data suggests that a significant number of faculty members are either pursuing or have completed graduate studies, which is encouraging in terms of academic qualification and readiness to implement HOTS strategies. Advanced academic attainment is linked to deeper pedagogical knowledge and greater emphasis on critical thinking (Tan et al., 2024).

1.5 Field of Specialization

Table 1.5 Frequency and Percentage Distribution on the Respondents' Field of Specialization Profile Variables

Profile Variables	Frequency (f)	Percentage (%)
Highest Educational Attainment		
Doctoral Degree Graduate	2	3.3
Doctoral Unit Earner	14	23.3
Masteral Degree Graduate	28	46.7
Masteral Unit Earner	7	11.7
Baccalaureate Degree Graduate	9	15.0
Total	60	100.0

Respondents are well distributed across fields of specialization. Business Education Subjects and Entrepreneurship represents the largest group (19 respondents, 31.7%), followed by Tourism, Hotel & Restaurant Management (16 respondents, 26.7%), Information Technology & Computer Sciences (14 respondents, 23.3%), and Education, Social Sciences & Professional Education Subjects (11 respondents, 18.3%).

This broad range of specializations supports the interdisciplinary nature of teaching HOTS in Kolehiyo ng Subic. According to Garcia and Tan (2023), cross-disciplinary approaches enrich the implementation of advanced cognitive strategies in higher education settings.

2. Strategies Used in Teaching and Learning HOTS

The utilization of teaching strategies was assessed in terms of discussions, inquiry and asking questions, use of technology, role playing and simulations, and case studies. The results are presented in Table 2.

Table 2: Mean Scores on the Utilization of Strategies in Teaching and Learning HOTS

Strategy	Mean	Interpretation
Discussions	4.72	Very Highly Utilized
Inquiry and Asking Questions	4.85	Very Highly Utilized

Use of Technology	4.70	Very Highly Utilized
Role Playing and Simulations	4.52	Very Highly Utilized
Case Studies	4.68	Very Highly Utilized

The data indicate that all instructional strategies were very highly utilized, as reflected by the consistently high mean scores. Among these, “Inquiry and Asking Questions” emerged as the most frequently employed strategy, garnering the highest mean score of 4.85. This underscores its perceived effectiveness in cultivating critical thinking, aligning with the findings of King et al. (2021), who emphasized that the formulation of thoughtful questions is central to developing higher-order thinking skills (HOTS). Similarly, the strategy “Use of Technology” received a commendably high mean score of 4.70, which supports the conclusions of Alfonso and Pineda (2023), who asserted that technology-enriched learning environments play a pivotal role in fostering HOTS. Furthermore, both “Role Playing and Simulations” and “Case Studies” were also highly rated, demonstrating a strong preference for experiential and student-centered learning methods that facilitate active engagement and the practical application of knowledge, consistent with the work of Adams and Cruz (2022). These results collectively affirm the widespread and effective use of varied instructional strategies that support the development of critical and higher-order thinking skills.

3. Perceived Challenges in Teaching and Learning HOTS

Table 3: Mean Scores on Perceived Challenges in Teaching and Learning HOTS

Challenge Category	Mean	Interpretation
Teacher’s Perception, Knowledge, and Skills	4.89	Very Highly Challenging
Planning and Achievement of Objective Aspects	4.87	Very Highly Challenging
Interruption of Teaching and Learning Processes	4.62	Very Highly Challenging
Classroom Management	4.60	Very Highly Challenging
Pupil’s Learning Ability	4.72	Very Highly Challenging

The findings reveal that all identified categories were perceived as very highly challenging in the implementation of higher-order thinking skills (HOTS). The most significant challenge was associated with "Teacher’s Perception, Knowledge, and Skills" (Mean = 4.89), underscoring the critical need for enhanced teacher

training and professional development in HOTS pedagogy. This aligns with the work of Li and Chen (2024), who emphasized that teacher expertise is a central determinant in the successful promotion of higher-order thinking in the classroom. "Planning and Achievement of Objectives" also emerged as a major challenge (Mean = 4.87), reflecting the complexities involved in aligning HOTS instruction with established curricular standards. Villanueva and Santos (2023) noted that rigid curriculum frameworks often hinder the seamless integration of higher-order thinking strategies in many educational systems. Additional concerns were identified in areas such as "Interruption of Teaching and

4. Test of Difference: Utilization of Strategies Across Teacher Profiles

Table 4: Analysis of Variance to test the differences on Utilization of Strategies in Teaching and Learning Higher Order Thinking Skills when group according to Teachers' Profile

Sources of Variations	SS	df	MS	F	Sig.	Decision / Interpretation
Age	2.874	3	0.958	0.642	0.590	Do Not Reject Ho (Not Significant)
Sex	0.521	1	0.521	0.388	0.536	Do Not Reject Ho (Not Significant)
Field of Specialization	4.131	5	0.826	0.724	0.606	Do Not Reject Ho (Not Significant)
Academic Position	3.054	3	1.018	0.781	0.509	Do Not Reject Ho (Not Significant)
Highest Educational Attainment	2.489	3	0.830	0.690	0.561	Do Not Reject Ho (Not Significant)
Within Groups	82.321	51	1.614			
Total	95.390	59				

The results revealed that there were no significant differences in the utilization of strategies for teaching higher-order thinking skills (HOTS) when grouped according to age, sex, field of specialization, academic position, or highest educational attainment, as all computed p-values exceeded the 0.05 alpha level of significance ($p > 0.05$). Consequently, the null hypothesis is accepted, indicating that the application of teaching strategies is not influenced by variations in teacher profile.

These findings imply that educators, regardless of their demographic and professional backgrounds,

Learning Processes" and "Classroom Management," both of which highlight the influence of environmental and behavioral factors on instructional effectiveness (Smith & Ramos, 2021). Finally, "Pupil's Learning Ability" was also rated as a very highly challenging area, suggesting that the cognitive demands of HOTS may exceed the capabilities of some students without appropriate support. This is consistent with Zhang et al. (2020), who advocated for the use of scaffolding techniques and differentiated instruction to address learners' varying needs in developing higher-order thinking.

implement HOTS-related strategies with similar frequency and emphasis. This consistency suggests a shared institutional commitment to promoting critical thinking skills through standardized pedagogical approaches. The results are consistent with the study of Nguyen et al. (2021), who reported that institutional culture and policy play a central role in fostering uniformity in instructional practices across faculty members. Such uniform application underscores the effectiveness of institutional frameworks and professional development efforts in ensuring the broad adoption of HOTS-focused teaching methodologies.

5. Test of Difference: Perceived Challenges Across Teacher Profiles

Table 5: Analysis of Variance to test the differences on Utilization of Strategies in Teaching and Learning Higher Order Thinking Skills when group according to Teachers' Profile

Sources of Variations	SS	df	MS	F	Sig.	Decision / Interpretation
Age	3.765	3	1.255	0.591	0.624	Do Not Reject Ho (Not Significant)
Sex	0.398	1	0.398	0.278	0.600	Do Not Reject Ho (Not Significant)
Field of Specialization	5.210	5	1.042	0.703	0.622	Do Not Reject Ho (Not Significant)
Academic Position	2.987	3	0.996	0.752	0.527	Do Not Reject Ho (Not Significant)
Highest Educational Attainment	2.412	3	0.804	0.685	0.565	Do Not Reject Ho (Not Significant)
Within Groups	80.754	51	1.583			
Total	95.526	59				

The results also indicated that there were no significant differences in the perceived challenges of teaching and learning higher-order thinking skills (HOTS) when grouped according to teacher profile variables, as all computed p-values were greater than the 0.05 alpha level of significance ($p > 0.05$). Therefore, the null hypothesis is accepted, confirming that demographic and professional characteristics such as age, sex, academic position, field of specialization, and highest educational attainment do not significantly influence the challenges perceived by educators.

This finding suggests that teachers across various profiles encounter similar levels of difficulty in implementing HOTS, pointing to the presence of shared systemic or institutional barriers. These results align with the study by Tan et al. (2024), who concluded that organizational constraints—such as curriculum limitations, resource gaps, and policy demands—tend to impact faculty members uniformly, regardless of their individual backgrounds. The implication is that efforts to address challenges in HOTS implementation should focus on systemic solutions rather than demographic-targeted interventions.

IV. CONCLUSIONS

Based on the summary of findings, the researcher concluded that:

1. The respondent is a typical female; respondents are from mid-career professionals showed based on their age; majority were specialized in Business Education subjects and entrepreneurship; BS degree with masteral

units and large proportion are positioned as part-time instructors.

2. The teacher-respondents assessed “Very Highly Utilized” strategies in teaching and learning HOTS. While on the challenges in teaching and learning HOTS, teacher respondents assessed “Very Highly Challenging”.
3. There is no significant difference in the utilization of strategies for teaching higher-order thinking skills (HOTS) when grouped according to age, sex, field of specialization, academic position, or highest educational attainment.
4. There is no significant differences in the perceived challenges of teaching and learning higher-order thinking skills (HOTS) when grouped according to teacher profile variables.

V. RECOMMENDATIONS

Based on the summary of findings and conclusions, the researcher arrived at the following offered recommendations:

1. Teachers should attend regularly in seminars, training sessions, and workshops to enhance their professional development, improve their teaching methods, and keep them updated to new trends of educational practices and resources.
2. College administration should aim to have available educational technologies in schools to improve access to information, engage in interactive and differentiated activities and instruction, and to equip digital literate students.

3. College Administration should conduct a collaborative write-up of systematic course syllabus in each subject of every courses/program to avoid curriculum inconsistencies.
4. The College Administration is highly encouraged to establish functional rooms or buildings as a simulation facility as offered in each courses/program.
5. To carry out a comparable or related investigation that has a broader scope to substantiate and affirm the results acquired in the research.

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Cultural Differences in Chinese and American Family Education: Situational Narratives in *The Pursuit of Happiness* and *Growing Pain*

中美家庭教育文化差异——《追求幸福》与《成长的烦恼》中的情境叙事

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Abstract— *The family is the first socialized unit that a person comes into contact with after birth, and the educational activities of the family begin at birth and end at death. The cultivation of a person's character and the formation of values are closely related to the moral education he receives from the family. There are many differences between China and the United States in terms of cultural traditions, conceptual awareness, lifestyles, and social customs. The reason for analyzing the difference in family education between the two countries is that we correctly borrow the premise of the advanced education concept of the United States. Finding the best combination among these differences and learning from the reasonable family education methods in the United States will help improve China's family education.*

*This article selects two works for comparison, one is the inspirational movie *The Pursuit of Happiness* that swept around the United States at the end of this century and the beginning of the last century, and a well-known TV series *Growing Pain* in China. These two works were chosen because they are very famous in both countries and the family education concepts in them highlight the family education styles of the United States and China respectively, which are very representative.*

This paper adopts the comparative analysis and the literature research method to compare the commonalities and differences of family education in China and the United States. Through the comparison of situational narrative (comparison of narrative sections, comparison of narrative techniques and comparison of narrative rhetoric) and comparison of family education models (comparison of ideas, parent-child activities

and difficulty solving) of the two works, the advanced experience of American family education is summarized, such as paying attention to children's independence, paying attention to cultivating a sense of equality, respecting children and so on. Its essence is refined and absorbed, which has good reference significance for the improvement of Chinese family education.

Keywords— family education, cultural differences, situational narratives, *The Pursuit of Happiness*, *Growing Pain*

摘要—家庭是一个人在出生以后接触的第一个社会化单位, 家庭的教育活动始于出生, 终于死亡。一个人品格的养成、价值观的形成与其受到的家庭道德教育密切相关。中美两国由于在文化传统, 观念意识, 生活方式以及社会习俗等方面存在着许多差异。分析两国家庭教育的差异的原因是我们正确借鉴美国的先进育人理念的前提。在这些差异中找到最佳的结合点借鉴美国合理的家庭教育方式有助于中国的家庭教育趋于完善。

本文选择了两部作品进行对比, 一个是本世纪末上世纪初风靡美国励志的电影《当幸福来敲门》和一部中国家喻户晓的电视剧《少年派》, 选择这两部剧是因为它们在两个国家都非常著名以及其中的家庭教育理念分别凸显了美国和中国的家庭教育风格, 极具代表性。

本文采用比较分析和文献研究法这两种方法, 比较中美家庭教育的共性和差异性。通过两部作品的情景叙事比较(叙事情节的比较、叙事手法的比较和叙事修辞的比较)以及家庭教育模式的比较(理念比较、亲子活动和困难解决), 美国家庭教育的先进经验, 如注重孩子的独立性, 注重培养平等意识, 尊重儿童等等, 提炼并汲取其精粹, 对中国家庭教育的完善具有很好的借鉴意义。

关键词: 中美家庭教育; 文化差异; 情景叙事; 《当幸福来敲门》; 《少年派》

I. INTRODUCTION

Family is a product of human society in the process of development. It is the most basic and core social component cell, and the first social environment for human survival and activities after birth. In different historical periods, the meaning of the family may not be consistent, but the important position of the family in the course of social progress has never been shaken. The stable development of the society is closely related to the actual situation of the family. The labor force in the family is creating the wealth of today's society, and the builders of tomorrow's society are the new generation of the family. Family education plays a very important role in the growth and training of the new generation. Family education is the starting point of one's educational journey and the foundation stone of receiving school education, social education and inheritance education in the future.

In the past ten years, Chinese and foreign researchers

have studied a lot of Chinese and American family cultural differences in *The Pursuit of Happiness* and *Growing Pain*, roughly from the aspects of thinking and culture, education and culture, family perspective, social interpersonal differences, personal value differences, emotional cognition differences, especially in the past five years, the differences in Chinese and foreign family education have received more and more attention, but there is little research on situational narratives.

There are many differences between China and the United States in terms of cultural traditions, conceptual awareness, lifestyles, and social customs. The reason for analyzing the difference in family education between the two countries to learn from successful experience of American family education which helps to improve Chinese family education as a whole and eventually promote China's international competitiveness in the future.

This paper analyzes the characteristics of the education

systems and the current situation of family education in China and the United States through the two works *The Pursuit of Happiness* and *Growing Pain*, comparing the similarities and differences of family education in China and the United States. This paper finds the shortcomings in the process of family education in China, breaks through the barriers in the concept of Chinese family moral education, and draws on the essence of the American education system, hoping to provide practical suggestions for the improvement of China's family education system. This paper is of practical significance for promoting the development of China's family education and promoting the process of China's education reform.

This paper mainly includes the following research content: the first part, introduction. According to the background and purpose of the question, this paper introduces the significance and value of the comparative study of Chinese and American educational culture, and elaborates the research situation of family moral education at home and abroad. The second part, literature review. It is a review of the study of family education models in two works. The third part, the two works of the scene narrative comparison. They are the comparison of narrative plot, narrative technique and narrative rhetoric. The fourth part is the comparison of family education modes in the two works. They are concept comparison, parent-child activities and conflict resolution. The fifth part is the conclusion.

By studying the differences between family education in China and the United States, this paper compares the similarities and differences, makes an in-depth analysis of situational narrative methods and means, and explores effective family education models, so as to provide theoretical reference and practical guidance for the development of family education in China and the West.

II. LITERATURE REVIEW

In recent years, there have been many studies on Chinese and Western family education, but little research has been done on situational narratives. Due to the

differences in social systems and cultural backgrounds between China and the United States, parents of the two countries also present different cultural differences and characteristics in their children's educational concepts. Regarding the discussion of Chinese and foreign family education, domestic and foreign researchers have given many views.

Review on Cultural Differences in Chinese and American Family Education

Most abroad researches on the cultural differences between China and the United States mainly focus on family education and social integration. In recent years, some foreign educators have put forward several critical opinions on family education from the four aspects of improving family education (Maluleke S G, 2014)^[1], the impact of the effectiveness of family education on policies (Blok H, Karsten S, 2011)^[2], and the shaping of family education (Purcell V, 2017)^[3] and educational experience (Beck C W, 2015)^[4], and discussed them from the perspective of family education and social integration. Explore and predict the future trend of home education. (Chris Lubiensk, 2013)^[5]. At the same time, in cross-cultural communication, different values, different national personalities, and different ways of thinking lead to cultural differences between China and the West.

Most domestic researches on the cultural differences between China and the United States mainly focus on family culture and values. Zhang Yangmei (2011)^[6], Zhou Ling, Li Junjun (2009)^[7], Yang Chao (2014)^[8] and Wang Jianfen (2014)^[9] pointed out that the focus of American family education is to cultivate children's ability to adapt to various environments and independent survival, attach great importance to children's self-training, and pay attention to cultivating children's independent consciousness and independent living ability from an early age. Such as labor exercise, will exercise, etc. However, Zhang Dingdan (2014)^[10], Lin Xin (2018)^[11] and Zhang Na (2012)^[12] pointed out Chinese has long been influenced by the ideas of "propriety" and "loyalty" advocated by Confucian culture,

and whether it is the concept of interpersonal communication or education, it has always adhered to the harmony and self-dedication advocated by Confucianism. Zhu Juanjuan (2018)^[13] and Guo Shixian (2020)^[14] points out that the core of American culture is individualistic values, and the protagonist Chris in *The Pursuit of Happiness* on the Door implements this core value in his understanding of despair and hope, freedom and happiness. Shi Yujie (2019)^[15], Zou Meng (2015)^[16] and Jiang Nannan (2013)^[17] pointed out that unlike the United States, China attaches more importance to collectivity in terms of individual values, which is a direct difference between American culture and Chinese culture. Shao Xueyan (2019)^{[18][18]}, Zhou Haixin(2013)^[19] and Bao Wenjuan (2011)^[20] pointed out that competition between countries is ultimately reflected in the competition for talent. Moreover, the United States is a country full of opportunities and challenges, advocating independence and exploration, and cultivating talents with the ability to handle a variety of situations is the goal of American family education. And in China, Min Zhengwei, Li Haofeng (2008)^[21], Li Lingtao, Qi Binyu (2019)^[22], Xu Lei, Zeng Yuheng (2019)^[23] and Zhang Yongfeng (2022)^[24] take the TV series *Growing Pain* as an example, we can see from it that China's family education has become an extension of school education, paying attention to reading, focusing on intellectual development and investment, and neglecting the cultivation and exercise of life ability. The center of this play always revolves around the word "college entrance examination", and all the families in the play focus on the college entrance examination wholeheartedly. "Everything is inferior, only reading is high." "Learn and excel." and other old society feudal imperial examination system and its ideology are deeply rooted in the hearts of the people.

All in all, most domestic research on this work explores the fundamental differences in family education between China and the United States from the aspects of family culture and values, but rarely studies the dynamic expression and cultural connotation of Chinese and

American family cultural differences from the perspective of film narrative techniques.

To sum up, in the past ten years, Chinese and foreign researchers have studied a lot of family cultural differences between China and the United States, roughly from the aspects of thinking and cultural differences, educational cultural differences, family perspective differences, social interpersonal differences, personal value differences, emotional cognitive differences, especially in the past five years, the differences in Chinese and foreign family education have received more and more attention, but there is little research on situational narrative.

III. COMPARISON OF THE SITUATIONAL NARRATIVES OF THE TWO WORKS

The Pursuit of Happiness was written by Gabriel. Directed by Muccino, Will Smith. American films starring Smith and others. The film is based on a true story, and the protagonist is Chris Gardner, a black American investment expert. The film tells the inspirational story of a down-and-out salesman who is on the verge of bankruptcy and his wife has left home, how he worked hard to fulfill his responsibilities as a single parent, worked hard to become a stock market trader, and finally became a well-known financial investor. *Growing Pain* is an urban family TV series directed by Liu Huining and Li Shaofei, starring Zhang Jiayi, Yan Ni, Zhao Jinmai, Guo Junchen, Wang Yuwen and Jiang Guannan. The play mainly revolves around four families, telling the story of family members facing the sun, wind and rain, working hard, and finally harvesting growth.

3.1 Comparison of Narrative Plots

In terms of narrative device *The Pursuit of Happiness* and *Growing Pain* have similarities and differences, they both have unique narratives of traditional themes, that is to say, they both face difficulties, overcome difficulties, and finally reap growth. But they focus on different characters, the former focusing on the characters of one family, the latter focusing on the characters of four families.

3.1.1 Similarity: Situational Narrative of Inspirational Theme

The Pursuit of Happiness and *Growing Pain* have one outstanding thing in common: they both tell the story of one or more families who grow up and achieve success through many difficulties.

In *The Pursuit of Happiness*, Chris Gardner (Will Smith), a young black man living in San Francisco, worked as a salesman to raise his wife and young son. Chris never felt that life was very happy, and of course it was not very painful, just like thousands of ordinary people in the United States. Men live ordinary lives, until one day, a series of sudden changes let Chris know how precious ordinary days are. First, he lost his job, and the company layoffs cost him his job. Chris has suffered a series of major blows since then, his wife runs away because she can't bear the long-term poverty life, and even his six-year-old son (Jayden Smith) also took it with him. Not long after, his wife returned her son to Chris, and since then Chris has not only had to face the dilemma of unemployment, but also has to raise his son independently. Not long after, Chris was evicted from the house by the landlord because of his long-term rent arrears and lived on the streets with his son. Over the next two or three years, the residence of the father and son moved from cardboard boxes to public restrooms. Chris is strong in the face of difficult times to work casual jobs to make money, but also strives to cultivate children's spirit of optimism in the face of difficulties, although the father and son have a hard time, but they can still live happily. Once, Chris met a man driving a high-end sports car in the parking lot, Chris asked him what kind of job he had to live such a life, the man told him that he was a stockbroker, and Chris decided that he wanted to be a good stockbroker and live a good life with his son. Chris, who had no knowledge of stocks at all, worked as an apprentice in a Wall Street stock company with perseverance, and he quickly mastered the knowledge of the stock market, then opened his own stockbroking company, and finally became a millionaire. Chris experienced many setbacks along the way, but his young

son gave him the greatest encouragement every time, and the two fathers and sons supported each other and finally fulfilled another American dream.

In *Growing Pain*, the agile girl Lin Miaomiao performed exceptionally in the middle school entrance examination and was accidentally admitted to a key high school, and her mother Wang Shengnan raised her eyebrows. Living in high school, Lin Miaomiao, who broke free from his mother's control, made three friends, Deng Xiaoqi, Qian Sanyi and Jiang Tianhao, and also became the anchor of the campus radio station, like a "winner in life". In the face of a frontal crit from Pei Yin, who "my son scored first in the city", Wang Shengnan's fighting spirit was fully ignited and began to accompany him. The road is narrow, and he has become neighbors with Pei Yin's family. The conflict between Wang and Pei continued to escalate, but they cherished each other because of marriage problems and became best friends. With the arrival of the third year of high school, Lin Miaomiao experienced the shock of his parents' feelings, Qian Sanyi endured the appearance of his parents, Jiang Tianhao was suddenly bankrupt by the family, and Deng Xiaoqi fell to the bottom because her mother's secret was exposed. The teenagers are untamed, facing the sun, wind and rain, and growing like spring grass. After the college entrance examination, the teenagers went their separate ways, full of sadness and expectations for the future. The four families have gone through twists and turns, found their own direction, and harvested moving growth.

3.1.2 Difference: Different Focus on Characters

The Pursuit of Happiness tells a touching story between father and son, and a microcosm of greatness and diligence in the face of adversity, focusing on only two characters, father and son. Moreover, the most focused person in the film is the father Chris, Chris's success is not only due to his diligence and broad-mindedness, but more importantly, he can recognize the essence of the whole event, not make decisions easily, even if the road ahead is difficult, he will face it calmly. The main reasons for Chris's success can be summarized in the following two aspects: First,

clarify your life goals. Second, be good at seizing the opportunities around you. The film embodies a clear spirit of independence, and the father teaches his son that everyone should achieve happiness through their own efforts. Americans are more often successful through self-dependence, both for loved ones and friends.

But *Growing Pain* focuses on the story of four families, and the characters in the drama are not adults but four high school students, Lin Miaomiao, Qian Sanyi, Deng Xiaoqi and Jiang Tianhao. The four teenagers in *Growing Pain* are all post-00s, they grew up in the environment of the information age, their material life has been satisfied, and their spiritual life is greatly enriched than before, and they have the courage to put forward and insist on their own views. In the *Growing Pain*, Lin Dawei, played by Zhang Jiayi, adheres to the concept of enlightened parenting and advocates that the education of his daughter should be based on understanding and supplemented by guidance. And Wang Shengnan, played by Yan Ni, is a typical Chinese "tiger mother", with the famous saying "Mom's hobby is you." Focus your life entirely on your family and your children. The differences and run-ins between the two concepts truly reflect the differences and changes in contemporary family education concepts.

3.2 Comparison of Narrative Devices

In terms of narrative devices, *The Pursuit of Happiness* and *Growing Pain* both tell the narrative tightly and coherently, trapping the audience in the emotions presented in the work, and then resonating with the audience. However, their narrative devices are also different, *The Pursuit of Happiness* mainly uses first-person and narratage, while *Growing Pain* not only uses first-person narration but also second-person and third-person narration, but doesn't use narratage.

3.2.1 Similarity: Compact and Coherent Narrative

The Pursuit of Happiness and *Growing Pain* are very compact and coherent, one link after another. They adopt the structure of "circular narrative" and "dramatic linearity", so that the audience is trapped in the emotions presented by

the work in the intricate plot and rhythm, causing resonance. After watching these two works, most of the audience will feel that the plot of these works are compact, and even think these two works are very good. This is because *The Pursuit of Happiness* and *Growing Pain* both adopt a circular structure, narrative, and dramatic linear structure, making the plot of the film more compact and easier to mobilize the audience's emotions.

First, both works adopt the circular narrative structure, it presents the fate of the characters in the work more clearly, and it is easier to trigger the audience's tears. In my opinion, the work adopts a "ring" narrative structure, which presents the context of this story more clearly, and also highlights the more complete story of the characters in the work, and also conveys the excitement of the dreamer after realizing his dream. Let the audience's senses be mobilized with the work, touching the softness of the audience's heart.

Second, both works adopt the dramatic linear narrative structure, taking the causal relationship of the story as the narrative driving force. The story is dramatized with linear time, so that the plot structure is interlocking and the logic is tightly logical and complete, strengthening the "illusionary reality" and "empathy", confusing the audience into the play. The dramatic linear narrative structure allows the entire film to present the causes and consequences of the entire event in the truncation, advancement and jump. There are not too many redundant pictures, and between the cross-transitions of the lenses, it creates more suspense and conflict for the work. Under the seamless connection of the lens, the audience is trapped in the emotions of the starring performance, which resonates with emotions.

3.2.2 Difference: Different Perspectives of Narration

The Pursuit of Happiness is mainly narrated in the first person and narratage, while *Growing Pain* is narrated not only in the first person but also in the second and third person, but without narratage. *The Pursuit of Happiness* cleverly uses the protagonist's first-person narration to increase the authenticity and coherence of the narrative; Through the metaphor of symbols, the rich emotions in the

hearts of the characters are brought out, which makes the development of the plot more substitutionary; In terms of theme sublimation, a lot of close-ups and contrasting shots are used to highlight the depth and dimension of the film's ideas. At the beginning of the film, after Garner sent his son to the nursery, he looked at the child's small figure through the window, and the first narration slowly opened with the loving eyes of the father staring at his son, "I am Chris Garner, I didn't see my father until I was 28 years old, so I made a commitment when I was very young, and when I grow up, I will always be by my children's side after I become a father." I don't know if you have noticed that Garner uses 7 "I" in this short sentence. This way of expression is simple and direct and down-to-earth, just like we usually stand downstairs with our neighbors and chat, telling each other who I am, how old I am, my simple life experience, and what kind of person I am. It only took a few seconds to get closer to the audience, since Garner emphasized that "I will always be by my children's side." Then it also indicates that in the advancement of the plot of the movie, there will be a lot of interaction between him and his son, and this is the highlight of this film. When using the art form of film to tell a real event, the most important point is not to be detached from reality, not to make the audience feel the slightest distortion, otherwise the film is a failure. The success of *The Pursuit of Happiness* is because the director uses first-person narration, which greatly increases the realism and substitution of the film.

3.3 Comparison of Narrative Rhetorical Device

In terms of narrative device, *The Pursuit of Happiness* and *Growing Pain* both violate the principle of cooperation and follow the principle of politeness, so that the audience can deepen their understanding of the film and thus correctly apply these principles in real life. However, they use rhetorical devices with different emphases, the former highlighting the rhetorical devices of repetition and contrast, and the latter highlighting the rhetorical devices of white drawing.

3.3.1 Similarity: Violation of the Principle of

Cooperation and Following the Principle of Courtesy

The Pursuit of Happiness and *Growing Pain* both cleverly violate the principle of cooperation and follow the principle of politeness in narrative device. So that readers can have a deeper understanding of the storyline, character and inner emotions of the characters in the work, deepen their understanding of the work, and learn the important role of language in conversational expression.

American Chinese philosopher Grice(1975)^[25] proposed that "in language communication activities, there is a tacit understanding between the speaker and the listener that both parties will abide by certain principles." Grice calls this mutually adherent principle the cooperative principle of conversation. To further illustrate the principles of cooperation, Grice has broken down the principles of cooperation into 4 guidelines. First, Quantitative guidelines require what is said is exactly what is needed for the conversation and saying no more than the information needed. Second, Quality Guidelines are being truthful in what you say, they do not say that self-knowledge is false and do not say anything that lacks sufficient evidence. Third, correlation guidelines are being related. Fourth, method guidelines are being clear, which require avoiding obscurity and ambiguity, there is conciseness and being orderly.

The first three of these four guidelines deal with the question of "what to say" in communication, and the fourth deals with the question of "how to say". In fact, it requires people to pay attention to the information, authenticity, relevance and clarity of the conversation in communication. By adhering to all these guidelines, people will be able to communicate in the most direct way and with the greatest efficiency. However, in actual conversation, due to the special needs, language habits, relationships and other reasons of both parties, the speaker will also violate the principle of cooperation and express his true thoughts in an implicit and indirect way to achieve specific communication purposes.

In response to the phenomenon of violating the principle of cooperation in communication, Leech proposed

the principle of politeness based on Brown & Levinson's face theory, pointing out that people deliberately violate the principle of cooperation in interpersonal communication, and let the listener care about the true intention of the speaker is out of the consideration of verbal politeness. In life, there are many examples of misunderstandings, conflicts, and interpersonal tensions caused by inappropriate speech, which is enough to show the importance of politeness in the use of words. The principle of courtesy is based on the "benefit and loss theory", which can be subdivided into 6 guidelines and 12 sub-criteria. First, strategic guidelines require trying to make others as little damage as possible and trying to benefit others as much as possible. Second, generosity guidelines require trying to benefit yourself as little as possible and making yourself suffer a lot. Third, praise guidelines require trying to minimize the derogatory treatment of others and trying to exaggerate the praise of others. Fourth, modesty guidelines require praising yourself as little as possible and demeaning yourself as much as possible. Fifth, agree with the guidelines require trying to narrow the differences between yourself and others and trying to exaggerate the consistency between yourself and others. Sixth, compassion guidelines require trying to minimize your dislike of others and trying to exaggerate your sympathy for others.

Take the example from *The Pursuit of Happiness*: Violation of quantitative guidelines and use strategy guidelines to remedy them. Because the internship period is not paid, the protagonist Chris is no longer able to support him and his son in the later stages of the internship. In desperation, Chris earned \$24 selling blood, and he paid \$8 for a core sensor to repair a portable bone density scanner, and his son wanted to see the sensor on the bus back to the relief station. So there is the following dialogue:

Christopher: What is it?

Chris: This is for fixing sensors.

Christopher: Can I take a look?

Chris: Of course, just don't break it, unless you want to sleep in the same room with me for the rest of your life.

Christopher: I don't mind.

Chris: No, you'll mind.

During the conversation, when his son Christopher asked him if he could see the core sensor, Chris's response was "Of course, just don't break it, unless you want to sleep in a room with me for the rest of your life." This answer violates the quantitative rule: your words cannot be more detailed than required. The protagonist first agrees to show his son the light bulb and core sensor, but asks him not to break it, which will hurt his son's emotions, so he humorously adds that unless the son is willing to live in a room with him for the rest of his life, through the strategic guideline: try to make others as little damage as possible, to alleviate the negative impact on his son's face. This dialogue also reflects from the side that Chris remains optimistic, humorous, tries his best to protect his son with a small heart, and is a good father with responsibilities even in a poor environment.

In *Growing Pain*, Lin Dawei's job is a funeral parlour host, and after his daughter finding out it, she hated this profession, felt very humiliated, and even quarreled with her father. But in the end, Lin Miaomiao was still persuaded by Lin Dawei with actions, a stray cat that Lin Miaomiao often fed died, it was Lin Dawei who took Lin Miaomiao to hold a funeral for it, and also said a lot of words of relief to Lin Miaomiao, until this time Lin Miaomiao understood that his father's work was not so terrible, but great, because he was able to let the dead leave without regrets, so that the living could be relieved, which is the meaning of this job. This section uses strategic guidelines to mitigate the negative impact on the daughter's face.

3.3.2 Difference: Different Focus on Rhetoric Devices

The Pursuit of Happiness highlights the rhetorical device of repetition and comparison. For example, Chris called his wife when he was detained, "All right, just... All right take him to the park... and bring him back, all right? All right, just bring me my son back. Okay, Linda?" There are four "All right" here, the first two and the last one is Chris's

comfort to himself, and the third is a kind of begging. The repetition of the phrase "bring back" further revealed Chris's inner fear.

And the rhetorical device of comparison in the film are everywhere, often full of expectation one second, and fall to the bottom of reality the next. The first such contrasting camera switch is the narration after Garner stands in front of the building and chats with the owner of the luxury car, "I still remember that moment, they all looked super happy, why can't I also have a happy face?" "Almost a second later, the camera switched directly to the alarm clock at 5:25 a.m., which is the distance between reality and dreams. Since then, Garner has firmly established her goal of becoming a stockbroker, and at the same time began a slow long road to fight against reality, such a comparison lens conversion processing, more able to mobilize the audience's emotions, follow the protagonist happy and sad together. A large number of applications to non-camera, including watching rugby matches, insinuations about the gap between rich and poor, etc., are also an interpretation and sublimation of the theme of "inspiration" in the movie, and they are trying to become a happy person.

Growing Pain highlights the rhetorical device of white drawing. The TV series *Growing Pain* vividly shows the living conditions of high school students and their parents in white. First, from the perspective of parents, parents pay more attention to their children's academic studies and almost everything. In this TV series, four classmates have become family representatives in the city today, urban office workers represented by Lin Miaomiao's parents, high level intellectual families represented by well-educated Qian Sanyi and his mother (his father isn't in this family), wealthy businessman families represented by Jiang Tianhao's parents, and single-parent families represented by Deng Xiaopi's mother. Through these families, we can see the survival of urban teenagers, no matter what work their parents do, without exception, they all focus on the children who have already entered high school. And this just happens to make many viewers involuntarily compare these four

families with their own families, and they can always find their own shadows, so there will be emotional resonance. Second, from the perspective of family education, adolescence is a thorny issue. To say that in this TV series, there is nothing more tossed than the adolescent girl Lin Miaomiao, and her mother belongs to the overriding parent representative of the typical college entrance examination, although she is a teacher at school, but she does not understand family education. When facing her daughter at home, the image of a "crazy" housewife is typical, if it were not for Lin Miaomiao's father being able to wisely resolve the turmoil, I am afraid that Lin Miaomiao was really ruined by her mother. Looking at Qian Sanyi's family, in his emotional world, he still has his own emotional needs, but fortunately, his mother did not go too far with her son.

Through the device of white drawing, different family cultures have been picturesquely reproduced in the audiences' minds. Many parents can find their own shadow, and many students can also find their own shadow, so they can have emotional resonance.

IV. COMPARISON OF FAMILY EDUCATION MODELS IN THE TWO WORKS

4.1 Comparison of Concept

From the concept of the two works, the adults in each work are leading their next generation to pursue happiness and success, to have dreams, and to defend dreams, only in this way will we succeed and happiness will come. But the values of happiness and success in China and the United States are different. China focusing on collectivism while the United States focusing on individualism.

4.1.1 Similarity: Leading the Next Generation in the Pursuit of Happiness and Success

The film *The Pursuit of Happiness* and the TV series *Growing Pain* have a distinctive common denominator in their educational philosophy, which is to lead the next generation to pursue happiness and success. *The Pursuit of Happiness* shows the protagonist Chris Gardner's tenacious struggle with the reality of life and his strong desire and

persistent pursuit of a happy life. There is a classic sentence in the film: "If you have a dream, you have to defend it." Faced with a life full of holes, Chris always believes that after working hard, happiness will come knocking. No matter how hard life is, you have to keep faith. Chris while bringing up the children, while going around to sell medical instruments, this time their life is very hard, not enough to eat, and even no place to live. Every day they had to wait in a long line to live in the free relief house, and if they couldn't get in line, they had to live in the public toilet. But Chris never gave up hope for life, and after hard work, he finally became a stockbroker and lived a happy life with his children.

With the theme of college entrance exams, *Growing Pain* shows the struggle of four families in their three years of high school, overcoming the difficult entrance exams and finally getting into the ideal college, and ultimately reaping the rewards of growth. Although there are quarrels and anger in the process, the children and their parents eventually reap the benefits of growth and love. By depicting the campus life of four high school students and their busy time preparing for the college entrance exams, *Growing Pain* shows the small worries and blessings of adolescence, and also reflects the different responses and dilemmas of different families in today's society when facing the pressure of children's education and higher education. After all, those who have gone through the college entrance exams or accompanied their children through the exams will remember this experience vividly. With both topicality and authenticity, it can be said that the TV series *Growing Pain* comes with the attribute of "topic maker".

4.1.2 Difference: Different Values in the Pursuit of Happiness and Success

We can see from the two works that there is a big difference between American values and Chinese values.

The Pursuit of Happiness reflects the contemporary American view of family education and the way of education. Chris attaches importance to the cultivation of

his son's character and values, and he passes on his sense of responsibility, independence, optimism and perseverance in his dreams to his son, guiding him to establish his own independent values. Individualism is the core of American cultural values, representing individuality and uniqueness, which is equivalent to "individualism" in China. It is a philosophy of life that takes the individual as the primary focus, confirms that the human being is the subject of value, firmly believes that each person has the value of each person, and attaches great importance to the self-rule, control and development of the individual, which to a large extent promotes the realization of the American dream. The belief in and admiration for individual struggle, the pursuit of equality and freedom, and the reliance on one's own strength in the process of realizing self-worth is a character trait that Americans have long formed and always maintained, and the full respect and importance given to the value of success while relying on one's own struggle and individual ability is the strong pillar on which American personal independence has thrived for a long time. The film reinforces and promotes the myth that America can succeed only through fair play, convincing viewers that success will not always elude you if you work hard and do your best.

Unlike American values, Chinese values are strongly influenced by Confucius' thinking. Only when a person has reached a certain level of cultivation himself can he set an example so that the whole family can live in harmony. If the moral ethics of the family and the way to rule the family are further expanded and go, he can rule the country. To create a relatively fair society and help the people create a suitable environment for survival is to level the world. The values of "cultivating one's moral character, cultivating one's family, ruling one's country, and pacifying the world" have influenced China for thousands of years.

4.2 Parent-child Activities

From the perspective of parent-child activities, parents in both works have achieved mutual understanding and communication with their children. However, due to the difference between the Chinese dream and the American

dream, its "family dream" is different.

4.2.1 Similarity: Mutual Understanding and Communication

The importance of parents to their children can never be matched, and the parent-child activity sections in *The Pursuit of Happiness* and *Growing Pain* both demonstrate mutual understanding and communication.

The Pursuit of Happiness in Chris was a salesman before, for various reasons, career has not been doing particularly well, in the frequent setbacks, his wife chose to leave the family, and even left a son to Chris, in such a stressful environment, and busy work, and to take care of children, if I am Chris, will certainly choose to give up. But Chris did not, and the most touching thing in this movie is Chris treating his son with that attitude. Chris's son saw his father's life so embarrassed were wet eyes, but Chris did not give up his life, did not give up their children, so that the son was greatly touched, and because of the usual influence of Chris on his son, but also become the best education he gave his children.

In the *Growing Pain*, a new type of contemporary parent-child relationship is revealed by showing the life and study status of high school students, that is, the "friend-like" relationship mode. We all know that in traditional Chinese family education, the status of parents is supreme, and the concept of superiority and inferiority is deeply imprinted in the minds of elders and juniors. However, as people's perceptions change, parent-child relationships tend to be more friend-like, with more mutual understanding and communication, while retaining mutual respect.

4.2.2 Difference: Different Family Dream

The American Dream is the pursuit of affluence, freedom and equal opportunities. Inspired and driven by it, people pursuing the American Dream always believe that in this land of America, no matter what color or ethnicity, no matter how poor and obscure, anyone enjoys equal opportunities for development can eventually reach the shore of success through their own diligent and hardworking efforts. The American Dream is a macroscopic

idea, which, from a microscopic view, reflects the family dream. In *The Pursuit of Happiness*, Chris believes that he must make a happy life for himself and his son. Once his goal is established, he does not care about anything, does not miss any opportunity to sell and express himself, gives his all for his dream, his attitude is not humble, does not curse, does not relent and does not give up.

The Chinese dream is a rich and strong country, a revitalized nation and happy people. The realization of the Chinese dream cannot be achieved without the support of millions of family dreams. In *Growing Pain*, one of the most prominent family dreams is for their children to desperately get into a good university. After the college entrance exam, the teenagers go their own way, full of sadness and expectations for the future. The four families go through ups and downs, find their own direction, and reap the benefits of moving growth.

4.3 Difficulty Solving

From the perspective of difficulty solving, the protagonist in any work is positive and optimistic when facing difficulties. However, because China and the United States have different historical and cultural backgrounds, they also have different values for dealing with difficulties.

4.3.1 Similarity: Optimism In the Face of Difficulties

In *The Pursuit of Happiness* and *Growing Pain*, when faced with difficulties, an obvious common denominator is that each person actively faces them, reflecting the positive guidance and unfailing care of adults for children.

The most important core of *The Pursuit of Happiness* is Chris's selfless fatherly love for his son, Kristoff. As Chris has experienced a lot of difficulties and conflicts, he understands the importance of this kind of fatherly love. In the most difficult days, he communicates well with his son and cultivates his son's optimism, reflecting the selflessness and greatness of fatherly love. When life was difficult, his wife felt worried and lost confidence, but Chris was more optimistic and believed he would get through the difficulties in front of him, while he also encouraged his wife. At the same time, his son's encouragement and trust in him also

become a great motivation for him to overcome difficulties. The kind of father-son love of sharing difficulties, supporting each other and taking care of each other is perfectly and movingly interpreted in the movie.

In *Growing Pain*, senior year is approaching, Lin Miaomiao experienced the shock of her parents' relationship, Qian Sanyi endured her parents' seeming separation, Jiang Tianhao was suddenly hit by family bankruptcy, and Deng Xiaoqi fell into the bottom because her mother's secret was exposed. All four families faced different difficulties, but they did not sink. Otherwise, they faced them actively and optimistically. Lin Miaomiao eventually experienced the love of her parents and decided to be angry with her past generation two paragraphs. Qian Sanyi and his mother communicate sincerely, and his mother finds his happiness. Jiang Tianhao's business venture took off and he started to pay attention to his studies. Deng Xiaoqi decides to take the art examination and fight to the end in blood, at any cost. This TV series ends in a comedy.

4.3.2 Difference: Different Values in Dealing with Difficulties

China and the United States are two large countries with very different cultural and historical backgrounds, which need to understand and communicate with each other. By enjoying classic American movies, students can gain an understanding of American history, society, economy, politics, education, art, religion and other aspects, so as to optimize their knowledge structures, enhance their cultural awareness, improve their sensitivity to cultural differences, tolerance and flexibility in dealing with cultural differences, and develop their cross-cultural communication skills (language skills, language skills, cognitive skills and emotional skills).

There are profound differences in the values of Chinese and American people when facing difficulties, such as the understanding of individualism. The Chinese dictionary defines "individualism" as the idea that everything is based on personal interests, which is expressed in the form of self-interest, profit and deceit, etc.

Individualism in Chinese culture is synonymous with egoism and it is a derogatory term, while individualism in Western culture has a completely different connotation. Although individualism is the core of American cultural values, we should take a correct view of American individualistic values so that we can learn and absorb the essence of Western culture more rationally and better construct our own value system in the trend of the collision between Chinese and Western cultures.

V. CONCLUSION

Family education is the starting point of moral development in life and is of great significance. To study the differences between Chinese and American family education and to analyze the reasons for the differences between family education in the two countries does not mean to reject all the achievements of family education in China, but to inherit dialectically the essence of traditional Chinese family education ideas, to learn from the successful experiences of American family education concepts, and to reject reasonably the negative factors in Chinese family education. In the process of developing and improving the theoretical system and practical activities of Chinese family education, we fully carry forward the excellent culture of the Chinese nation, absorb the advanced concepts of the United States, and discover the path of family education construction with Chinese characteristics. Through the comparison of the two works, the following conclusions are drawn from six aspects.

Three results have been concluded from aspects of narrative plots, devices and rhetoric.

(1) From the perspective of narrative plots, they are all telling the story of one or several families who have grown up through many difficulties and achieved success. But they focus on different characters, one tells the story of father and son, and the other tells the story of four families.

(2) From the perspective of narrative devices, their narrative techniques are very compact and coherent, one link after another. But their narratives are different in

person. *The Pursuit of Happiness* is mainly narrated in the first person and narration, while *Growing Pain* is narrated not only in the first person but also in the second and third person, but without narration.

(3) From the point of view of narrative rhetoric, they all cleverly violate the principle of cooperation and follow the principle of politeness. But their rhetorical focus is different, *The Pursuit of Happiness* highlights the rhetorical device of repetition and comparison, but *Growing Pain* highlights the rhetorical device of white drawing.

Three results have been concluded from aspects of philosophical comparison, parent-child activities and difficulty solving.

(4) From the perspective of philosophical comparison, they all tell the story of parents leading the next generation to pursue happiness and success, but the values of parents pursuing happiness and success in China and the United States are very different.

(5) From the perspective of parent-child activities, family education in China and the United States reflects the mutual communication and understanding between parents and children, but the "family dream" is different.

(6) From the perspective of difficulty solving, when facing difficulties, an obvious common point in the two dramas is that everyone actively faces it, reflecting the positive guidance and meticulous care of adults for children. But they have different values for difficulty.

Overall, this study explores the differences between Chinese and American family education through the comparison of two works, *The Pursuit of Happiness* and *Growing Pain* and adds some new ideas to the updating of Chinese family education concepts. However, there are still many shortcomings in this study. Due to the limited personal conditions, the understanding of the current situation of family education in the United States is not comprehensive and specific, but mainly through literature reading and borrowing data and theories from others. It is believed that with the government's gradual attention to the construction of family education, the scientific research

field will explore the comparative issues of family education in China and the United States more deeply and thoroughly, and promote the sustainable, healthy, and harmonious development of family education in China.

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Implementation of the Virtual internship Program: A case of Araling Panlipunan Junior High School Teachers at Zone IV, Division of Zambales S.Y. 2020-2021

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Abstract— The study aimed to conduct a situational assessment of the “Virtual Internship” program implemented by CHED/DepEd during the New Normal among selected secondary schools in Zone IV, Division of Zambales for School Year 2020–2021. Utilizing a descriptive research design, the study gathered data through questionnaires from 69 cooperating teachers and 41 student interns. The objective was to examine the perceptions of both groups regarding the implementation of the virtual internship program. Findings revealed no significant difference between the perceptions of cooperating teachers and student interns on the overall implementation of the program. However, among cooperating teachers, significant differences in perception were noted when grouped by age and years of teaching experience—particularly in areas such as Classroom-based Action Research, Teaching-Learning Assessment, Pedagogical Relevance, and Mentoring. Additionally, years of teaching experience influenced their views on the utilization of virtual teaching strategies. On the other hand, preservice teachers showed no significant differences in perception when grouped by age or sex. The results suggest that demographic and professional background can influence how cooperating teachers perceive the effectiveness of virtual internships, while preservice teachers tend to have a more uniform view. These findings are valuable for academic institutions and policymakers in evaluating and enhancing virtual internship models. The study provides insights into how future internship programs—especially in times of disruption—can be improved to support the educational and professional development of both student interns and their mentors

Keywords— *Virtual Internship, Cooperating teacher, student teacher, New Normal, pandemic, Virtual interns*

I. INTRODUCTION

Virtual teaching experiences” or “Virtual Internship” is one of the important mandates provided by the DepEd and CHED that is believed to be able to contribute to the enhancement of learning in the 21st century world. It is a key component to a student’s educational and personal growth, and the numerous benefits of an academic internship have been well established (Galvan, Fisher, Casman, & Small, 2013). In the midst of a pandemic that has profoundly altered many aspects of life, the continued effective delivery of education in all levels is, more than ever, of paramount importance. It is imperative for teacher education institutions (TEIs) to respond positively to the distinctive challenge and opportunity presented by the unusual

circumstances surrounding AY 2020 – 2021 by delivering courses in innovative and flexible ways suitable to the context of educational institutions, teachers, and students. Recently, the Commission on Higher Education released the Guidelines on the Implementation of Flexible Learning (CHED Memorandum Order No. 4, s, 2020) to ensure continuity of learning at the tertiary level while DepEd issued an order on the Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in light of the Covid-19 Public Health Emergency (DepEd Order No. 12, series of 2020). TEIs and Cooperating Schools must continue to strive to sufficiently prepare the next batch of teachers to teach in the post-pandemic, new normal environment. Hence, in addition to the current preparations being undertaken to deliver courses by means

of flexible modalities, the Field Study and Practice Teaching courses also need to be redesigned in ways that are compatible with the present situation.

Since the start of the COVID-19 pandemic, schools around the world have closed down to prevent the further spread of the virus. As a result, the sheer speed and urgency to shift to online learning tested the existing infrastructure of schools, the ability to use technology in teaching and learning, and material resources readily available to teachers and students (Adedoyin & Sokyan, 2020). The purpose of this study is to provide insight into how internships of Teachers were redefined during the pandemic, along with students and cooperating teachers' perception on their situation in the implementation of virtual internship program with regards to the mandates of CHED/DepEd during COVID-19.

Digital literacy as a 21st-century survival skill is important for both children and adults because the development of technology and digitization in the present and future eras is inevitable so that human resources (HR) that can adapt to the times are required (Ahsan, Ismail, & Ahmad, 2022). Educational institutions as one of the institutions that prepare students to confront and overcome existing challenges 21st century have an important role in developing students' digital literacy skills. In this regard, it is advised that educators increase their proficiency in accordance with standards, particularly those pertaining to digital literacy (Spante, Hashemi, Lundin, et al., 2018). This study served as a frame of reference to bridge the gap between the traditional teachers still stuck on old teaching styles and the modern 21st century student who is almost always connected online and provide perception in the digital competencies of cooperating teachers as mentors during the pandemic as it is one of the six literacy skills designated by the World Economic Forum as a 21st century life skill in 2015 is digital literacy (Mason, Khan, & Smith, 2016). This information not only provides valuable suggestions for other academic programs during this time of shutdowns and restrictions but can also help institutions to redefine future internship opportunities to help facilitate students as well as cooperating teachers' educational and professional growth.

II. METHODOLOGY

This study employed Descriptive- Quantitative method of research. As Creswell (2014) mentioned, quantitative methods may use a survey design to provide a numeric description of trends, attitudes, or opinions of a sample of a population. This method aimed at finding out "what is", thus survey questionnaire was used to collect descriptive data.

The questionnaire used was in the form of a Google form and a survey test paper and undergo Cronbach's alpha to test its consistency and stability. It consists of two parts: Part I-is the profile of students and cooperating teachers. Part II included the perceptions of the stakeholders (teachers and students) towards policies and mandates coming from the DepEd. Several stakeholders as identified in the (CHED Memorandum Order No. 4, s, 2020) entitled "New Normal Guidelines in the Deployment of Pre-service Teachers on Experiential Learning: Field Study and Teaching Internship".

The researcher of this study has made use of convenience sampling. Convenience sampling technique was utilized since choosing of Zone IV was due to the proximity or availability of the said District to the place of residence of the researcher. The number of both teacher- and student-respondents was also pre-determined by the researcher for reason of convenience, thus no mathematical formula was used to determine such number of respondents that was used in the study.

The participants of the study were sixty nine (69) cooperating teachers and forty one (41) student-teachers (pre-service) in Zone IV, Division of Zambales, Zone IV comprise the districts of Subic, Castillejos, and San Marcelino. All secondary public schools that entered a memorandum of agreement with Institutions of Higher Learning with regards to the assessment of its teacher education students in a virtual teaching environment.

In the process of gathering data for this study the researcher strictly followed the rules and protocols given by the Inter Agency Task Force (IATF) to ensure the safety of everyone. The researcher have asked permission to the office of the Schools Division Superintendent, District Supervisor and administrators of the different District Schools of Zone IV. The questionnaires were given to the teachers and students and requested them to indicate their perceptions to the virtual classroom program as a learning modality in this New Normal. As such, these questionnaires were retrieved from them after one week, rest assured that all information were treated with utmost confidentiality and the respondents who prefer to conceal their identity on the questionnaire were considered and the same respect and honor will be rewarded to them.

Data gathered were tallied, tabulated, analyzed and interpreted accordingly. IBM SPSS software program was used in the tabulation and statistical treatment of the data gathered using the survey questionnaire. Specifically, the researcher have made used of frequency counts, percentages, mean, ranking and average weighted mean for descriptive statistical treatment, whereas, the F-test (One-

way ANOVA) was used as treatment in order to determine significant difference among groups and draw inferences.

Table 1 shows the frequency and percentage distribution of the student and cooperating teacher -respondents' profile variables composed of age, sex and number of years in teaching respectively.

III. RESULTS AND DISCUSSION

1. Profile of the Student teacher and Cooperating teacher- respondents.

Table 1: Frequency and Percentage Distribution of the Student teacher-respondents and Cooperating Teachers respondents' Profile Variables

Profile Variables of Student Teacher		Frequency (f)	Percentage (%)
Age Mean=23.97 years old	16-20 years old	6	14.60
	21-25 years old	24	58.50
	26-30 years old	9	22.00
	31-35 years old	1	2.40
	36-40 years old	1	2.40
	Total	41	100.00
Sex	Male	19	46.30
	Female	22	53.70
	Total	41	100.00
Profile Variables of Cooperating Teacher		Frequency (f)	Percentage (%)
Age Mean=40.10 years old	21-25 years old	4	5.80
	26-30 years old	11	15.90
	35-40 years old	29	42.00
	45-50 years old	14	20.30
	50-55 years old	9	13.00
	55 years old and above	2	2.90
	Total	69	100.00
Sex	Male	15	21.70
	Female	54	78.30
	Total	69	100.00
Number of Years Teaching Mean=15.38 years	0-5 years	11	15.90
	6-10 years	18	26.10
	11-20 years	22	31.90
	21-30 years	9	13.00
	31 years and above	9	13.00
	Total	69	100.00

The majority of the student-teacher respondents were aged 21–25 years old (58.50%), with a mean age of 23.97, indicating they were in early adulthood—a stage commonly associated with goal-setting and career development. In

terms of sex, most respondents were female (53.70%), slightly outnumbering male participants (46.30%). This reflects the continuing trend of female dominance in the teaching profession, which may be attributed to gender-

based communication differences, with women generally placing greater emphasis on connection and collaboration in educational settings (Marchbank, 2013).2. Profile of the Teacher– respondents.

The majority of the cooperating teacher-respondents are female (78.30%), consistent with national data showing a higher proportion of women in the teaching profession. In terms of teaching experience, most have been in the service for 11–20 years, with a mean of 15.38 years, indicating that

they are seasoned educators. This level of experience suggests a strong mastery of subject matter and the ability to apply creative teaching strategies, enhancing the learning process. Research by Tara Kini and Anne Podolsky (2016) supports this, noting that teaching experience is closely linked to improved student achievement, with gains in effectiveness continuing well into the second and third decades of a teacher’s career.

2. Perception of the respondents on the Mandates in the Implementation of the Virtual Internship Program.

Table 2: Summary of the Respondents on the Mandates in the Implementation of the Virtual Internship Program.

Mandates in the Implementation of the Virtual Internship Program	Cooperating Teacher		Preservice Teacher	
	Weighted Mean	Outstanding Rating	Weighted Mean	Outstanding Rating
1. Teaching-Learning Related Assessment	3.34	Always	3.23	Often
2. Classroom-based Action Research	2.68	Often	2.58	Often
3. Relevance of Teaching Content and Pedagogy to Course Objectives and Requirements.	2.97	Moderate Knowledge	3.10	Moderate Knowledge
4. Availability and Relevance of Modalities and Resources	2.71	Available	2.60	Available
5. Mentoring and Utilization of Virtual Strategy	3.54	Always	3.38	Always
Overall Weighted Mean	15.24		14.89	

Table 2 summarizes respondents’ perceptions of the mandates in the Virtual Internship Program. Cooperating teachers rated mandates related to Teaching-Learning Assessment as “Always” (M = 3.44), while student teachers rated them as “Often” (M = 3.23). The increased use of webinars and digital platforms has further enhanced accessibility and engagement in virtual learning environments (Johnson et al., 2021; Lee & Kim, 2022).

For Classroom-Based Action Research, both groups responded “Often,” with means of 2.68 (teachers) and 2.58 (students), indicating moderate implementation. This aligns with recent research emphasizing action research as a critical tool for bridging theory and practice, fostering reflective teaching, and enhancing professional learning in virtual contexts (Gonzalez et al., 2020; Nguyen & Reid, 2021).

Regarding the Relevance of Teaching Content and Pedagogy, students and teachers reported “Moderate Knowledge” (M = 3.10 and M = 2.97), indicating partial alignment with course objectives. Darling-Hammond et al.’s (2017) call for coherence between pedagogy and learning outcomes remains relevant, as recent studies confirm the importance of pedagogical alignment in remote education (Smith & Flores, 2023).

On the Availability and Relevance of Modalities and Resources, the overall mean was 2.71, with 2.60 for students—both interpreted as “Available.” However, effectiveness varies, consistent with recent findings that highlight the need for strategic integration of technology, content, and pedagogy in virtual learning (Kimmons et al., 2022; Mishra & Koehler, 2006).

Finally, in terms of Mentoring and Virtual Strategies, cooperating teachers rated them as “Always” (M = 3.54), and student teachers similarly (M = 3.38), reflecting strong support. Effective mentoring continues to be recognized as vital for professional growth and reflective practice in online teaching contexts (Brown & Green, 2021; Smith & Israel, 2010).

3. Test of difference in the Perceptions of Cooperating Teachers-respondents on the implementation virtual internship program when grouped according to profile.

Table 3: Analysis of Variance to test difference in the Perceptions of Cooperating Teachers-respondents on the implementation virtual internship program as to Teaching-Learning Related Assessment when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	1.572	5	0.314	1.330	0.263	Accept Ho Not Significant
	Within Groups	14.892	63	0.236			
	Total	16.464	68				
Sex	Between Groups	0.007	1	0.007	0.029	0.866	Accept Ho Not Significant
	Within Groups	16.457	67	0.246			
	Total	16.464	68				
Number of Years in Teaching	Between Groups	0.728	4	0.182	0.741	0.568	Accept Ho Not Significant
	Within Groups	15.736	64	0.246			
	Total	16.464	68				

Table 3 shows no significant differences in perceptions based on age ($p = 0.263$), sex ($p = 0.866$), or years of teaching experience ($p = 0.568$), leading to acceptance of the null hypothesis. This is consistent with findings by

Harris et al. (2020), who report that perceptions of assessment practices tend to be stable across demographic variables, emphasizing shared professional standards over individual differences.

Table 4: Analysis of Variance to test difference in the Perceptions of Cooperating Teachers-respondents on the implementation virtual internship program as to Classroom-based Action Research when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	4.068	5	0.814	3.094	0.015	Reject Ho Significant
	Within Groups	16.564	63	0.263			
	Total	20.632	68				
Sex	Between Groups	0.489	1	0.489	1.626	0.207	Accept Ho Not Significant
	Within Groups	20.143	67	0.301			
	Total	20.632	68				
Number of Years in Teaching	Between Groups	3.432	4	0.858	3.193	0.019	Reject Ho Significant
	Within Groups	17.200	64	0.269			
	Total	20.632	68				

Table 4 shows significant differences in perceptions based on age ($p = 0.015$) and years of teaching experience ($p = 0.019$), rejecting the null hypothesis. No significant difference was found for sex ($p = 0.207$), so the null hypothesis was accepted. Recent studies (Cochran-Smith & Lytle, 2021; Zeichner, 2018) emphasize that experienced teachers tend to engage more deeply in classroom-based action research, while gender differences have minimal impact on educators' research involvement and perceptions.

Table 5: Analysis of Variance to test difference in the Perceptions of Cooperating Teachers-respondents on the implementation virtual internship program as to Relevance of Teaching Content and Pedagogy to Course Objectives and Requirements when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	17.093	5	3.419	9.877	0.000	Reject Ho Significant
	Within Groups	21.804	63	0.346			
	Total	38.897	68				

Sex	Between Groups	0.940	1	0.940	1.659	0.202	Accept Ho Not Significant
	Within Groups	37.957	67	0.567			
	Total	38.897	68				
Number of Years in Teaching	Between Groups	16.364	4	4.091	11.619	0.000	Reject Ho Significant
	Within Groups	22.533	64	0.352			
	Total	38.897	68				

Table 5 presents significant differences in perceptions of the relevance of teaching content and pedagogy based on age and years of teaching experience ($p < 0.001$), leading to rejection of the null hypothesis. No significant difference was found for sex ($p = 0.202$), so the null hypothesis is

accepted. This supports Darling-Hammond et al. (2017), who emphasize that teaching effectiveness and alignment with course objectives often improve with experience, while gender does not significantly influence instructional perceptions.

Table 6: Analysis of Variance to test difference in the Perceptions of Cooperating Teachers-respondents on the implementation virtual internship program as to Availability and Relevance of Modalities and Resources when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	3.682	5	0.736	3.160	0.013	Reject Ho Significant
	Within Groups	14.681	63	0.233			
	Total	18.363	68				
Sex	Between Groups	0.061	1	0.061	0.224	0.637	Accept Ho Not Significant
	Within Groups	18.302	67	0.273			
	Total	18.363	68				
Number of Years in Teaching	Between Groups	2.594	4	0.648	2.632	0.042	Reject Ho Significant
	Within Groups	15.769	64	0.246			
	Total	18.363	68				

Table 6 shows significant differences in perceptions of the availability and relevance of modalities and resources based on age ($p = 0.013$) and years of teaching experience ($p = 0.042$), rejecting the null hypothesis. No significant difference was found for sex ($p = 0.637$), so the null

hypothesis is accepted. This aligns with research by Adeogun (2001) and Mwiria (2015), which highlights how experience and maturity influence educators' awareness and utilization of teaching resources, while gender has less effect.

Table 7: Analysis of Variance to test difference in the Perceptions of Cooperating Teachers-respondents on the implementation virtual internship program as to Mentoring and Utilization of Virtual Strategy when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	1.341	5	0.268	1.073	0.384	Accept Ho Not Significant
	Within Groups	15.748	63	0.250			
	Total	17.090	68				
Sex	Between Groups	0.036	1	0.036	0.142	0.707	Accept Ho Not Significant
	Within Groups	17.053	67	0.255			
	Total	17.090	68				

Number of Years in Teaching	Between Groups	2.410	4	0.602	2.626	0.043	Reject Ho Significant
	Within Groups	14.680	64	0.229			
	Total	17.090	68				

Table 7 shows a significant difference in perceptions based on years of teaching experience ($p = 0.043$), leading to rejection of the null hypothesis. No significant differences were found for age ($p = 0.384$) and sex ($p = 0.707$), resulting in acceptance of the null hypothesis. This supports findings by Hudson (2013), who noted that mentoring effectiveness often improves with teaching experience, while

demographic factors like age and sex have less impact on mentoring perceptions.

4. Test of difference between the perceptions of Preservice Teacher-respondents on the implementation virtual internship program when grouped according to profile.

Table 8: Analysis of Variance to test difference on the Perceptions of Preservice Teachers-respondents on the implementation virtual internship program as to Teaching-Learning Related Assessment when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	1.493	4	0.373	1.966	0.121	Accept Ho Not Significant
	Within Groups	6.836	36	0.190			
	Total	8.329	40				
Sex	Between Groups	0.080	1	0.080	0.378	0.542	Accept Ho Not Significant
	Within Groups	8.249	39	0.212			
	Total	8.329	40				

Table 8 presents the ANOVA results on preservice teachers' perceptions of the Virtual Internship Program related to *Teaching-Learning Related Assessment* by profile variables. No significant differences were found based on age ($p = 0.121$) or sex ($p = 0.542$), leading to acceptance of

the null hypothesis. Though students and educators report satisfaction with webinar learning (Cornelius & Gordon, 2013; Gegenfurtner et al., 2018), no meta-analysis has yet assessed its effectiveness on student achievement. Related studies focus on blended, online, and distance learning.

Table 9: Analysis of Variance to test difference in the Perceptions of Preservice Teachers-respondents on the implementation virtual internship program as to Classroom-based Action Research when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	1.628	4	0.407	1.304	0.287	Accept Ho Not Significant
	Within Groups	11.242	36	0.312			
	Total	12.870	40				
Sex	Between Groups	0.001	1	0.001	0.002	0.964	Accept Ho Not Significant
	Within Groups	12.870	39	0.330			
	Total	12.870	40				

Table 9 shows no significant differences in preservice teachers' perceptions of Classroom-Based Action Research based on age ($p = 0.287$) or sex ($p = 0.964$), leading to acceptance of the null hypothesis. Action research involves

systematic inquiry by educators into their own teaching to address specific classroom issues and improve practice through data collection and reflection (Mertler, 2012a, 2012b).

Table 10: Analysis of Variance to test difference in the Perceptions of Preservice Teachers-respondents on the implementation virtual internship program as to Relevance of Teaching Content and Pedagogy to Course Objectives and Requirements when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	3.588	4	.897	2.116	0.099	Accept Ho Not Significant
	Within Groups	15.262	36	.424			
	Total	18.850	40				
Sex	Between Groups	0.180	1	0.180	0.375	0.544	Accept Ho Not Significant
	Within Groups	18.670	39	0.479			
	Total	18.850	40				

Table 10 shows no significant differences in preservice teachers' perceptions of the relevance of teaching content and pedagogy by age ($p = 0.099$) or sex ($p = 0.544$), leading to acceptance of the null hypothesis. This suggests a shared perspective among respondents.

Research indicates many teachers lack computer literacy, impacting their ability to integrate technology effectively (Martin & Heller, 2011; Satharasinghe, 2006). Computer literacy goes beyond basic skills, influencing teaching efficacy and student learning.

Table 11: Analysis of Variance to test difference in the Perceptions of Preservice Teachers-respondents on the implementation virtual internship program as to Availability and Relevance of Modalities and Resources when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	0.781	4	0.195	1.300	0.288	Accept Ho Not Significant
	Within Groups	5.408	36	0.150			
	Total	6.190	40				
Sex	Between Groups	0.498	1	0.498	3.414	0.072	Accept Ho Not Significant
	Within Groups	5.692	39	0.146			
	Total	6.190	40				

Table 11 shows no significant differences in preservice teachers' perceptions of the availability and relevance of modalities and resources based on age ($p = 0.288$) or sex ($p = 0.072$); hence, the null hypothesis is accepted.

engagement and achievement in virtual settings (Trust & Whalen, 2021; König et al., 2022). Schools with well-integrated technological resources better support instructional delivery and learning outcomes, while resource limitations hinder virtual teaching effectiveness.

Recent studies highlight that access to sufficient and high-quality digital learning resources directly influences student

Table 12: Analysis of Variance to test difference in the Perceptions of Preservice Teachers-respondents on the implementation virtual internship program as to Mentoring and Utilization of Virtual Strategy when grouped according to profile

Sources of Variations		SS	df	MS	F	Sig.	Decision
Age	Between Groups	1.183	4	0.296	1.323	0.280	Accept Ho Not Significant
	Within Groups	8.047	36	0.224			
	Total	9.230	40				
Sex	Between Groups	0.216	1	0.216	0.933	0.340	Accept Ho Not Significant
	Within Groups	9.015	39	0.231			
	Total	9.230	40				

Table 12 shows no significant differences in preservice teachers' perceptions of mentoring and virtual strategy by age ($p = 0.280$) or sex ($p = 0.340$); thus, the null hypothesis is accepted.

This is supported by recent research showing that the effectiveness of virtual mentoring is less influenced by demographic variables and more by the quality of interaction and feedback. Trust and Prestridge (2021) found that strong mentor-mentee relationships in virtual settings promote professional learning and reflective teaching practices. Schmidt-Crawford et al. (2022) also emphasized that consistent virtual mentoring helps preservice teachers build confidence and instructional skills, regardless of age or gender.

IV. CONCLUSION AND RECOMMENDATION

The study reveals that both the student-teacher and cooperating teacher respondents are female, with the student-teacher in early adulthood and the cooperating teacher in middle adulthood, having over 15 years of teaching experience. Assessment of the virtual internship program shows that cooperating teachers consistently rate "Always" in areas such as teaching-related assessment, mentoring, and the use of virtual strategies. In contrast, student teachers display variability in their responses, indicating "Often" and "Moderate Knowledge" in key aspects like action research and the relevance of pedagogy to course objectives. These findings align with Vygotsky's Sociocultural Theory, which emphasizes the essential role of mentors (cooperating teachers) in scaffolding the learning experiences of novice teachers, particularly within virtual learning environments.

The analysis finds no significant difference in perceptions of the virtual internship program between student interns and cooperating teachers overall. However, significant differences emerge among cooperating teachers when grouped by age and years of teaching experience, particularly in areas related to action research, the relevance of pedagogy, and mentoring strategies. This supports **Knowles' Adult Learning Theory**, which suggests that adult learners (in this case, cooperating teachers) bring diverse experiences and learning preferences that influence how they adapt to and perceive new instructional models such as virtual internships. Conversely, no significant differences appear among pre-service teachers when grouped by age and sex, indicating a more uniform perception within this group, likely due to their shared generational familiarity with digital tools. These findings underscore the importance of experience and ongoing professional development in successfully adapting to virtual instructional models. The differing levels of digital

competence and pedagogical alignment among teachers highlight the need for targeted support and continuous learning. As digital literacy remains a vital 21st-century skill, the study reinforces the theoretical foundation of **Connectivism**, which emphasizes the value of networked learning and adaptability in digital environments—especially for pre-service teachers navigating a rapidly changing educational landscape.

The study provides important insights into the dynamics of virtual teaching internships during the COVID-19 pandemic. It highlights the strong role that experienced cooperating teachers play in mentoring pre-service teachers, especially in virtual settings where traditional classroom interactions are limited. It also points to disparities in digital competence and pedagogical readiness, suggesting that although student teachers may be digitally native, they still require structured support to apply their skills effectively in teaching contexts. Moreover, the absence of significant differences in perceptions between the two groups suggests a general acceptance of the virtual internship model, while also revealing areas for improvement, particularly in digital content delivery and the implementation of action research.

In conclusion, the study demonstrates that virtual internship programs bridge the gap between traditional and digital teaching models, but their success largely depends on the preparedness, support systems, and technological access available to both cooperating and student teachers. The findings underscore the importance of continuous professional development, equitable access to digital tools, and the need for mentoring strategies tailored to the virtual context. As education continues to evolve in the post-pandemic era, these insights guide institutions in refining virtual teaching internships to ensure they remain relevant, effective, and responsive to the needs of 21st-century learners and educators.

Future research should focus on evaluating the effectiveness of virtual internships compared to traditional formats, particularly in achieving learning outcomes and preparing students for future careers in education and related fields. It is essential to explore student perspectives, assess long-term impacts on professional growth, and examine whether virtual internships promote or hinder access for marginalized groups. Comparative and longitudinal studies, along with investigations into digital literacy, mentorship quality, and institutional support, will help refine virtual internship models and guide improvements in policy and curriculum development.

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Practices and Challenges Encountered by Secondary Mathematics Teachers in Limited Face-To-Face Learning Modality in Zone IV, Division of Zambales

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Abstract— This research studied the practices and challenges encountered by Secondary Mathematics teachers during limited face-to-face learning modality in Zone IV, Division of Zambales for the school year 2021–2022. It utilized a descriptive quantitative research design with a questionnaire as the main instrument. Results showed that teachers strongly agreed on the indicated practices on Health and Safety Protocols; Accessibility, Teacher Performance; Teaching Strategy, and ICT Access and Use. They disagreed with challenges related to Class Scheduling, Teaching and Learning Delivery, Assessment of Students' Performance; but agreed that Class structuring and Management posed difficulties for effective discussions and student engagement. However, there is no significant difference between the appraised practices and challenges when grouped according to age, gender, teaching position, years in teaching, and average number of hours rendered in mathematics class weekly. There exist significant differences on the perceived practices among respondents handling Grades 7, 10, and 11. Post Tukey HSD tests and the Games-Howell test indicate that Grade 7 and Grade 11 groups differ significantly with their perceived practices of limited face-to-face modality. Therefore, the grade level to which the teachers are assigned has an impact on how they perceive the implementation of the limited face-to-face modality. Lastly, there is no significant relationship between assessed practices and perceived challenges faced by the teachers in the conduct of limited face-to-face learning modality and the correlation that was established was negligible negative correlation, suggesting that teachers who strongly agreed on the indicated practices tend to have low perceived challenges.

Keywords— limited face-to-face learning, teaching practices, perceived challenges, secondary mathematics teachers, grade level differences

I. INTRODUCTION

The Corona Virus Disease (Covid-19) pandemic greatly affects education around the world. Many countries have decided to temporarily close schools that have affected millions of students since the outbreak and threat of the pandemic. As an urgent response to ensure continuity of education in the Philippines, the Department of Education (DepEd) has started Distance Learning on October 5, 2020. According to Quinones (2020), distance Learning refers to a learning delivery modality, where learning takes place between the teacher and the learners who are geographically remote from each other during instruction. This modality has three types: Modular Distance Learning (MDL), Online Distance Learning (ODL), and TV/Radio-Based Instruction.

World Health Organization (WHO, 2020) states that School closures have clear negative impacts on child health, education and development, family income and the overall economy. Consequently, the pandemic has aggravated the global learning crisis more than had been anticipated (World Bank, United Nations Educational, Scientific and Cultural Organization, & United Nations International Children's Emergency Fund, 2021). In relation to this, every country is responsible for devising strategies for reopening schools in a secure manner (Fernandez-Guzman, Sangster-Carrasco, & Pinedo-Soria, 2021). School reopening should be prioritized over reopening other elements of society (Viner, Bonell, Drake, Jourdan, Davies, Baltag, Jerrim, Proimos, & Darzi, 2021).

In January 2020, most schools in China, where the COVID-19 outbreak began, were closed for the Chinese

New Year holidays, and reopened in April 2020 for graduating classes in high schools (Australian Government-Department of Education, Skills and Employment, 2020). Denmark was the first European country to restart schools after closure, allowing municipalities to reopen schools as early as April 15, 2020. Norway allowed daycare and preschools to open on April 20 and Grades 1–4 (ages 6–11) on April 27 in regions with low infection rates (Melnick, Darling-Hammond, Leung, Yun, Schachner, Plasencia, & Ondrasek, 2020). A Sept. 8 report by the United Nations Children’s Fund identified the Philippines and Venezuela as the two remaining countries that have yet to return to in-person classes. On Oct. 25, Venezuela resumed face-to-face classes for its more than 11 million students (Bautista, 2021). After almost 2 years of distance learning, even as the COVID-19 pandemic persists, DepEd allows limited face-to-face classes. The Philippines, one of the most virus-hit countries in Asia, was the last country in the world to reopen schools for in-person classes since the World Health Organization declared a pandemic in March 2020. According to DepEd Memorandum no. 071, s. of 2021, 59 public schools started the pilot face-to-face classes on November 15, 2021. In SDO- Zambales, there are ten participating schools namely, San Marcelino National High School (NHS) Annex and Baliwet Elementary School (ES) in San Marcelino, Banawen ES in San Felipe, and Belbel ES, Burgos ES, Burgos ES, Maguisguis ES, Moraza ES, Nacolcol Integrated School (IS), Owaog Nebloc ES, and Palis IS.

On February 2, 2022, given President Rodrigo Duterte’s approval of the recommendation for the progressive expansion of face-to-face classes, Education Secretary Leonor Magtolis Briones authorized all regional directors to commence the progressive expansion phase of face-to-face classes for both public and private schools (DepEd, 2022). SDO- Zambales is the first division that 100% or 313 public schools opened limited face-to-face classes. Implementing limited face-to-face classes even though there are still active cases of COVID-19 is a positive step before the full implementation of face-to-face classes,

but the Department of Education shared the various challenges experienced by teachers and students (Hernando-Malipot, 2021). In TIMSS 2019, the Philippines ranked last among 58 countries in math and science, according to Banerjee (2022), there is a learning crisis before the pandemic and according to World Bank, UNESCO, and UNICEF (2021), the pandemic has exacerbated this learning crisis and children in almost every country have fallen behind in their learning. The world bank (2019) stated that the teacher should enrich and transform students’ lives despite all challenges. Thus, there is a need to determine if mathematics teachers are ready or prepared and equipped with the right skills and knowledge to address the challenges on Limited Face-to-Face Learning Modality during pandemic. In this light, teachers are in need of continuous professional development, assistance and resources/equipment to be able to provide quality education for the learners during pandemic. Lastly, the researcher investigated the practices and the challenges of the face-to-face learning modality to come up with the program that will prepare teachers to perform their task and be ready to face challenges they might experience during the conduct of face-to-face learning modality during pandemic.

II. METHODOLOGY

A. Research Design

In this study, the researcher used a Descriptive Design to describe and investigate the practices and the challenges of the face-to-face learning modality to come up with a program that will prepare teachers to perform their tasks and be ready to face challenges they might experience during the conduct of face-to-face learning modality during a pandemic.

B. Respondents and Location

The respondents of the research study are the secondary mathematics teachers of Zone 4, DepEd Division of Zambales. Table 1 below shows the frequency distribution of the respondents by school.

Table 1: Distribution of the Teacher – Respondents from Secondary Schools of Zone 4, Division of Zambales

Public Secondary Schools	Teachers (f)
1. Laoag Integrated School	3
2. San Guillermo National High School	10
3. San Rafael High School	2
4. Castillejos National High School	15
5. Castillejos Resettlement High School	2
6. Hanjin Integrated School	2
7. Jesus F. Magsaysay Technological Vocational High School	3

8. San Agustin High School	3
9. Aningway-Sacatihan High School	2
10. Calapandayan Integrated School	3
11. Ilwas High School	4
12. Pamatawan Integrated School	2
13. San Isidro High School	5
14. Subic National High School	20
Total	76

As shown in Table 1, a total population of seventy-six (76) secondary mathematics teachers are identified as respondents of the study. Teacher respondents are all employed among fourteen (14) schools of Zone 4, Division of Zambales. The study will be conducted at Public High Schools of the three (3) Districts (San Marcelino District, Castillejos District, and Subic District) of Zone 4, DepEd Division of Zambales. San Marcelino District includes Laoag Integrated School, Brgy. Laoag, San Marcelino; San Guillermo National High School, Brgy. San Guillermo, San Marcelino; and San Rafael High School, Brgy. San Rafael, San Marcelino. Castillejos District includes Castillejos National High School, Brgy. San Roque, Castillejos; Castillejos Resettlement High School, Brgy. Balaybay, Castillejos; Hanjin Integrated School, Brgy. Magsaysay, Castillejos; Jesus F. Magsaysay Technological Vocational High School, Brgy. San Jose, Castillejos; and San Agustin High School, San Agustin, Castillejos. Subic District includes Aningway-Sacatihan High School, Brgy. Aningway-Sacatihan, Subic; Calapandayan Integrated School, Brgy. Calapandayan, Subic; Ilwas High School, Brgy. Ilwas, Subic; Pamatawan Integrated School, Brgy. Pamatawan, Subic; San Isidro High School, San Isidro, Subic; and Subic National High School, Mangan-vaca, Subic.

C. Research Instrument

This study employed a research-made survey questionnaire. The survey questionnaire was composed of three parts. Part 1 identified the teacher-respondents' profiles, including age, sex, grade level handled, years in teaching, and teaching position. Part 2 determined the practices of the respondents on a limited face-to-face learning modality. Part 3 determined the challenges of the respondents in the limited face-to-face learning modality. Parts 2 and 3 used a four-point scale from 4 (strongly agree), 3 (agree), 2 (disagree), and 1 (strongly disagree). For the validation of the instrument, the researcher sought the approval of experts in terms of content, face, and construct. The enhanced and modified proposed survey questionnaire was field tried out for testing among secondary math teachers in Zone 1 to 3 of

the Division of Zambales. Lastly, Cronbach Alpha was determined with a reliability index of 0.892309 (good) for Practices and 0.913573 (excellent) for Challenges. This means that the survey questionnaire was reliable.

D. Data Gathering Procedure

A letter of request to the Schools Division Superintendent, DepEd Division of Zambales, was written to ask permission to conduct research among the teacher-respondents to gather relevant and pertinent data. After the request was approved, another letter requests were prepared for the School Principal/ School Head of school respondents seeking their assistance during the distribution of the survey questionnaire in a Google form. The survey questionnaire was distributed during the fourth quarter of the school year 2021-2022. The respondents were given enough time to answer the questionnaire. Data that were collected were tabulated and analyzed.

E. Data Analysis

After retrieving the disseminated survey questionnaires, the data was tallied and tabulated following the objectives of the study. The data was analyzed using statistical tools. The percentage was computed to present the profile of the respondents. The frequency was utilized to determine the distribution of responses to a specific question or items in the survey questionnaires. The Weighted Mean is the average score of the observations. This was calculated to determine the respondents' overall perceptions. The Analysis of Variance was used to test the significant difference between the assessed practices and perceived challenges in limited face-to-face learning modality by the respondents when grouped according to profile. The Pearson r Correlation was used to test the significant relationship between the assessed practices and perceived challenges in limited face-to-face learning modality by the respondents.

III. RESULTS AND DISCUSSION

1. Profile of the Teacher-Respondents

Table 2 shows the frequency and percentage distribution of the teacher-respondents as to their age, sex,

teaching position, grade level handled, years in teaching, and Average number of hours rendered in a Mathematics class weekly.

Table 2: Frequency and Percentage Distribution of the Teacher-Respondents' Profile

Age	Frequency	Percent
56 to 60 years old	2	2.63
51 to 55 years old	8	10.53
46 to 50 years old	6	7.89
41 to 45 years old	10	13.16
36 to 40 years old	19	25
31 to 35 years old	12	15.79
26 to 30 years old	12	15.79
21 to 25 years old	7	9.21
Total	76	100.00
Mean = 37.80		
Sex	Frequency	Percent
Male	28	36.84
Female	45	59.21
Prefer not to say	3	3.95
Total	76	100.00
Teaching Position	Frequency	Percent
Master Teacher 2	2	2.63
Master Teacher 1	1	1.32
Teacher 3	19	25
Teacher 2	14	18.42
Teacher 1	40	52.63
Total	76	100.00

Grade Level Handled	Frequency	Percent
Grade 11	10	13.16
Grade 10	19	25
Grade 9	19	25
Grade 8	12	15.79
Grade 7	16	21.05
Total	76	100.00
Years in Teaching	Frequency	Percent
31 to 35 years	2	2.63
26 to 30 years	1	1.32
21 to 25 years	6	7.89

16 to 20 years	7	9.21
11 to 15 years	13	17.11
6 to 10 years	23	30.26
1 to 5 years	24	31.58
Total	76	100.00
Average Number of Hours rendered in a Mathematics Class Weekly	Frequency	Percent
More than 5 hours	40	52.63
5 hours	18	23.68
4 hours	12	15.79
3 hours	2	2.63
2 hours	2	2.63
1 hour	2	2.63
Total	76	100.00

The age of the 76 Secondary Mathematics teacher respondents, there are 19 or 25.00%, who belong to 36 to 40 age group. It was followed by 12 (15.79%) teachers who are at 31-35 and 26-30 age groups respectively; 8 or 10.53%, 51-55 age group; 7 (9.21%) 21-25 age group; 6 (7.89%), 46-50 age group; and 2 (2.63%) who belong to age brackets of 56-60. The mean age was 37.80. This particular age falls under the category of middle adulthood or midlife. Middle adulthood ranges from 35 to 50 years old who frequently accommodates greater life obligations. According to Chiang and Wang (2014), the matured age group is a viable source for potential educators and Heinz (2013) stated that in comparison to their younger counterparts, teacher candidates over the age of 30 do better during teaching practice. Moreover, the result of the present study is consistent with the data obtained in the study of Campilla and Castañaga (2021) and Francisco (2020) on age profile variables. Their respondents belong to the age bracket (31-40) or middle adulthood.

The sex of 76 Secondary Mathematics teacher respondents, 45 or 59.21% are female, 28 or 36.84% are male and 3 or 3.95% prefer not to say their sex. This means that majority of secondary mathematics teacher respondents of the present study are represented by women. Teaching has become a feminized profession, especially in elementary teaching, in which it is regarded as women's work (Bongco & Ancho, 2020). This is particularly evident at the primary school level, where, as of 2017, data from the World Bank (2024) shows that 65.73% of instructors are female. The same is true in the Philippines, where as of 2016, 87.54% of primary school teachers were female (World Bank Data, retrieved August 2019). As per data from

the World Bank, there are increasingly more women working as teachers. Moreover, the result of the present study is consistent with the data obtained in the study of Regalado (2017) and Bongco and Ancho (2020) on sex profile. Their respondents belong to the female group.

Forty (40) or 52.63% are Teacher 1; 19 or 25% are Teacher 3, 14 or 18.42% are Teacher 2, 2 or 2.63 are Master Teacher 2, and 1 or 1.32 are Master Teacher 1. According to Regalado (2017), available items in the Department of Education (DepEd) are relatively few, the promotions are rare in the DepEd and if there are promotions it is usually kept to the barest minimum. Moreover, the result of the present study is consistent with the data obtained in the study of Regalado (2017), and Dela Fuente (2020), most of the teachers belong to Teacher 1 position.

Out of 76 Secondary Mathematics teacher respondents, 19 or 25% are teaching Grade 9 and 10 respectively; followed by 16 or 21.05% are teaching Grade 7; 12 or 15.79% are teaching Grade 8; and 10 or 13.16 are teaching Grade 11. This particular result is consistent with Antipolo and Rogayan (2021), the result shows that the greater number of respondents handled Grade 8, 9 and 10.

There are 24 or 31.58% whose teaching experience is 1-5 years; followed by 23 or 30.26% have 6-10 years in teaching; 13 or 17.11% have 11-15 years in teaching; 7 or 9.21 have 16-20 years in teaching; 6 or 7.89% have 21-25 years in teaching; 2 or 2.63% have 31-35 years in teaching; and 1 or 1.32% has 26-30 years in teaching. Moreover, the result of the present study contradicts with the result in the study of Rodríguez-Muñiz, Burón, Aguilar-González and Muñiz-Rodríguez (2021) wherein 75.4% of the sample had

more than 10 years of experience and only 9.4% had less than three years of experience and according to Stoilescu and McDougall (2015), 90% of the mathematics teachers have at least 5 years of teaching experience.

Out of 76 Secondary Mathematics Teachers, 40 or 52.63% rendered more than 5 hours in a mathematics class weekly; 18 or 23.68% rendered 5 hours; 12 or 15.79 rendered 4 hours; and 2 or 2.63 rendered 3 hours, 2 hours, and 1 hour, respectively in a mathematics class weekly. DepEd Memorandum no. 291, s. 2008 stated that public school teachers shall render at most six hours of actual classroom teaching a day, except when undertaking academic activities that require presence outside the school premises. According to DepEd order no. 30, s. 2022 and DepEd order no. 71 s. 2021, the school has designed class programs that cater both learners of the face-to-face class

arrangement and distance education while observing the maximum 6-hour classroom teaching hours of teachers and has developed a teaching schedule that follows the 5-hour minimum contact time for teaching and learning. DepEd Order number 31, s. 2012 states that the time allotment for the mathematics class is 4 hours weekly.

2. Level of Agreement of Mathematics Teacher-Respondents with the Practices in Limited Face-to-Face Learning Modality

Table 3 shows that practice on Health and Safety Protocols (Strongly Agree, 3.74 ranked 1st); practices on Teacher Performance (Strongly Agree, 3.70 Ranked 2nd); practices on Teaching Strategy (Strongly Agree, 3.54 ranked 3rd); practices on ICT Access and Use (Strongly Agree, 3.53 ranked 4th); and practices on Accessibility (Strongly Agree, 3.52 ranked 5th).

Table 3: Level of Agreement of Mathematics Teacher-Respondents with the Practices in Limited Face-to-Face Learning Modality

Practices in Limited Face-to-Face Learning Modality	Weighted Mean	Qualitative Rating	Rank
1. Health and Safety Protocols	3.74	Strongly Agree	1
2. Accessibility	3.52	Strongly Agree	5
3. Teacher Performance	3.70	Strongly Agree	2
4. Teaching Strategy	3.54	Strongly Agree	3
5. ICT Access and Use	3.53	Strongly Agree	4
Overall Weighted Mean	3.61	Strongly Agree	

Overall, the mathematics teacher-respondents Strongly Agreed with the practices on Limited Face to face Learning Modality pertaining to Health and Safety Protocols; Accessibility; Teacher Performance; Teaching Strategy and ICT Access and Use in Limited Face-to-Face Learning Modality. The summary on the perceptions with the practices of the limited face-to-face learning modality is strongly agreed. Education is the gateway to life, leading to a world full of knowledge, awareness, empowerment, and opportunities. Creating a secure educational environment is critical for increasing student engagement, active participation, and overall achievement. A student who is nurtured and supported in a safe environment will thrive and emerge as confident, sensitive human beings of the future (Jisu, 2023). According to Mubita, Milupi, and Kalimaposo (2023), safety and health management in schools are essential for providing safe and healthy learning environments for both students and teachers, as they improve academic performance, reduce absenteeism, and improve learners' mental and physical health outcomes.

3. Level of Agreement of Mathematics Teacher-Respondents with the Challenges in Limited Face-to-Face Learning Modality

Table 4 shows that Classroom Structuring and Management (Agree, 2.51 ranked 1st); Assessment of Student's Performance (Disagree, 2.30 Ranked 2nd); Class Scheduling (Disagree, 2.16 ranked 3rd); and Teaching and Learning Delivery (Disagree, 1.92 ranked 4th). Overall, the mathematics teacher-respondents Disagreed with the challenges in Limited Face-to-Face Learning Modality on Class Scheduling, Teaching and Learning Delivery, Assessment of Student's Performance and agreed that class structuring and Management cause a threat on the effective classroom discussion and student's participation or engagement. Foster's (2022) study revealed that effective classroom structuring and management can foster a positive learning environment that supports academic, social, and emotional learning; facilitate a structured and organized environment in which students can focus on learning; build trust and healthy relationships between instructor and students, as well as peer-to-peer among students; maintain

attention and foster motivation and engagement; and minimize disruption and interference with learning.

Table 4: Level of Agreement of Mathematics Teacher-Respondents with the Challenges in Limited Face-to-Face Learning Modality

Challenges in Limited Face-to-Face Learning Modality	Weighted Mean	Qualitative Rating	Rank
1. Classroom Structuring and Management	2.51	Agree	1
2. Class Scheduling	2.16	Disagree	3
3. Teaching and Learning Delivery	1.92	Disagree	4
4. Assessment of Student’s Performance	2.30	Disagree	2
Overall Weighted Mean	2.22	Disagree	

As stated in DepEd-DOH Joint Memorandum Circular No. 1, s. 2021, during the implementation of the Limited Face-To-Face Learning Modality, classrooms must be set up following the prescribed classroom layout to ensure learners' safety from COVID-19 transmission while the learners should follow the proper physical distancing and the schools should consider providing microphones or other appropriate sound systems for teachers to facilitate teaching in a physically distanced setup so that students can easily hear and understand the lessons. Briones (2020), household resources affect the learning development of students due to income, educational background, family members, limited internet connections, availability of background and gadgets, number of family members and work situations of family members especially the adults or specifically parents. Students are noted to have difficulty without the assistance of teachers. Thus face-to-face is more preferred than the distance or modular mode of learning. And also, the limited time allotted on face-to-face learning also affects majority of the students across households.

4. Test of significant difference on perceived practices in the conduct of limited face-to-face learning modality among the respondents when grouped according to profile.

Table 5: Test of Significant Difference on Perceived Practices of Limited Face-to-Face Learning Modality Among the Respondents When Grouped According to Profile Variables

Sources of Variation		Df	F	Sig	Decision/ Interpretation
Age	Between Groups	7	0.769	0.615	Accept Ho Not Significant
	Within Groups	68			
	Total	75			
Gender	Between Groups	2	0.042	0.959	Accept Ho Not Significant
	Within Groups	73			
	Total	75			
Teaching Position	Between Groups	4	0.941	0.446	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Grade Level Handled	Between Groups	4	2.914	0.027	Reject Ho Significant
	Within Groups	71			
	Total	75			
Years in Teaching	Between Groups	5	1.464	0.213	Accept Ho Not Significant
	Within Groups	70			
	Total	75			

Average number of hours rendered in a Mathematics class weekly.	Between Groups	5	0.952	0.453	Accept Ho Not Significant
	Within Groups	70			
	Total	75			

The results indicate that there is a significant difference in the perceived practices by the teacher-respondents in the conduct of limited face-to-face learning modality of mathematics teacher respondents when grouped according to grade level handled ($F= 2.914, p =0.027$). However, no significant differences were found based on age ($F = 0.769, p = 0.615$), gender ($F = 0.042, p = 0.959$), teaching position ($F = 0.941, p = 0.446$), years in teaching ($F = 1.464, p = 0.213$), or average number of hours rendered in a mathematics class weekly ($F = 0.952, p = 0.453$). This shows that teacher of different year levels had different appraisal with the practices in the conduct of limited face-to-face learning modality. This implies that students have direct impact on how teacher perform their task with the implemented health and safety protocols, accessibility, teacher performance, teaching strategy and ICT access and use. Thus, the result implies that there is substantial statistically detected difference on appraise practices in limited face-to-face learning modality of mathematics teacher respondents when grouped according to grade level handled.

Since the test of difference on the perceived practices of limited face to face modality of teachers when grouped according to grade level handled is significant ($p = 0.027$), a post hoc analysis was conducted to determine which among the groups have significant difference. Both Tukey HSD (assuming equal variances) and Games-Howell (assuming unequal variances) yield the same result. Post Tukey HSD tests and Games-Howell test indicate that Grade 7 and Grade 11 groups differ significantly with their perceived practices of limited face to face modality ($p = 0.007$) and Grade 11 and Grade 10 is also significant ($p = .004$) with p value less than 0.05. Therefore, the grade level which the teachers are assigned has an impact on how they perceived the conduct or implementation of the limited face to face modality.

In the study of Albduor (2015), the grade 7th students faced difficulty in reading comprehension in English, similar to mathematics where the medium of instruction is English, students and teachers' communication skills may post significant effect on how the teaching-learning processes become successful. As an important skill to be

developed in math class, the language of mathematics must be well taught by the teachers and used by the students. In the study of Flores (2018), teachers faced difficulty in teaching Grade 11 students due to retention of topics learned in the lower levels. He reiterated that internalization of lesson to among students and coordination between schools and parents should be established to address student's difficulty. According to Baes (2019), Grade 10 students in Tuy National High School in Batangas, teachers also faced difficulties in handling mathematics class like the Grade 11 students. Problems identified were in curriculum, learning assessments, learning processes and materials. Evidently, these findings show that teachers handling different grade levels faced different kind of difficulties on handling the class as well as in employing any learning modalities whether face-to-face, online and/or traditional learning modality.

5. Test of significant difference on perceived challenges in the conduct of limited face-to-face learning modality among the respondents when grouped according to profile.

As seen on the table, there was no significant difference in the perceived challenges in the conduct of limited face-to-face learning modality among the respondents when grouped according to age ($F= 0.335, p= 0.935$), gender ($F= 0.624, p= 0.647$), teaching position ($F=0.725, p=0.725$), grade level handled ($F=0.624, p= 0.647$), years in teaching ($F=0.436, p= 0.8220$), number of hours rendered in mathematics class ($F= 1.496, p= 0.202$) which are greater than Alpha level of Significance (0.05), therefore the null hypothesis is accepted. This implies that age, gender, teaching position, grade level handled, years in teaching and average number of hours rendered in mathematics class weekly by mathematics teacher respondents do not have an effect on the perceived challenges of the respondents in the conduct of limited face-to-face learning modality. Thus, the result implies that there is no substantial statistically detected difference on perceived challenges in limited face-to-face learning modality of mathematics teacher respondents when grouped according to profile.

Table 6: Test of Significant Difference on Perceived Challenges of Limited Face-to-Face Learning Modality Among the Respondents When Grouped According to Profile Variables

Sources of Variation		df	F	Sig	Decision/ Interpretation
Age	Between Groups	7	0.335	0.935	Accept Ho Not Significant
	Within Groups	68			
	Total	75			
Gender	Between Groups	4	0.624	0.647	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Teaching Position	Between Groups	4	0.514	0.725	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Grade Level Handled	Between Groups	4	0.624	0.647	Accept Ho Not Significant
	Within Groups	71			
	Total	75			
Years in Teaching	Between Groups	5	0.436	0.822	Accept Ho Not Significant
	Within Groups	70			
	Total	75			
Average number of hours rendered in a Mathematics class weekly.	Between Groups	5	1.496	0.202	Accept Ho Not Significant
	Within Groups	70			
	Total	75			
	Within Groups	71			
	Total	75			

Ondras and Alvero (2023) stated that all teachers, elementary and secondary teachers experience challenges during the face-to-face learning modality where in there are still cases of covid 19. These challenges were discovered to pose potential risks to students' learning, impeding their progress and possibly leading to permanent disconnection from school. As emphasized by City University Ajman (2022), teachers face a slew of challenges in the aftermath of the COVID-19 pandemic and despite these challenges, the post-pandemic world provides opportunities for teachers. The post-pandemic world allows teachers to rethink their teaching methods and implement more innovative and creative approaches. The disruption of the traditional classroom model allows teachers to experiment with new teaching strategies and pedagogies. This can help

to create a more engaging and dynamic learning environment that better meets the needs of today's students. Teaching can be challenging at times, particularly during the covid-19 pandemic, however as these teachers demonstrated, anything is possible. Teachers dealt with these difficulties using their coping strategies. Even though they faced such challenges, the good news is that as educators, they continued to look for potential solutions to the problems (Agayon, A.J., Agayon, A.K., & Pentang, J., 2022).

6. Test of Relationship Between the Assessed Practices and Perceived Challenges in the Conduct of Limited Face-to-Face Learning Modality

Table 7: Test of Relationship Between the Assessed Practices on Limited Face-to-Face Learning Modality and Perceived Challenges

CORRELATION		Values	Decision	Interpretation	
Assessed Practices on Limited Face-to-Face Learning Modality	Perceived Challenges on the Conduct Limited Face-to-Face Learning Modality	Pearson r	- 0.028	Ho is Accepted.	Low Negative Correlation.
		Sig. (2-tailed)	0.810		
		N	76	Not significant.	

It can be seen that there is a negligible negative correlation indicated by the computed r value of -0.028 between perceived practices and challenges among the respondents in the conduct of limited face-to-face learning modality. The perceived challenges are negatively correlated to the indicated practices in the conduct of limited face-to-face modality. This means that as the practices improved, the challenges faced by the teachers decreases slightly or at a very minimal possibility.

The computed P-value of 0.810 is greater than Alpha Level of Significance (0.05), therefore the null hypothesis is accepted, hence there is no significant relationship between practices and challenges as assessed and perceived by the teachers in the conducted of limited face-to-face learning modality, respectively. These two parameters that may affect the effective delivery of teaching and learning processed in the face-to-face learning modality can be improved and sustained as strongly agreed by the teacher-respondents that affects the conduct of face-to-face learning modality in terms of health and safety protocols; accessibility; teacher performance; teaching strategy; and ICT access. Thus, effective and efficient teaching and learning practices in the conduct of face-to-face learning modality should be sustained and also, can be well planned and designed in order to improve student learning (Alonso-Garcia, Aznar-Diaz, Caceres-Reche, Trujillo-Torres & Romero-Rodriguez, 2019). The insignificant relationship between the strongly agreed upon practices in the conduct of face-to-face learning modality shows no direct impact on the perceived challenges of the teacher respondents. As such, teachers may separately address the pre-empted difficulty and challenges that concern the school’s policies and protocols in terms of the implementation of the face-to-face modality in the future as well as the difficulties or challenges the teachers may be facing or may encounter in whatever teaching and learning modality they must employ. Truly, teachers as guide and facilitator of learnings, students can master and understand the needed knowledge and skills (Schreiber and Valle, 2013) especially, in the subject mathematics where devoted teachers can deliver the lesson

confidently, correctly and on time despite limited time allotted such as in limited face-to-face learning modality. Thus, when face-to-face modality is implemented when enough time spare for teaching and learning mathematics through the teacher’s competency, visibility and accessibility for student’s support, the problem brought by the pandemic among student’s learning gap can be remedied at least lessened.

IV. CONCLUSIONS

Based on the results and findings of the study, the respondents are middle adult female secondary mathematics teacher, holds Teacher 1 position, serve for 1-5 years of teaching, handling grades 9 and 10 and rendered more than 5 hours in a mathematics class weekly. The mathematics teacher-respondents Strongly Agreed with the practices in Limited Face to face Learning Modality pertaining to Health and Safety Protocols; Accessibility; Teacher Performance; Teaching Strategy and ICT Access and Use in Limited Face-to-Face Learning Modality. The mathematics teacher-respondents Disagreed with the challenges in Limited Face-to-Face Learning Modality on Class Scheduling, Teaching and Learning Delivery, Assessment of Student’s Performance and agreed that Class structuring and Management cause a threat on the effective classroom discussion and student’s participation or engagement.

There is no significant difference in the appraised practices in the conduct of limited face-to-face learning modalities among respondents when grouped according to age, gender, teaching position, years in teaching and average number of hours rendered in mathematics class weekly, but there is significant difference with the appraised practices on the conduct of limited face-to-face learning modalities among respondents when grouped according to grade level handled. Therefore, the grade level to which the teachers are assigned has an impact on how they perceived the conduct or implementation of the limited face to face modality. There is no significant difference on the perceived

challenges in the conduct of limited face-to-face learning modality among the respondents when grouped according to age, gender, teaching position, grade level handled, years in teaching and average number of hours rendered in mathematics class weekly. There is no significant relationship between practices and challenges faced by the teachers in the conducted of limited face-to-face learning modality and a negative negligible correlation exists. Thus, schools with effective and efficient practices in the conduct of limited face to face learning modality tend to have teachers with high resiliency and receptiveness to anxiety.

V. RECOMMENDATIONS

Provide teachers with sustainable and continuous skills and classroom management training to enhance the quality of teaching and learning delivery across all year level in preparation for full face-to-face learning modality that will address the learning gaps; sustain teacher's resiliency and improve the classroom as learning environment in the new normal period. The school head must provide students and teachers with strong internet connection and ICT facilities in school to access online learning resources for instructional support they can utilize during and after class. Teachers must design follow-up collaborative activities online to enhance social engagement among students which are not met during face-to-face learning modality due to health and safety protocols. Teachers must conduct regular peer coaching and mentoring activities to address and eradicate the challenges and/or problems that can be encountered in handling different grade levels.

School Head must continuously monitor the effective and efficient conduct of teaching and learning delivery in face-to-face learning modality in consonance with health and safety protocols to avoid future learning problems. School Head and Teachers must work collaboratively and harmoniously to attain educational goals and objectives through the consistent observation of efficient and effective practices in the conduct of limited face-to-face learning modality. Future researchers may conduct a follow up study on practices and challenges encountered by secondary mathematics teachers in full Face-to-Face Learning modality to establish comparison and differences of results.

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Socio-economic obstacles in Education of Muslim Women: A study of Aligarh District

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Abstract— This paper is an attempt to analyse the Socio-economic problems of Muslim women's education in villages of Aligarh in Uttar Pradesh. This study is based on the secondary sources of data obtained from the census report (2011), Sachar committee report, Gender inequality index, Human development report and other published sources to throw light on the actual status of Muslim women's education. The present study has tried to find out the major problems faced by women who wish to pursue education at school and at higher education institutions. The finding of the study reveals that the educational status of Muslim in general and Muslim women's in particular, is not satisfactory and need special attention. This study also highlights that 42.7% of the total population of the Muslims in India are illiterate; among the Muslim women, illiteracy is as high as 48.11%. Overall the major finding of the study revealed that Muslim women have faced a double disadvantage in terms of accessing educational institutions, low educational attainment and low educational quality.

Keywords— Women, Education, Literacy Rate, Socio-Economic Obstacles, Muslim.

I. INTRODUCTION

Education is the main economic factor of personal development. Education is one of the significant social indicators having bearing on the achievement and the growth of an individual as well as the community. This is perceived to be highly suitable for providing employment and thereby improving the quality of life, the level of human well-being and access to basic social services. It is found that 42.72% of the total population of the Muslims in India are illiterate; among the Muslim women, illiteracy is as high as 48.11%. India is one of the least literate societies in the world. Within this broader picture of social disadvantage, the literacy levels of Muslim women's are further skewed towards the bottom. This initial disadvantage i.e. Muslim women's poor literacy rates, completely precludes the possibility of their entering institutions of higher education. Due to this reason the Aligarh Muslim University and the Jamia Millia Islamia-Minority institutions with the specific aim of furthering education among Muslim (Male and Female) in India are unable to have a majority of Muslim students in their professional schools (Census 2011).

Education is the basic and fundamental requirements of citizens of a country in the universal declaration of human rights. Mahatma Gandhi once said "To educate one man

you educate one person, but to educate one woman, you educate a whole civilization." It means education not only empower the woman but empower the whole society. The human civilization has changed from agricultural society to cybernetic age but the position of woman was not so much changed because of educational deprivation.

Muslims occupy the second largest share in India's population after Hindus. Therefore, India's overall economic growth and development are largely depending on the progress of this community. Muslims, by and large have remained backward in attaining education so far. The situation even worse for Muslim women. This give rise to gender disparity in education.

Women in general are the most vulnerable in Indian society and Muslim women in particular are the ubiquitously backward owing to host of different reason the patriarchal nature of our society is also responsible for the pathetic conditions of our women. Moreover; Muslim women suffer more because of the Socio- cultural setup. They are not given enough freedom and hardly have access to higher education a variety of reasons of account for the economic, social, cultural and educational backwardness of Muslim. For the development of rural environment, education should be taken on priority as it is the most important factor. Education is the basis for

creativity and foresightedness that triggers change; it helps in economic growth, quality of life and quality of human resource.

HUMAN DEVELOPEMENT REPORT (2011):

Indian's planning commission's Indian human development report 2011 findings show that improvement on a few indicator like poverty, education and health etc. As regards Muslims but the rate of growth much lower than for schedule castes and schedule tribes. The situation has improved little after SACHCHAR committee report. According to the 2011 report urban poverty is highest among Muslims, rural poverty also higher than that of other religious groups and, indeed, than that of other backward classes. one third of the Muslims in the country were living below the poverty line. The rate of decline in poverty has also been slowest in the Muslim community.

SACHCHAR COMMITTEE REPORT (2006):

Education of Muslim women is not only the problem of Muslims but it is the problem of the whole country. The literacy rate among Muslim women is 50.1% and among Hindu women is 53.1%. The literacy rate among Jain women is highest, it is 90.6%. There is 30% difference between the literacy rate of Muslim women and Jain women. Census says that Muslim women's educational level is lowest among all religious communities. Likewise, work participation rate of the Muslim women is far behind the national average. Their participation is 14.8% while national average is 25.6%. Muslim women's education has always been a problem. The question arises for how long will they not get education like their male counterparts? The Quran does not differentiate between the education of males and females. The first verse of the Quran is about acquiring knowledge. There is no difference between males and females. In a Hadith Prophet Muhammad says "getting education is compulsory on every men and women" Despite these teachings there is so much difference between the education of Muslim men and women. Can the Muslim community progress without educating their women? The answer is absolutely not, it cannot progress without women's education.

A woman is not only a woman; she is a mother, a sister and a wife. For all these roles her role of education is very important. The mother is the first school of the child. Because the child is the closest to her mother, he also spends the most of his time with his mother, so an educated mother can change the perception of the child. The mother is the biggest source of the informal education. By seeing the bad condition of Muslim women's education, the quality of education of Muslim children can easily be judged.

GENDER INEQUALITY INDEX [GII]: According to the human development report 2011, India ranks 129 out of 146 countries on the gender inequality index. Gender inequality index remains a major barrier to human development. Girls and women have made major strides since 1990 but they have not yet gained gender equity. The disadvantages facing women and girls are a major source of inequality. All too often, women and girls are discriminated against health, education, political, labour market etc. with negative consequences for development of their capabilities and their freedom of choice. The GII is an inequality index. It measure gender inequality in three important aspects of human development reproductive health, measured by maternal mortality ratio and adolescent birth rates, empowerment, measured by proportion of parliament by seats occupied by females and proportion of parliamentary seats occupied by adult females and males aged 25 years and older with at least some secondary education and economic status expressed as labour market participation and measured by labour force participation rate of females and males population aged 15 years and older.

The GII is built on the same framework as the IHDI to better expose differences in the distribution of achievement between women and men. It measures the human development costs of gender inequality. Thus the higher the GII value the more disparities between females and males and the more loss to human development.

The GII sheds new light on the position of women in 160 countries.

CAUSES OF EDUCATIONAL BACKWARDNESS OF MUSLIM WOMEN IN INDIA: The important causes of educational backwardness in Indian society, as summarized by the backward classes commission, are as follows---

1. Traditional apathy for education on account of social environment condition or occupational handicaps.
2. Poverty and lack of means among the communities to educate their children.
3. Lack of sufficient number of educational institutions in rural areas.
4. Living in inaccessible areas and lack of proper communication.
5. Lack of adequate educational aid, in the form of scholarships, monetary grant for the purpose of books, clothing and hostel facilities.

The reasons usually suggested for the present educational backwardness of Indian masses in general. The educational status of Muslims can be examined in the context of their

place in economy. The Muslim community is a homogeneous community; response too varies largely towards programmes of literacy and education.

SOCIAL CAUSES: The overall participation of Muslim women that constitute about 12.6% of the state population end. But most of them remain educationally, socially, politically and cultural backward. There are some social causes such as in security, unwillingness to send distant educational institution, Early marriage to discontinue the women education, neighbor's criticism to girls education. Hindrance to education too played a major role in the educational backwardness of Muslim women in India.

This study has been conducted in Al-Barkaat institute of education, Aligarh. In this study an attempt has been made to analyze the educational status of Muslim women in our country. This study reveals that female literacy rate at the national level in 65.5% and 59.5% in Uttar Pradesh. On the point of female literacy rate Uttar Pradesh ranks 31st in all over India. The minorities (Muslim, Christians Sikhs, Buddhist, Jain and Parsis). This study reveals that in Muslim women have lowest literacy rate in India that is 50.1. In Uttar Pradesh Muslim women have lowest literacy rate that is 37.28 (2001). In this study author also examined the Muslim women GER in higher education at national and state level of Uttar Pradesh in particular. Uttar Pradesh ranks second highest amongst all states of India on the total number of universities but in terms of overall GER it ranks 11th among all over states in India 16.3. The female related to Muslim community has 41.21 GER in India and 41.84 in Uttar Pradesh. (Sharma, 2015).

In this study authors made an attempt to analyse the Muslim women education and empowerment in rural areas of district. The study was mainly based on primary source of data. The data reveals that socio-economic condition are the major determinants of women liberation than the religion. Education of women is having supreme power for the development of individuality. It is also an instrument for strengthening socially useful skills, habits and attitudes of common citizenship (Waseem et, al.2012).

A study mainly focuses on being a popular Muslim community differs from one social group to another. Educational backwardness of Muslims women which can be describe in three categories first of all backwardness of education and backwardness among Muslims women can

be seen in the context of larger problem. Second, the educational status of Muslims can be examined in the context of their place in economy. Third, Muslim community is not a homogeneous community. The educational status of Muslim women in India is worse than that of Muslims men as clear from this study. Educationally, Muslims comprises one of the most backward communities in the country, Muslims girls and women lay behind their male counterparts and women of all other community. Findings of this study show that the literacy rate of Muslim women is very low comparison to other communities (Devi 2014).

OBJECTIVES OF THE STUDY

1. To find out about what social and economic problems faces by Muslim women during education.
2. To know about the reasons of educational backwardness of Muslim women.
3. To examine the formulation and implementation of government policies and programme directed towards the betterment of Muslim women.

II. AREA OF THE STUDY

The study has been conducted in villages of Aligarh district. Aligarh district is one of the highly developed prosperous and agriculturally advocated districts of western Uttar Pradesh. Aligarh is one of the important districts of Uttar Pradesh located in the north western part in the fertile region of Ganga and Yamuna known as Doab. The density of rural population of Aligarh district is mainly influenced by soil fertility, agricultural and industrial development and development of transport facility. In Aligarh district there is 5 sub-district and 12 blocks.

III. DATA SOURCES AND METHODOLOGY

The entire study is based on the secondary sources of data which have been collected from the census of India (2011), various rounds of NSSO data, Sachchar committee Report (2006), Human Development Reports (2011), Gender Inequality Index, journals and other published sources.

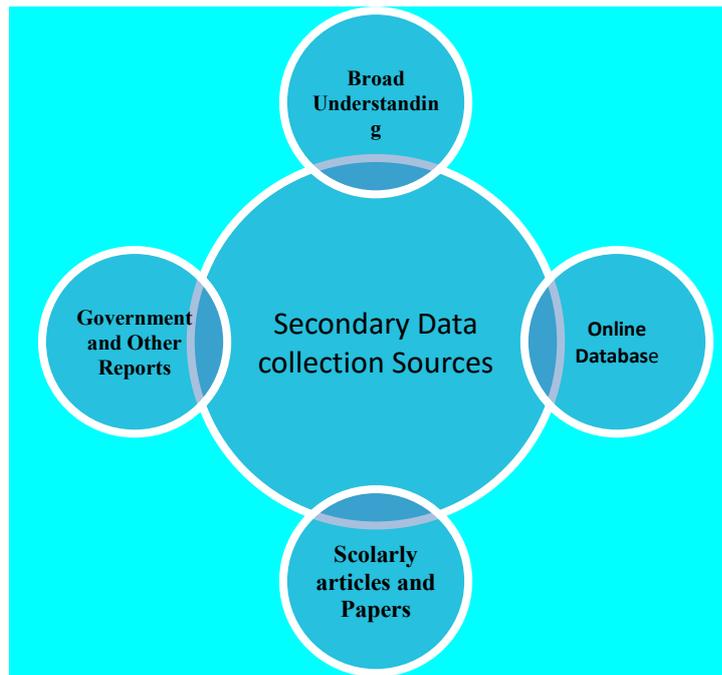


Fig: 1 Developed by the Researcher

Table 1. Percentage of illiteracy among Religious community in India

Religious community	Percentage
Hindus	36.39
Muslims	42.72
Jains	13.57
Christians	25.65
Sikhs	32.49
Buddhist	28.16
Others	49.65

Source: Government of India Census 2011

According to the census 2011, it is clearly evident in the above data about illiteracy among religious community in India. Data illustrates that Muslim community shows 42.72% followed by Hindu 36.39% whereas Sikhs shows 32.49%. However, it clearly shows that Muslims still deprived from education in our society among other religious communities.

Table 2. Percentage of literacy by Religious community in India

Religion	Male	Female	Total
Muslim	51.9	62.41	57.155
Hindus	55.98	70.78	63.38
Jains	84.93	87.86	86.395
Christians	71.97	6.78	74.375
Sikhs	63.29	71.32	67.305
Buddhist	65.6	77.87	71.735
Others	41.38	59.38	50.38

Source: Government of India Census 2011

In this data from the census shows about the literacy among religious communities in India. Data reveals that majority of data shows in female in Jains 87.86% followed by Hindus, Sikhs, Buddhist (70.78%, 71.32%, 77.87%) whereas, Muslims Shows 62.41%. Data clearly illustrates that Muslims having least literacy among females. Out of total in both male and female there is also least data comes from Muslim community 57.155%. Data indicates that Muslim female literacy is lower than other community in India.

Table 3: Literacy and Educational attainment (Overall literacy rates in Aligarh District)

Category	Total Literacy	Male Literacy	Female Literacy
Total Population	67.52%	77.97%	55.68%
Urban Areas	67.85%	73.73%	61.21%
Rural Areas	67.34%	80.11%	52.8%

Source: Government of India Census 2011

These figures indicate that Muslim Women in Aligarh have a significantly lower literacy rate compared to their male counterparts and women from other religious communities.

IV. DISCUSSION

The above data shows that women lag behind men in almost every literacy rate. India a secular nation with a wide range of religious beliefs as well as unique customs and traditions, can occasionally provide significant obstacles to women's education. Equal opportunities should be provided so that women can demand information and knowledge and take control of their own lives. As we know education is very important part of our life. Without education there is no possibility of progress of any community. Many Muslim women are deprived from education in our society. There are many social and economic causes of educational backwardness of Muslim women. Educational backwardness is the biggest hindrance to progress of any Nation. So there is need to address this problem properly and adequately. For addressing this problem we should go inside the problem and know about what was the mechanism and causes behind it. This study shall help us in understanding the situation of the Muslim women and their problem in the context of education. This study shall also throw some light on various forces those are acting as barrier against the getting education of Muslim women. Social discrimination and the economic exploitation of our minority group will be eliminated to uphold the principles of social justice and accomplish both social and economic development for society.

V. CONCLUSION

Muslim society of India is very heterogeneous in nature because of the influence of caste system. Muslim women are facing various Socio-economic problems in contemporary society, which has to be understood in terms

of their educational background. Addressing these challenges requires a multifaceted approach involving community participation, infrastructural development, and supportive policies to create conducive environment to the educational advancement of Muslim women. Women NGOs should rise up to the challenges of the millennium and set-up activities to empower their less privileged women. Government should support provide a political will, encouragement and support to address the problem .women should come out and be bold to take up challenges etc.

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Selecting a Specialized Physical Assessment Test for Female Wrestlers Aged 14-15

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Abstract— Using conventional research methods in Physical Education and Sports, the article has selected 14 tests to assess the professional physical fitness of female Freestyle wrestlers aged 14-15, namely: assessment of speed (2 tests); assessment of strength (6 tests); assessment of endurance (3 tests) and assessment of motor coordination ability (3 tests).

Keywords— professional physical fitness, female athlete, freestyle wrestling, age 14-15.

I. INTRODUCTION

In recent years, improving Vietnam's sports achievements to the top level in Southeast Asia and gradually approaching the world has become a national and ethnic requirement to affirm Vietnam's cultural, economic and political level in the international arena.

Faced with this situation, the Sports and Physical Training sector has put forward a strategy to innovate the training of sports talents, including paying attention to the need to focus on developing a number of key sports (strengths) to participate and achieve high results at regional and international sports events.

In regional and international competitions, Vietnamese Freestyle Wrestling athletes always achieve high rankings, so Freestyle Wrestling is identified as one of the key sports of Vietnamese Sports. This also shows that we have a relatively complete training system for Freestyle Wrestling athletes.

However, to achieve high and stable results in major international competitions, the completion of the training system for athletes is always a concern for Vietnamese Freestyle Wrestling professionals, in which special attention must be paid to the selection of tests and the development of a system of standards for assessing athletes' physical fitness during training. However, this has not really received due attention.

Based on the above reasons, we conducted the study: "SELECTING A TEST TO ASSESS THE SPECIALIZED PHYSICAL FITNESS OF FEMALE WRESTLERS AGED 14-15".

Research method: the research process used the following methods: document analysis and synthesis; discussion interviews, pedagogical observation and statistical mathematics.

The research subjects were 40 female Freestyle wrestlers aged 14-15 at units with a tradition of training female Freestyle wrestlers in the Northern provinces.

The collected data were processed using SPSS 16 software.

II. RESEARCH RESULTS AND DISCUSSION

2.1. Interview to select physical fitness assessment test for female Freestyle wrestlers aged 14-15.

Through the methods of analysis and synthesis and through practical investigation, the topic has identified 28 indicators, tests to evaluate the physical level of female Freestyle wrestlers aged 14-15 (as presented specifically in Table 1).

In order to determine the feasibility of the tests, the topic conducted interviews with lecturers and coaches who are directly teaching and coaching Freestyle Wrestling. The results are presented in Table 1 and Table 2.

Table 1. Results of interviews to select physical fitness assessment tests for female Freestyle wrestlers aged 14-15 (n = 31)

No	Qualities	Test	Prioritize 1	Prioritize 2	Prioritize 3	Prioritize 4	Prioritize 5	\bar{x}
1.	Quick power	Run 30m high start (s)	10	12	9	0	0	4.03
2.		Carry 15kg weight, sit down and stand up 15s (sl)	2	5	19	5	0	3.13
3.		Crawl escape 15s (sl)	5	7	11	7	1	3.26
4.		Move across 9x4m mat (s)	3	5	14	8	1	3.03
5.		Catch reflex 15s (sl)	15	14	2	0	0	4.42
6.	Power	Lie prone and do push-ups 1 minute (sl)	16	12	2	1	0	4.39
7.		Jump far in place (cm)	15	14	1	1	0	4.39
8.		Jump with a person of equal weight 30s (times)	17	8	6	0	0	4.35
9.		Double grab with a person of equal weight 30s (times)	18	3	10	0	0	4.26
10.		Wrap over the shoulder with a person of equal weight 10s (times)	3	5	14	8	1	3.03
11.		Jump with a person of equal weight 30s (times)	4	4	17	6	0	3.19
12.		Hang on a ladder with legs touching the handle as much as possible (times)	3	6	18	3	1	3.23
13.		Crawl in place for 1 minute (times)	14	11	6	0	0	4.26
14.		Lie down after 1 minute (rounds)	14	13	4	0	0	4.32
15.	Endurance	3000m run (s)	5	4	15	6	1	3.19
16.		Maximum continuous lunge with equal weight (sl)	16	13	2	0	0	4.45
17.		1 minute continuous platform jump (sl)	6	2	16	6	1	3.19
18.		1 minute continuous flank curl with equal weight (sl)	3	7	19	2	0	3.35
19.		Maximum continuous double lift with equal weight (sl)	18	12	1	0	0	4.55
20.		Maximum rotation of rainbow (revolutions)	15	13	2	1	0	4.35
21.	Motor coordination	30m high start run 3600 mid-run on command (s)	5	5	18	3	0	3.39

22.		Zigzag run 30m (s)	6	2	15	7	1	3.16
23.		Vertical split (cm)	5	3	16	6	1	3.16
24.		Horizontal split (cm)	4	6	15	5	1	3.23
25.		Forward bend (cm)	16	11	4	0	0	4.39
26.		Rainbow rotation forward - backward 30 seconds (rounds).	15	13	2	1	0	4.35
27.		Pick up and lift with a person of equal weight continuously for 1 minute (sl)	5	5	18	3	0	3.39
28.		Rainbow height (cm)	14	13	4			4.32

Table 3.2. Results of two interviews to select physical fitness assessment tests for female Freestyle wrestlers aged 14-15 (n = 31)

No	Qualities	Test	Time	n	Prioritize 1	Prioritize 2	Prioritize 3	Prioritize 4	Prioritize 5	\bar{x}	Chi squared
1.	Quick power	30m high start run (s)	1st	31	10	12	9	0	0	4.03	0.3
			2nd	31	9	11	11	0	0	3.94	
2.		Carrying a 15 kg weight, sitting down and standing up 15s (sl)	1st	31	2	5	19	5	0	3.13	0.31
			2nd	31	3	4	19	5	0	3.16	
3.		Crawling 15s (sl)	1st	31	5	7	11	7	1	3.26	1.88
			2nd	31	6	8	8	9	0	3.35	
4.		Moving across the 9x4m mat (s)	1st	31	3	5	14	8	1	3.03	0.08
			2nd	31	3	5	13	9	1	3.03	
5.		Taking up reflex 15s (sl)	1st	31	15	14	2	0	0	4.42	0.07
			2nd	31	14	15	2	0	0	4.39	
6.	Power	Lying prone and doing push-ups for 1 minute (sl)	1st	31	16	12	2	1	0	4.39	0.52
			2nd	31	15	14	1	1	0	4.39	
7.		Jumping on the spot (cm)	1st	31	15	14	1	1	0	4.39	1.4
			2nd	31	14	15	2	0	0	4.39	
8.		Straightening with a partner 30s (times)	1st	31	17	8	6	0	0	4.35	0.52
			2nd	31	16	8	7	0	0	4.29	
9.		Double picking up with a partner 30s (times)	1st	31	18	3	10	0	0	4.26	0.08
			2nd	31	19	3	9	0	0	4.32	
10.		Wrap around the shoulders with a partner 10s (times)	1st time	31	3	5	14	8	1	3.03	1.29
			2nd time	31	4	4	15	8	0	3.13	

11.		Jumping with a person of equal weight 30s (times)	1st time	31	4	4	17	6	0	3.19	0.36
			2nd time	31	5	3	16	7	0	3.19	
12.		Hang on a ladder, bend your legs and touch the handle as much as possible (times)	1st time	31	3	6	18	3	1	3.23	1.76
			2nd time	31	4	5	17	5	0	3.26	
13.		Crawl in place for 1 minute (times)	1st	31	14	11	6	0	0	4.26	0.48
			2nd	31	15	12	4	0	0	4.35	
14.		Loop down after 1 minute (revolutions)	1st	31	14	13	4	0	0	4.32	2.74
			2nd	31	15	12	2	2	0	4.29	
15.		Run 3000m (times)	1st	31	5	4	15	6	1	3.19	1.72
			2nd	31	3	5	16	7	0	3.13	
16.		Jump with a person of equal weight continuously for maximum (times)	1st	31	16	13	2	0	0	4.45	0.37
			2nd	31	14	14	3	0	0	4.35	
17.	Endurance	Jump on the platform continuously for 1 minute (times)	1st	31	6	2	16	6	1	3.19	1.32
			2nd	31	5	3	17	6	0	3.23	
18.		Rib Claw with equal weight continuously for 1 minute (sl)	1st	31	3	7	19	2	0	3.35	0.67
			2nd	31	4	8	16	3	0	3.42	
19.		Double Pick with equal weight continuously for maximum (sl)	1st	31	18	12	1	0	0	4.55	0.27
			2nd	31	16	14	1	0	0	4.48	
20.		Rainbow rotates for maximum (revs).	1st	31	15	13	2	1	0	4.35	1.03
			2nd	31	16	13	2	0	0	4.45	
21.	Motor coordination	Run 30m high start, rotate 3600 in the middle of the interval on command (s)	1st	31	5	5	18	3	0	3.39	1.7
			2nd	31	5	5	17	4	0	3.39	
22.		Zigzag Run 30m (s)	1st	31	6	2	15	7	1	3.16	0.29
			2nd	31	5	3	15	7	1	3.13	
23.		Longitudinal Split (cm)	1st	31	5	3	16	6	1	3.16	1.57
			2nd	31	5	3	12	10	1	3.03	
24.		Side Split (cm)	1st	31	4	6	15	5	1	3.23	0.13

			2nd	31	4	6	14	6	1	3.19	
25.	Forward bend (cm)	1st	31	16	11	4	0	0	0	4.39	0.19
		2nd	31	16	12	3	0	0	0	4.42	
26.	Rainbow rotation forward - backward 30 seconds (rounds).	1st	31	15	13	2	1	0	0	4.35	1.2
		2nd	31	15	13	3	0	0	0	4.39	
27.	Pick up and lift with a person of equal weight continuously for 1 minute (sl)	1st	31	5	5	18	3	0	0	3.39	0.29
		2nd	31	6	5	18	2	0	0	3.48	
28.	Rainbow height (cm)	1st	31	14	13	4	0	0	0	4.32	2.74
		2nd	31	15	12	2	1	1	1	4.26	

From the results in Table 1 and Table 2, it can be seen that, in the 28 tests given to the lecturers and coaches for interviews, 14 tests were chosen by the majority of opinions to assess the professional physical fitness of female Freestyle wrestlers aged 14-15, namely:

- Assessment of speed including 2 tests (Running 30m with high start (s); Reflex picking 15 s (sl)),

- Assessment of strength including 6 tests (Lying prone with hand push-ups for 1 minute (sl); Jumping long in place (cm); Bouncing with a person of the same weight for 30 seconds (times); Double picking with a person of the same weight for 30 seconds (times); Crawling in place for 1 minute (sl); Bouncing after 1 minute (rounds)),

- Assessment of endurance including 3 tests: Bouncing with a person of the same weight continuously at maximum (sl); Double picking with a person of the same weight continuously at maximum (sl); Maximum rotation of the rainbow (revolutions). - Assessment of motor coordination ability includes 3 tests: Forward bending (cm); Rainbow rotation forward - backward for 30 seconds (revolutions); High rainbow (cm).

2.2. Results of testing the reliability and informativeness of physical fitness assessment tests for female freestyle wrestlers aged 14-15

Results of reliability testing of the tests

In order to determine the reliability of the selected tests, we conducted a reliability test of the selected test system. The above test system was tested twice under the same conditions and at the same time. The results are shown in Table 3.

Results of the test's informativeness

After determining the reliability of the tests using the retest method, the thesis continued to determine the Brave - Pison pair correlation coefficient (r) between the test results and the athlete's performance in the athlete's specialty. The results are shown in Table 4.

The results in Tables 3 and 4 show that all the tests selected through interviews ensure the necessary statistical reliability (with r ranging from 0.905 - 0.991) and ensure informativeness (with r ranging from 0.805 - 0.899).

In summary: through research steps (analyzing and synthesizing documents; interviewing lecturers and coaches; determining the reliability and informativeness of the tests), the topic has selected 14 tests to assess the professional physical fitness of female Freestyle Wrestling athletes aged 14-15, which are:

- Speed assessment includes 2 tests (Running 30m with high start (s); Reflexive lifting 15 s (sl)),

- Strength assessment includes 6 tests (Prone push-ups for 1 minute (sl); Long jump in place (cm); Bouncing with a person of the same weight for 30 seconds (times); Double pick-up with a person of the same weight for 30 seconds (times); Crawling in place for 1 minute (sl); Bouncing back after 1 minute (rounds)),

- Endurance assessment includes 3 tests: Maximum continuous bouncing with a person of the same weight (sl); Maximum continuous double pick-up with a person of the same weight (sl); Maximum rotation of the rainbow (rounds).

- Motor coordination assessment includes 3 tests: Forward bending (cm); Rainbow rotation forward - backward for 30 seconds (rounds); Rainbow height (cm).

Table 3. Reliability test results of physical fitness assessment tests for female Freestyle wrestlers aged 14-15

No	Test, index	Age 15 (n=22)				Age 16 (n=18)			
		First time ($\bar{x} \pm \delta$)	2nd time ($\bar{x} \pm \delta$)	r	P	First time ($\bar{x} \pm \delta$)	2nd time ($\bar{x} \pm \delta$)	r	P
1	30m high start run (s)	4.52±0.23	4.53±0.17	0.969	<0.05	4.32±0.12	4.29±0.08	- 0.920	<0.05
2	15 s(sl)	14.55±1.5 3	14.68±1.3 9	0.976	<0.05	15.79±0.2 8	15.92±0.2 8	0.964	<0.05
3	1 minute prone push-up (sl)	31.68±1.2 9	31.86±0.9 4	0.906	<0.05	33.72±1.0 2	33.78±1.0 6	0.975	<0.05
4	On-the-spot long jump (cm)	212.81±1.62	212.67±1.62	0.980	<0.05	214.58±0.90	214.64±1	0.975	<0.05
5	30s (times)	14.86±1.0 4	15.05±1.0 5	0.928	<0.05	16.72±0.9 6	16.78±1.0 6	0.978	<0.05
6	30s (times)	16.32±1.1 3	16.68±1.1 3	0.905	<0.05	17.89±0.5 8	17.94±0.6 4	0.930	<0.05
7	30s (times)	25.59±1.4 4	26±1.31	0.937	<0.05	28.00±0.6 9	28.06±0.7 3	0.946	<0.05
8	1 minute (times)	21.64±2.3 4	21.86±1.9 1	0.947	<0.05	23.61±0.8 5	23.67±0.8 4	0.961	<0.05
9	1 minute (times)	24.77±1.2 3	24.77±1.1 5	0.935	<0.05	26.78±1.0 6	26.89±1.1 8	0.917	<0.05
10	1 minute (times) crawling (sl)	25.32±1.6 2	25.91±0.8 7	0.905	<0.05	27.72±0.8 3	27.78±0.8 8	0.964	<0.05
11	1 minute (times) back bend (reverse)	24.14±1.8 3	25.05±1.4 3	0.942	<0.05	27.11±1.1 8	27.17±1.2 5	0.983	<0.05
12	Maximum continuous maximum ...	5.64±0.16	5.77±0.16	0.991	<0.05	5.24±0.14	5.25±0.15	0.912	<0.05
13	30m high start run (s)	15.55±1.4 1	16±1.45	0.937	<0.05	17.11±0.7 6	17.17±0.7 9	0.954	<0.05
14	15 s(sl)	41.34±0.4 9	41.45±0.5 2	0.988	<0.05	40.79±0.3 6	40.82±0.3 6	0.947	<0.05

Table 4. Results of the validity of the physical fitness assessment tests for female Freestyle wrestlers aged 14-15

No	Test, index	Age 15 (n=22)		Age 16 (n=18)		P
		($\bar{x} \pm \delta$)	r	($\bar{x} \pm \delta$)	r	
1	30m high start run (s)	4.53±0.17	0.873	4.29±0.08	0.848	<0.05
2	15 s(sl)	14.68±1.39	0.845	14.92±0.28	0.873	<0.05
3	1 minute prone push-up (sl)	31.86±0.94	0.831	32.78±1.06	0.883	<0.05
4	On-the-spot long jump (cm)	212.67±1.62	0.852	214.64±1	0.857	<0.05
5	30s (times)	15.05±1.05	0.822	15.78±1.06	0.851	<0.05
6	30s (times)	16.68±1.13	0.845	16.72±0.75	0.816	<0.05

No	Test, index	Age 15 (n=22)		Age 16 (n=18)		P
		$(\bar{x} \pm \delta)$	r	$(\bar{x} \pm \delta)$	r	
7	30s (times)	26±1.31	0.869	27±0.69	0.899	<0.05
8	1 minute (times)	21.86±1.91	0.870	22.56±0.7	0.891	<0.05
9	1 minute (times)	24.77±1.15	0.820	25.39±0.78	0.814	<0.05
10	1 minute (times) crawling (sl)	25.91±0.87	0.838	26.67±0.77	0.805	<0.05
11	1 minute (times) back bend (reverse)	25.05±1.43	0.861	26.17±1.25	0.866	<0.05
12	Maximum continuous maximum ...	5.77±0.16	0.877	5.25±0.15	0.884	<0.05
13	30m high start run (s)	16±1.45	0.868	17.17±0.79	0.890	<0.05
14	15 s(sl)	41.45±0.52	0.839	40.82±0.36	0.883	<0.05

III. CONCLUSION

From the research results, the topic has selected 14 tests to assess the professional physical strength of female Freestyle wrestlers aged 14-15, which are:

- Assessment of speed including 2 tests (Running 30m with high start (s); Reflex picking 15 s (sl)),

- Assessment of strength including 6 tests (Lying prone with hand push-ups for 1 minute (sl); Jumping far in place (cm); Bouncing with a person of equal weight for 30 seconds (times); Bouncing in place for 1 minute (sl); Bouncing after 1 minute (rounds)),

- Assessment of endurance including 3 tests: Bouncing with a person of equal weight continuously at maximum (sl); Bouncing with a person of equal weight continuously at maximum (sl); Bouncing with a person of equal weight continuously at maximum (sl); Bouncing with a person of equal weight continuously at maximum (rounds).

- Assessment of motor coordination ability includes 3 tests: Forward bending (cm); 30-second forward and backward rainbow (circles); High rainbow (cm).

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SOURCE OF THE ARTICLE

The article is extracted from the results of the thesis: "*Research on exercises to develop specialized physical strength for female Freestyle wrestlers aged 14 - 15*". The thesis was conducted by PhD student Ta Dinh Duc at the Institute of Culture, Arts, Sports and Tourism of Vietnam.

Twenty-First Century Learning Skills Developed among Grade 11 Students in Zone 3, Division of Zambales

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Abstract— This study determined the level of 21st century learning skills developed among Grade 11 students in Zone 3, Division of Zambales. This study used descriptive research design where survey checklist has served as the main instrument in gathering data. Purposive sampling was implemented. There are 129 HUMSS students from 4 public schools in Zone 3, Zambales that served as respondents. The instrument used is adopted and modified by the researchers. It was also validated by experts. The instrument has two parts, includes; (a) Profile of the respondents, (b) level of learning skills. Based from the results, the study concludes that (a) majority of the student-respondents are female in their teenage stage, (b) the academic performance of the respondents is very satisfactory, (c) that they perceived agree with their level of learning in terms of critical thinking, creativity, collaboration, and communication skills, (d) that there was significant difference in the level of learning skills when grouped according to sex profile, and lastly (e) there is no significant relationship between the level of learning skills and academic performance of the respondents.

Keywords— 21st century learning skills, Grade 11 students, HUMSS strand, descriptive research, academic performance

I. BACKGROUND OF THE STUDY

High school graduates often enter college academically unprepared for college-level material. In some cases, academic deficiencies are so severe that colleges opt to expel the students (Bettinger and Long 2009 and Mah and Ifenthaler 2018). According to Harlow (nd), it is necessary to be prepared to enter higher education. Students who did not prepare for college while in high school have a distinct disadvantage from those learners who prepare.

Preparations may include the enhancement of the 21st century skills that the students have. 21st-century skills are classified into three categories: learning skills, literacy skills, and life skills (Pardede, 2019). The learning skills refer to the mental processes required to adapt and improve upon a modern work environment. The literacy skills, sometimes called IMT skills (information literacy, media literacy, and technology literacy), deals with how individuals can discern facts, publishing outlets, and the technology behind them; and the life skills focus on the intangible elements of every

individual's everyday life that include both personal and professional qualities.

According to Ross (2017), 21st century skills not only provide a framework for successful learning in the classroom but ensure students can thrive in a world where change is constant and learning never stops.

Today, the Philippines has taken necessary actions to thrive and survive in the fast-changing industries of the 21st century. One indicator is the shift from the SEC-UbD curriculum to K-12 curriculum. The new education curriculum was anchored to the 21st century skills to meet the global standards. As stated in D.O. No. 21, s. 2019 entitled Policy Guidelines on the K-12 Basic Education Program, K-12 curriculum will holistically develop individuals equipped with the 21st century skills. These skills will prepare students to become effective in helping to address the needs of the nation, by pursuing higher education, employment, entrepreneurship, or middle-level skills development. For the Philippines to cope with the pressing challenges, there is a need to assess the learners' knowledge and existing 21st-

century learning skills as an indicator that the school is fulfilling its commitment in the field of education and to the country.

The Department of education must continue identifying the necessary skills needed by 21st-century learners for them to survive in the 21st-century environment. For the students to deal with the changes, they need to learn the essential skills that are useful in all subjects and all careers; this is what we call the Four C's of the 21st-century learning skills: critical thinking, communication, collaboration, and creativity.

It is therefore the objective of this research to determine the level of 21st century learning skills developed among Grade 11 students in Zone 3, Division of Zambales.

Statement of the Problem

This study aimed to determine the level of 21st century learning skills developed among Grade 11 students in Zone 3, Division of Zambales. Specifically, this study will answer the following questions:

1. What is the profile of the respondents in terms of:
 - 1.1 Age
 - 1.2 Sex?
2. What is the student's Academic Performance?
3. What is the level of learning skills developed among Grade 11 students in terms of:
 - 3.1 Critical thinking skills
 - 3.2 Creativity skills
 - 3.3. Collaboration skills
 - 3.4. Communication skills?
4. Is there a significant difference on the level of skills developed in terms of the following dimensions when grouped according to profile variables:
 - 4.1 Critical thinking skills
 - 4.2. Creativity skills
 - 4.3. Collaborative skills
 - 4.4. Communication skills?
5. Is there a significant relationship between the level of 21st century learning skills developed and students' academic performance?
6. What plan can be developed to enhance level of 21st century learning skills among Grade 11 students?

II. METHODS AND DESIGN

This study made use of the quantitative- descriptive research design and the questionnaire as the main instrument of gathering data.

Participants and Sampling Technique

The study used purposive sampling technique in selecting the respondents. There a total of 129 HUMSS students served as respondents. They came from 4 public nation high schools from Zone 3, Division of Zambales, namely; Cabangan National High School (Cabangan), Gov. Manuel D. Barretto National High School (San Felipe), La Paz National High School (San Narciso) and San Antonio National High School (San Antonio).

Instruments

The instrument used was an adapted questionnaire from the study of Okan Sarigoz entitled Assessment of the High School Students' Critical Thinking Skills and Christie J. Brungardt entitled College Graduates' Perceptions of Their Use of Teamwork Skills: Soft Skill Development in Fort Hays State University and online quiz from skillsyouneed.com (Creative Thinking Skills Self-Assessment) and mindtools.com (How Good Are Your Communication Skills) and modified by the researcher.

The instrument was pilot tested on Grade 11 HUMSS students of Zambales National High School through Google Forms. Reliability was also tested using Cronbach Alpha. The validated instrument was utilized by the researcher to gather data for this study. It was subdivided into three (3) sections. Sections (I) consist of respondents' profile, (II) academic performance, (III) questionnaires about Critical Thinking Skills, Creativity Skills, Collaboration Skills, Communication Skills.

To interpret the data effectively, the researcher employed the following statistical treatment.

Table 1. Respondents Questionnaire Weighted Value and Qualitative Description

Weighted Value	Qualitative Description
3.25 – 4.0	Strongly Agree That It was Developed
2.50 – 3.24	Agree That It was Developed
1.75 – 2.49	Fairly Agree That It was Developed
1.0 – 1.74	Disagree That It was Developed

Table 2. Scale Used in the Interpretation of Pearson r Correlation Value

+/- 0.00 to +/- 0.20	negligible correlation
+/- 0.21 to +/- 0.40	low or slight correlation
+/- 0.41 to +/- 0.70	moderate relationship
+/- 0.71 to +/- 0.90	denotes high relationship
+/- 0.91 to +/- 0.99	very high relationship
+/- 1.00	perfect correlation

III. RESULTS AND DISCUSSION

1. Profile of the Student-respondents

Table 3: Frequency and Percentage Distribution on the Student-respondents' Profile Variables

Profile Variables		Frequency (f)	Percentage (%)
Age (Years) Mean = 18.12 or 18 years old	16-20	126	97.70
	21 & above	3	2.30
	Total	129	100.00
Sex	Male	36	27.90
	Female	93	72.10
	Total	129	100.00

Table 3 shows the frequency, percentage and mean distribution on the student-respondents' profile variables of age and sex.

1.1. Age. Most of the student-respondents with 126 (97.70%) are from the age group 16-20 years old, while 3 (2.30%) are from the age group 21 years and above. The computed mean age of student-respondents was 18.12 or 18 years old.

1.2. Sex. The majority of the student-respondents with 93 (72.10%) are female, while 36 (27.90%) are male.

2. Student's Academic Performance

The student's academic performance is presented in Table 4.

Table 4: Frequency and Percentage Distribution on the Student-respondents' Academic Performance

Descriptive Equivalent	Academic Performance Rating	Frequency	Percentage
Outstanding	90-100	40	31.00
Very Satisfactory	85-89	58	45.00
Satisfactory	80-84	31	24.00
Fairly Satisfactory	75-79	0	0.00
Did Not Meet Expectations	74 and below	0	0.00
Total		129	100.00
Mean= 88.28 (Very Satisfactory)			

The academic performance of 58 (or 45.00%) students ranged from 85-89 indicating "Very Satisfactory" academic performance; 40 (or 31.00%) students whose academic performance ranged from 90-100 described as "Outstanding" academic performance; and 31 (or 24.00%) students whose academic performance ranged from 80-84 described as "Satisfactory". The computed mean academic performance of student-respondents was 88.28 indicating "Very Satisfactory" academic performance.

This is related to the studies of Santos (2019), academic performance of students is very satisfactory with an average of 88.0563, Almerino, Ocampo, Abellana, Almerino, Mamites and Pinili (2020), HUMSS students have average academic performance and Magulod (2018) students have good level of academic performance with a total mean grade of 85.55.

A study in Pakistan emphasized that academic performance is among the several components of academic success (Masud, Mufarrih, Qureshu, Khan, Khan, Khan 2019). Regier (2015) suggested that academic success is vital because it is linked to positive outcomes.

3. Level of Skills of the Student-respondents

3.1 Level of Skills in terms of Critical Thinking Skills of the Student-respondents

The level of skills of student-respondents in terms of Critical Thinking Skills is presented in Table 5.

The student-respondents "Agree" that "4. They can detect the problems in a situation, explain and define them" and "11. When they encounter a situation, they can express their thoughts and defend their opinion" with a rating of 3.16 (tied at rank 1.5) while "19. When they encounter a matter,

they can be more elaborative” had the lowest mean of 2.96 interpreted as “Agree” (rank 20).

Table 5: Assessed Level of Skills in terms of Critical Thinking Skills

Critical Thinking Skills	Mean	DR
1. When I encounter a problem, I consider it without prejudice.	2.98	Agree
2. When I encounter a problem, I analyze whether the subject is from first hand or second hand.	3.12	Agree
3. I deduce regarding an explained issue and I can evaluate the reasons of these deductions.	3.03	Agree
4. I can detect the problems in a situation, explain and define them.	3.16	Agree
5. When I encounter a problem, I can solve it, and make deductions.	3.11	Agree
6. While a situation is explained, I can analyze it by thinking the data regarding that matter.	2.99	Agree
7. By means of my thoughts, I can make hypothesis regarding the situation.	2.98	Agree
8. I can pass an accurate judgment an issue, and I can give a conclusion with my thoughts.	2.97	Agree
9. When I read a matter, I can understand the main idea and intention of the writer.	3.05	Agree
10. By means of my thoughts, I can make comments and can good judgments.	3.00	Agree
11. When I encounter a situation, I can express my thoughts and defend my opinion.	3.16	Agree
12. I can explain my thoughts regarding a matter convincingly and logically.	3.01	Agree
13. By means of explanations regarding a situation, I can predict the unexplained ideas.	2.98	Agree
From the explanations regarding a situation, I can find the contradiction between reason and result.	3.10	Agree
While an issue is explained, I can concentrate on the matter together with my thoughts.	3.07	Agree
By means of explanations, I can establish striking connections regarding the situation.	2.98	Agree
When I encounter a problem, I can think critically, reasonably and analytically.	3.03	Agree
When I encounter a scenario, I can visualize it and can feel as the main character of it.	3.1	Agree
When I encounter a matter, I can be more elaborative.	2.96	Agree
When I encounter a matter or an action, my thoughts do not misguide me.	2.97	Agree
Overall Weighted Mean	3.04	Agree

Overall, the student-respondents “Agree” that their level of skills was developed in terms of critical thinking skills with a mean rating of 3.04. The result implies that the student's level of skills in terms of critical thinking skills was not fully developed since the students just agreed but not strongly agreed that it was developed.

The result of this study is related to the findings of Aktamis and Yenice (2010), students in the Aegean Region have middle-level developed critical-thinking skills. Fadhlullah and Ahmad (2017) also reported that students' critical thinking abilities ranged from low to moderate.

An Indonesian study emphasizes the importance the need of students to develop critical thinking. Pardede (2019) emphasized that critical thinking increases the students'

ability to passionately and responsibly take, apply and control their thinking skills, develop proper principles and standards to evaluate their thinking, and willingly judge, accept, or reject new ideas, concepts, and viewpoints.

3.2 Level of Skills in terms of Creativity Skills of the Student-respondents

The student-respondents “Strongly Agree” that “2. They take up new activities or hobbies on a regular basis” with a rating of 3.35 (rank 1) while “11. They deliberately try to break their routine” had the lowest mean of 2.72 interpreted as “Agree” (rank 18). Overall, the student-respondents “Agree” that their level of skills was developed in terms of creativity skills with a mean rating of 3.14. The result implies that the student's level of skills in terms of creativity was not

fully developed since the students just agreed but not strongly agreed that it was developed. The result of the study is related to the findings of Sugiyanto, et.al (2018), the student's creative thinking skills were relatively in low grade and

according to the study of Meiarti and Ellianawati (2019), the creativity of the students is not optimally developed.

Table 6 shows the level of skills of student-respondents in terms of Creativity Skills.

Table 6: Assessed Level of Skills in terms of Creativity Skills

Creativity Skills	Mean	DR
1. I try out new ways of doing things.	3.30	Strongly Agree
2. I take up new activities or hobbies on a regular basis.	3.35	Strongly Agree
3. I enjoy discussions with people with different viewpoints.	3.16	Agree
4. I enjoy finding out more about things that are new to me.	3.33	Strongly Agree
5. I make an effort to take on new challenges.	3.28	Strongly Agree
6. I am open to new ideas, even those that challenge the way I think.	3.18	Agree
7. I spend time thinking and reflecting on how I learn.	3.21	Agree
8. I like thinking about the connections and similarities between things.	3.19	Agree
9. I like activities that involve patterns, such as crosswords and jigsaw puzzles.	3.14	Agree
10. I do not like to opt for the first solution that I think of to any problem.	3.02	Agree
11. I deliberately try to break my routine.	2.72	Agree
12. I like trying to solve difficult problems, both as puzzles and in life.	3.05	Agree
13. I make an effort to use techniques that help me think differently.	3.21	Agree
14. From the explanations regarding a situation, I can find the contradiction between reason and result.	3.1	Agree
15. While an issue is explained, I can concentrate on the matter together with my thoughts.	3.07	Agree
16. By means of explanations, I can establish striking connections regarding the situation.	2.98	Agree
17. When I encounter a problem, I can think critically, reasonably and analytically.	3.03	Agree
18. When I encounter a scenario, I can visualize it and can feel as the main character of it.	3.1	Agree
19. When I encounter a matter, I can be more elaborative.	2.96	Agree
20. When I encounter a matter or an action, my thoughts do not misguide me.	2.97	Agree
Overall Weighted Mean	3.04	Agree

An Indonesian study also showed that the creative thinking skills of students are not fully developed. Madyani, Yaminah, Utomo, Saputro and Mahardiani (2020), majority of the respondents showed a low level of creative thinking skills.

Creative thinking of students must be developed because it helps an individual to see new opportunities, to produce new ideas to flexibly adapt to changing situations and apply one's imagination to solve complex problems. To

address the fast-changing industries and to gain competitive advantage individuals must go beyond the playbook, often improvising with limited resources and being capable of inventing the new solution (Puccio 2020).

3.3 Level of Skills in terms of Collaboration Skills of the Student-respondents

The level of skills of student-respondents in terms of Collaboration Skills is shown in Table 7.

Table 7: Assessed Level of Skills in terms of Collaboration Skills

Collaboration Skills	Mean	DR
1. When I work as part of a team, I ensure the instructions are understood by all the team members prior to starting the task.	3.34	Strongly Agree
2. When I work as part of a team, I understand and contribute to the organizational goals.	3.19	Agree
3. When I work as part of a team, I teach other team members.	3.16	Agree
4. When I work as part of a team, I interact cooperatively with other team members.	3.21	Agree
5. When I work as part of a team, I know the process of making a decision.	3.11	Agree
6. When I work as part of a team, I serve as a role model in formal and informal interactions.	3.11	Agree
7. When I work as part of a team, I conduct myself with courtesy.	3.14	Agree
8. When I work as part of a team, I ask for the instructions to be clarified when it appears not all the team members understand the task.	3.22	Agree
9. When I work as part of a team, I help ensure the proper balancing of the workload.	3.16	Agree
10. When I work as part of a team, I know how to weigh the relative importance among different issues.	2.89	Agree
11. When I work as part of a team, I lead when appropriate, mobilizing the group for high performance.	3.07	Agree
12. When I work as part of a team, I respect the thoughts and opinions of others in the team.	3.36	Strongly Agree
13. When I work as part of a team, I can identify potential problems readily.	3.16	Agree
14. When I work as part of a team, I communicate in a manner to ensure mutual understanding.	3.21	Agree
15. When I work as part of a team, I do my part of the organization in a timely manner.	3.15	Agree
16. When I work as part of a team, I prepare sufficiently to make a decision.	3.12	Agree
17. When I work as part of a team, I treat others with courtesy.	3.23	Agree
18. When I work as part of a team, I willingly contribute solutions to resolve problems.	3.29	Strongly Agree
19. When I work as part of a team, I seek and respond to feedback.	3.26	Strongly Agree
20. When I work as part of a team, I track other team members' progress	3.13	Agree
21. When I work as part of a team, I solicit input for decision making from my team members.	3.15	Agree
22. When I work as part of a team, I adapt readily to varying conditions and demands.	3.1	Agree
23. When I work as part of a team, I listen attentively.	3.27	Strongly Agree
24. When I work as part of a team, I am able to change decisions based upon new information.	3.15	Agree
When I work as part of a team, I try to bring out the best in others.	3.29	Strongly Agree
When I work as part of a team, I recognize conflict.	3.08	Agree
When I work as part of a team, I clearly and accurately exchange information.	3.02	Agree
When I work as part of a team, I emphasize the meeting of deadlines.	3.21	Agree
When I work as part of a team, I accept individual differences among members.	3.19	Agree
When I work as part of a team, I identify needs or requirements and develop quality/timely solutions.	3.17	Agree

When I work as part of a team, I pay attention to what others are saying.	3.27	Strongly Agree
When I work as part of a team, I treat all my team members as equals	3.4	Strongly Agree
Overall Weighted Mean	3.18	Agree

The student-respondents “Strongly Agree” that “32. When they work as part of a team, they treat all their team members as equals” with a rating of 3.40 (rank 1) while “10. When they work as part of a team, they know how to weigh the relative importance among different issues” had the lowest mean of 2.89 interpreted as “Agree” (rank 32). Overall, the student-respondents “Agree” that their level of skills was developed in terms of collaboration skills with a mean rating of 3.18. The result implies that the student’s level of skills in terms of collaboration was not fully developed since the students just agreed but not strongly agreed that it was developed.

The result of the study is related to the findings of Othman and Murad (2015), student collaboration was not fully developed because some group members preferred not to share their ideas with the group. Some members were taking group work as relaxation time, some consider group

works a waste of time because other members discuss some unrelated topics and cannot reach an agreement. According to Varona (2020), good collaboration skills yield better results in collaborative learning contexts, it is why the collaboration skills of the students must be developed.

According to Child and Shaw (2016), students’ collaboration skills should be developed to increase students’ social competency and academic self-concept. Students gained more knowledge and learned specific skills and processes when they work in groups. Sulaiman and Shahrill (2015) stated that collaboration helped to improve students’ performance academically as well as to develop the necessary skills of the 21st century.

3.4 Level of Skills in terms of Communication Skills of the Student-respondents

Table 8 presents the level of skills of student-respondents in terms of Communication Skills.

Table 8: Assessed Level of Skills in terms of Communication Skills

Communication Skills	Weighted Mean	Descriptive Equivalent
1. I try to anticipate and predict possible causes of confusion, and I deal with them up front.	3.16	Agree
2. When I write a memo, email, or other document, I give all of the background information and detail I can to make sure that my message is understood.	3.24	Agree
3. If I don't understand something, I ask to clarify it.	3.29	Strongly Agree
4. When people talk to me, I try to see their perspectives.	3.12	Agree
5. When I finish writing a report, memo, or email, I scan it quickly for typos and so forth, and then send it off right away.	3.16	Agree
6. When talking to people, I pay attention to their body language.	3.15	Agree
I use diagrams and charts to help express my ideas.	3.10	Agree
Before I communicate, I think about what the person needs to know, and how best to convey it.	3.17	Agree
When someone's talking to me, I think about what I'm going to say next to make sure I get my point across correctly.	3.30	Strongly Agree
Before I send a message, I think about the best way to communicate it (in person, over the phone, in a newsletter, via memo, and so on).	3.20	Agree

I try to help people understand the underlying concepts behind the point I am discussing. This reduces misconceptions and increases understanding.	3.22	Agree
I consider cultural barriers when planning my communications.	3.19	Agree
Overall Weighted Mean	3.19	Agree

The student-respondents “Strongly Agree” that “9. When someone's talking to them, they think about what they’re going to say next to make sure they get their point across correctly” with a rating of 3.30 (rank 1) while “7. They use diagrams and charts to help express their ideas” had the lowest mean of 3.10 interpreted as “Agree” (rank 12). Overall, the student-respondents “Agree” that their level of skills was developed in terms of communication skills with a mean rating of 3.19.

The result implies that the student's level of skills in terms of communication was not fully developed since the students just agreed but not strongly agreed that it was developed.

The result of the study is related to the findings of Iksan, et.al (2011), the communication skills among students are good but some aspects need to be developed, and in the findings of Misdi, Pauzi, Mokhtar, Ali and Hadi (2010), the level of communication among students at learning institutions in Malaysia is not satisfactory.

A local study also revealed that senior high school students’ collaboration was not fully developed. Eslit and Bangelisan (2018) reported that the respondents' speaking and listening skills revealed a high significance which can be

Table 9: Analysis of Variance to test difference on the Level of Skills as to Critical Thinking Skills when Grouped According to the student-respondents profile variables

Sources of Variations		SS	df	MS	F	Sig.	Decision / Interpretation
Age	Between Groups	0.519	1	0.519	2.554	0.113	Accept Ho Not Significant
	Within Groups	25.832	127	0.203			
	Total	26.351	128				
Sex	Between Groups	0.981	1	0.981	4.910	0.028	Reject Ho Significant
	Within Groups	25.370	127	0.200			
	Total	26.351	128				

There was a significant difference on the level of skills as to critical thinking skills when student-respondents are grouped according to sex (Sig. = 0.028). The computed significant value (Sig.) is less than (<) 0.05 alpha level of significance, therefore null hypothesis is rejected. There is a

deduced that the respondents are not effective communicator are not effective communicators. According to Richards (2021), some of the reasons for not fully developed communication skills may include lack of motivation, little opportunity to practice communicating and personality factors.

A foreign study suggested that communication skills must be developed because it is essential to achieve success in the growing service sector. Penbek, et. al (2009) reported that students in today's era need to master communication skills in different cultural contexts to be globally competitive.

IV. TEST OF DIFFERENCE ON THE LEVEL OF SKILLS WHEN GROUPED ACCORDING TO THE STUDENT-RESPONDENTS PROFILE VARIABLES

4.1 Critical Thinking Skills

The Analysis of Variance to test difference on the Level of Skills as to Critical Thinking Skills when Grouped According to the student-respondents profile variables is presented in Table 9.

significant difference on the level of skills as to critical thinking skills when grouped according to sex

The result of the study is related to the findings of Perdana, Budiyo, Sajidan, and Sukarmin (2019), the significant value obtained in their study was 0.000 which

indicates that there is significant gender difference in terms of critical thinking skills.

On the other hand, the computed significant value (Sig.) for age was (Sig. = 0.113) which indicates that there was no significant difference on the level of skills as to critical thinking skills of student-respondents.

4.2 Creativity Skills

Table 10 shows the Analysis of Variance to test difference on the Level of Skills as to Creativity Skills when

Table 10: Analysis of Variance to test difference on the Level of Skills as to Creativity Skills when Grouped According to the student-respondents profile variables

Sources of Variations		SS	df	MS	F	Sig.	Decision / Interpretation
Age	Between Groups	0.231	1	0.231	1.204	0.275	Accept Ho
	Within Groups	24.372	127	0.192			Not Significant
	Total	24.603	128				
Sex	Between Groups	0.376	1	0.376	1.971	0.163	Accept Ho
	Within Groups	24.227	127	0.191			Not Significant
	Total	24.603	128				

The result for age is related to the study of Tindowen, Bassig, Cagurangan (2017), the significant value obtained in their study for age was 0.233 which indicates that there is no significant age difference in terms of creativity skills. On the other hand, the significant value obtained in their study for sex was 0.032 which indicates that there is a significant sex difference in terms of creativity skills. Their findings stresses that the male learners are more creative than female learners.

4.3 Collaborative Skills

The Analysis of Variance to test difference on the Level of Skills as to Collaborative Skills when Grouped

Grouped According to the student-respondents profile variables.

The computed significant values (Sig.) for age (Sig. = 0.275) and sex (Sig. = 0.163) were all greater than (>) 0.05 alpha level of significance. The results indicate that there was no significant difference on the level of skills as to creativity skills of student-respondents. Therefore, the null hypothesis is accepted.

According to the student-respondents profile variables is shown in Table 11.

The computed significant values (Sig.) for age (Sig. = 0.119) and sex (Sig. = 0.062) were all greater than (>) 0.05 alpha level of significance. The results indicate that there was no significant difference on the level of skills as to collaborative skills of student-respondents. Therefore, the null hypothesis is accepted.

It is related to the study of Tindowen, et.al (2017), the significant values obtained in their study for age was 0.318 and sex was 0.928 which indicates that there is no significant age and gender differences in terms of collaboration skills.

Table 11: Analysis of Variance to test difference on the Level of Skills as to Collaborative Skills when Grouped According to the student-respondents profile variables

Sources of Variations		SS	df	MS	F	Sig.	Decision / Interpretation
Age	Between Groups	0.516	1	0.516	2.467	0.119	Accept Ho
	Within Groups	26.564	127	0.209			Not Significant
	Total	27.080	128				
Sex	Between Groups	0.736	1	0.736	3.546	0.062	Accept Ho
	Within Groups	26.344	127	0.207			Not Significant
	Total	27.080	128				

4.4 Communication Skills

Table 12 shows the Analysis of Variance to test difference on the Level of Skills as to Communication Skills when Grouped According to the student-respondents profile variables.

The computed significant values (Sig.) for age (Sig. = 0.299) and sex (Sig. = 0.136) were all greater than (>) 0.05 alpha level of significance. The results indicate that there was no significant difference in the level of skills as to communication skills of student-respondents. Therefore, the null hypothesis is accepted.

Table 12: Analysis of Variance to test difference on the Level of Skills as to Communication Skills when Grouped According to the student-respondents profile variables

Sources of Variations		SS	df	MS	F	Sig.	Decision / Interpretation
Age	Between Groups	0.247	1	0.247	1.087	0.299	Accept Ho Not Significant
	Within Groups	28.853	127	0.227			
	Total	29.100	128				
Sex	Between Groups	0.506	1	0.506	2.248	0.136	Accept Ho Not Significant
	Within Groups	28.594	127	0.225			
	Total	29.100	128				

It is related to the study of Tindowen, et.al (2017), the significant values obtained in their study for age was 0.847 and sex was 0.129 which indicates that there is no significant age and gender differences in the effects of communication skills.

**LEARNING SKILLS AND STUDENTS’
ACADEMIC PERFORMANCE**

The Pearson Product Moment Coefficient of Correlation to determine Relationship between Level of Skills of the 21st Century Learning Skills and Students’ Academic Performance is presented in Table 13.

**V. TEST OF RELATIONSHIP BETWEEN THE
LEVEL OF SKILLS OF THE 21ST CENTURY**

Table 13: Pearson Product Moment Coefficient of Correlation to determine Relationship between Level of Skills of the 21st Century Learning Skills and Students’ Academic Performance

Sources of Correlations		Level of Skills	Academic Performance	Decision / Interpretation
Level of Skills	Pearson Correlation	1	-.010	No Relationship Accept Ho
	Sig. (2-tailed)		0.912	
	N	129	129	
Academic Performance	Pearson Correlation	-.010	1	
	Sig. (2-tailed)	0.912		
	N	129	129	

The computed Pearson r value was -0.010 which denotes a very low negative correlation between the level of skills and the academic performance of students. The computed P-value was 0.912 which is greater than (>) 0.01 level of significance, therefore the null hypothesis is accepted. The result signifies that there is no significant relationship between the level of skills and the academic performance of students.

This further implies that the level of skills of students does not affect their academic performance. This is related to the study of Varona (2020), the students in St. Michael College of Caraga are proficient in their academics, but the 21st-century skills

in terms of 4C's (critical thinking, communication, collaboration, and creativity) have no significant impact on students' academic performance.

VI. PROPOSED ACTION PLAN TO ENHANCE THE LEVEL OF LEAST DEVELOPED 21ST CENTURY LEARNING SKILL AMONG GRADE 11 LEARNERS

The proposed action plan to enhance the level of least developed 21st Century learning skill among Grade 11 learners is presented in Table 14.

Table 14: Proposed Action Plan to Enhance Least Developed 21st Century Learning Skills among Grade 11 Students

Competency	Area Needing Enhancement	Proposed Action Plan	Persons Involved	Materials Needed	Source of Fund	Budget	Time Frame
Critical thinking skills	Becoming elaborative on different matters	Conduct virtual training to enhance critical thinking skills	Teachers, School Head, Invited Speaker	Laptop/ Mobile Phone and Internet connection	School MOOE	500.00	January 2022
Creativity skills	Flexibility on routines	Conduct of Virtual Symposium to Enhance Creativity Skills	Teachers, School Head, Invited Speaker	Laptop/ Mobile Phone and Internet connection	School MOOE	500.00	February 2022
Collaboration	Knowing how to weigh relative importance among different issues when working as part of a team	Conduct group dynamic activities to enhance team building.	Teacher/ Facilitator, Students	Spaghetti Tower Game *spaghetti noodle, marshmallows Zoom Game] *picture book entitled "Zoom" by Istvan Banyai	School MOOE	500.00	March 2022
Communication	Use of diagrams and charts to help express ideas.	Conduct activities that foster creative thinking (give students the chance to answer questions creatively using their own words).	Teacher, students	Ready- made questionnaire for the activity.	School MOOE	None (School supplies can be utilized)	April 2022

VII. CONCLUSION

Based on the summary of the findings, the researcher concluded that:

1. Majority of the student-respondents are female in their teenage stage.
2. The academic performance of the student-respondents is “Very Satisfactory”.
3. The student-respondents “Agree” that their level of skills in terms of critical thinking skills was developed.
 - 3.2 The student-respondents “Agree” that their level of skills in terms of creativity skills was developed.
 - 3.3 The student-respondents “Agree” that their level of skills in terms of collaboration skills was developed.
 - 3.4 The student-respondents “Agree” that their level of skills in terms of communication skills was developed.
4. There was a significant difference on the level of skills as to critical thinking skills when student-respondents are grouped according to sex.
5. There was no significant relationship between the level of skills and academic performance of students.
6. The proposed action plan to enhance the level of least developed 21st Century Learning Skill among Grade 11 learners.

Recommendations

Based on the summary of findings and the conclusions arrived at, the researcher offered the following recommendations:

1. Skills development may be considered to further increase academic performance on the students.
2. Teachers are encouraged to guide students on how they think and use appropriate technique to apply critical thinking during class discussion.
3. Teachers are encouraged to use diverse teaching strategies which stresses on student-centered learning to stimulate students’ thinking by encouraging critical and creative thinking.
4. Teachers are encouraged to provide opportunities to be creative within and outside school environment.
5. Proper guidance and counseling maybe considered to weigh relative important issues emotionally or

socially among students to develop their collaboration skills.

6. Teachers are encouraged to guide students develop a way to express their ideas correctly.
7. Future researchers may conduct a follow-up study with in-depth and with a wider in scope so as to validate the findings obtained in the study.

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The Impact of Social Relationships on Students' Academic Performance in Secondary Schools, Meru District Council, Arusha, Tanzania

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Abstract— The study assessed the impact of social relationships on students' academic performance in secondary schools, Meru District Council, Arusha Tanzania. The following specific objectives: to assess the forms of relationships among students in secondary schools and their impact on students' academic performance; and to investigate on the effects peers, family, school, and neighbours on students' academic performance were studied. The study surveyed 504 secondary school students, and the data was analysed using descriptive statistics, Chi-square test for independence and one-way Kruskal-Wallis ANOVA. Findings revealed six forms of relationships among students including: Friendship, Peers, Acquaintances, Classmates, Support groups, and Romantic. The forms of relationships found to have a significant impact on students' academic performance. It was also found out that there are a significant effect of family, peers, schools and neighbours' interactions on students' academic performance. The study recommends that teachers pay attention on the kind of relationships among students because they may have both positive and negative outcomes, design guidance and counselling systems to guide students' social interactions; Schools should establish a mutual relationship between the school members and family members for the sake of understanding and follow ups of students both academic and behavioural progresses.

Keywords— Academic Performance, Family and Friendships

I. BACKGROUND TO THE STUDY

The concept of social relationship involves the connections that exist between people who have persistent interactions that are perceived by the participants to have personal meaning. It includes the relationship between family members, friends, neighbours and co-workers (August & Rook, 2013). Social relationship includes factors such as family, school, social economic status, peers and neighbours (Junio & Liwag, 2016). According to various literatures, social relationships are among the factors that have impact to students' academic performance. The Family involves a unit that composes of father, mother, children, adopted or blood related and other close relatives including grandfather, grandmother, uncles,

aunties, cousins, nephews, and nieces who live in a household (Law of the Child Act, 2009). Researchers have shown that family environment contributes largely to the growth and performance of a child, for example, Priyanka and Komira (2017) stated that the home comprises of such atmospheres which foster growth and development of family, trust, and confidence, sharing of ideas, parental support, parental approval, parental engagement, affection and support of siblings. Again, according to Priyanka and Komira (2017) in the study conducted in India showed that parental influences were positively correlated to actual academic performance of students. Also, the study by Cohen and Khan (2010) revealed that parents' contribution to their children's education has consistent and positive effects on academic performance and on the self-concept.

Peers are a group of people who have similar interests, age, background and social status; peer relationship involves the types and quality of social interactions among same aged peers (Cillessen, 2000). Studies on peer relationship have indicated that throughout development people seek to acquire an attachment to a group in the society (Castro Giovanni, 2002). Peer relationships in school or home have a big role in the socialization of children, which may further affect their academic performance (Olalekan, 2016).

A school is an education institution designed to provide teaching and learning process in a way that supports students' learning (Steiner, Hamilton, Peer & Pane, 2015). Examining on the school characteristics and its influences on students' academic performance; Kosgei, Mise, Odera, and Ayugi (2013) suggest that there is no significant relationship between teacher qualifications and students' academic performance however Ekperi (2018) established that teacher knowledge of the subject matter and teaching method correlate significantly with students' academic performance.

Neighbours can interact and affect students' academic performance. A neighbour is a person living next door to or every near to another, a person or place in relation to others next to it. Neighbours are considered as a social group that has an influence on student's performance. Coker (2016) revealed that there is a negative relation between neighbourhood disadvantage to both GPA and educational performance.

II. STATEMENT OF THE PROBLEM

Students' academic performance has been a problem year after year for example the study by Brighton (2017) on the factors affecting students' performance in Certificate of Secondary Education Examination in Tanzania found that low performance was due to shortage of teaching and learning materials, lack of readiness of students in learning, poor entry scores in form one and three, poor parental involvement in leaning of their children and un-clear education policy. Again, the study by Nghambi (2014) in community secondary schools in Urambo district found that poor performance in form four examinations was associated with poor working environment for teachers, poor supply of teaching and learning materials, high teacher -students ratio, and poor teaching methodology.

Moreover, as a remedy for poor performance in the government secondary schools, Kagu (2011) recommended that the government should increase the number of teachers, provide teaching and learning

materials such as textbooks, Laboratories, classrooms, lunch to students staying away from schools, and introduce bonus schemes for teachers serving in difficult environment. Among the recommendations by Boa (2014) is that every teacher should have favourable environment for teaching and learning for students' high academic performance.

It has been established by Ngassa and Gundula (2019) that parents are committed to monitor students' learning activities and give all kinds of support needed. Also, Orestes (2014) found that there is a close relationship between parental social economic status, and the society at large in students' academic performance.

Despite all the above-mentioned studies, yet students' academic performance continues to be poor in Tanzania, Meru District inclusive. Many studies have been done asking if relationships may affect students' academic performance, this is why the researcher decided to assess if students' academic performance may be affected by the social relationships. The current study, therefore, explored on the forms of relationships among students in secondary schools, the impact of those relationships on students' academic performance, and the effects of family, Peers, school and neighbours on students' academic performance.

III. OBJECTIVES OF THE STUDY

The study addressed the following two specific objectives

1. To Find out the forms of relationships among secondary school students in Meru District Council and their impact on students' academic performance
2. To investigate on the effects of peer relationships, family members relationships, school members interactions and neighbours' relationships to students' academic performance in Meru District Council.

IV. SIGNIFICANCE OF THE STUDY

The study will add to existing literature on the factors that contribute to students' academic performance. Teachers, parents, and policy makers can take the advantage of the findings to improve students' performance in schools. This study is significant to social workers, counsellors and other practitioners who work in the school settings because it helps to have evidence on the existing social relationships how they affect students' academic performance. This study can be used as a baseline to gain information which can help on designing

students' guidance and counselling programs and other life skills sessions.

V. DEFINITION OF TERMS

5.1 Academic Performance

Academic performance is defined by several authors as a level of achievement attained by a student through effects or skills during the learning processes which is either by theory or practical and has effects on the standard of education. It signifies the knowledge gained and is assessed by teachers considering the set of instructional goals (Abaidoo, 2018). In this study academic performance meant scores and grades obtained by a student after attempting a test or an exam during and/or after classroom instructions.

5.2 Family

A family means groups of people consisting of father, mother, children and/or relatives and their dependants forming one household living in same place with different roles, and influencing one another to meet psychological, social, cultural, and economic needs of each other (Gunindi & Demirciogulu, 2012). In this study, family meant the people who live with the students notably, parents, guardians and siblings.

5.3 Friendship

Is a close, voluntary relationships between two same age peers that is characterized by mutual affection or liking. In friendship people have similar social skills and competencies which in turn, help to foster feelings of equality between the people who are friends such feelings are distinct from the feelings children have towards their parents (Rubin, Chen, Coplan & Bowker, 2015). According to Ryan (2000) students with high achieving friends have greater academic achievement over time as compared to students with lower achieving friends. Spadofora, Schiralli and Jbouri (2019) suggested that, by associating with friends who have positive attitudes towards school, youth may enhance their own satisfaction with school. In this study friendship meant people like best friends, the people who are not necessarily of same age, same interest or hobbies but share some kind of closeness and/or sometimes may be used interchangeably with peers.

5.4 Neighbours

According to the Concise Oxford English Dictionary (Eleventh Edition), a neighbour is a person living next to or very near to another. A person or place in relation to others next to it. In this study neighbour meant a person

who lives close to the students' home and the community close to the school.

5.5 Peer Acceptance

Peer acceptance can be defined as the way an individual is liked by others. According to Rubin *et al.*, (2015), peer acceptance refers to the extent to which a child is collectively liked by his or her peers and it is associated with a variety of positive outcomes, such as competence (Gordon & Asher, 2005). In this study peer acceptance bears similar meaning to these provided by scholars in this section.

5.6 Peer Groups

Peer groups are of people of approximately the same age who have similar interests, background, or social status. Peer groups have an important influence on youth performance, beliefs, and behaviours in the school context (Filade, Bello, Uwaoma, Anwanane & Nwanghuruks, 2019). In this study peer groups meant all individuals who have same similar interest, who work to get, share hobbies, and have similar age.

5.7 Peer Pressure

Peer pressure means people of your same age encourage you to do something or stop from doing something no matter if you personally want to do it (Ryan, 2000). In this study peer pressure meant the way peers interact and motivate each other to achieve a certain goal.

5.8 Peer Rejection

The online Merriam –Webster dictionary defines peer rejection in the essence of one's refusal to accept someone of similar age, grade or status into a social group. In this study peer rejection meant the situation where by an individual person is being segregated from any kind of interactions by his/her peers. This segregation may happen in different environment such as in school, classroom, class activities, in extracurricular activities. The individual is affected to the extent that the situation affects his daily functioning in emotional, social, and psychological wellbeing. One can be rejected in the group due to the fact that he or she demonstrates shyness, withdrawn or anxious behaviour or struggling with externalizing behaviours such as aggression that may lead to a cycle of bullying followed by victimization (Killen, Mulvey and Hiti, 2013). Children who are shy, withdrawn or anxious, are always victims of interpersonal rejection because their peers perceive these up and down differences as social deviants that mark them as nonthreatening and unlikely to strike back (Olweus, 1993).

5.9 Peer Relationship

Is the way or form and reasons close friends of the same sex or different sex, communicate among themselves whether in open or exclusively (Olalekan, 2016). Peers work in a group to fulfil their goals, interests and work together to achieve common expectations. In this study peer relationships meant the ways peers work together to reach their ambitions.

VI. LITERATURE REVIEW

6.1 Theoretical Literature Review

This study was guided by the Ecological Systems Theory proposed by Bronfenbrenner in (1979). According to the theory, children normally find themselves trapped in various ecosystems, from the friendliest home ecological system to the larger school system, and then to the most expensive systems, which include society and culture.

In this theory, Bronfenbrenner presents an environment as an arrangement of connected structures with those closer to the developing individual being enclosed within those further afield (Rosa & Tudge, 2013). According to Bronfenbrenner (2005) as cited by Harkonen (2007) there are five systems in child development and learning which are Microsystem, Mesosystem, Ecosystem, Microsystem and Chronosystem which affect change and learning process. These structures can be described as follow

Microsystem is referring to the immediate environment of the child such as the family, peers, School and neighbours. According to Bronfenbrenner, the development of a child takes place because of the processes consisting of complex, reciprocal interactions among the persons, objects and symbols in the immediate environment (Beck, 2000; Taylor & Gebre, 2016).

Mesosystem is the relationship between the family's interaction with the schools, the schools to the community, and the family to peers; such interactions have a great impact on the student's development and school performance in general. For example, achieving home-school consistency and information between the two parties are important for academic, personal and social development for the child (Beck, 200; Kocayoruk, 2016).

Ecosystem presents the external activities that influence a child's development for example parents work, policies existing in the government, social changes and economic circumstances. Studies have indicated that there are factors beyond the school that influence child's educational outcomes. These factors are such as poverty,

domestic violence, parental drug abuse, neglect and physical or sexual abuse. The ecosystem interactions have various effects on the development of the child emotionally, socially as well as cognitive (Ryan & Jacob, 2018).

Macrosystem is the broader communities' culture, views and norms. The macrosystem contains overarching values, ideologies, laws, worldviews and customs of a particular society (Wahedi, 2012). Student's interactions with his society effects the way a student is learning for example ways of communication, the language, cultural practices all these factors have an impact to the students' performance (Beck, 2000).

Chronosystems are events that occur over a lifetime at critical periods of development. Among the dimensions of the chronosystem includes changes in personal overtime (Bronfenbrenner, 1994). Changes in student's life can affect their access to general education content and context (Gerdin, Allcock & Ruppap, 2016). It is highlighted that the development of science has changed traditional kind of learning to a more modern learning. Students have a clear remarkable interaction resulting from the development of science and technology. The advancement of internet use, computers and mobile phones and social media have a great influence on the way a student is learning. These changes overtime happening in the student's life and influences his or her learning has a developmental function in the students' educational achievement (Beck, 2000).

In this theory, Bronfenbrenner argues that, because students interact with the systems, a greater attention should be given to thoughtful how students network through these systems as means of attaining educational goals.

The Ecological systems theory lays stress on the quality and context of the child's surroundings (Harkonen, 2007). The theory emphasises that a child's own biology is a primary environment fuelling his/her surroundings. The Interaction with the growing biology, the child's interaction with the immediate family or community, environment and the societal scenery fuels and directs the child's development (Paquette and Ryan, 2011; Hudson, 2013).

This theory is related to the current study because the assumptions from the founder are similar as the study variables. For example, the assumptions that the environment that surrounds the student such as the family, the peers, the teachers and the neighbours interact and affect child's development and learning is related to the variables of this study. As this theory shows the variables such as peers, school, family members and the community (neighbours) are exactly the variables of my study.

While in the school the student finds himself in the groups of peers in which various interactions are carried out, this interaction is very important as it influences student’s studies and the performance. Peers work in a group to fulfil their goals, interests and work together to achieve common expectations (Olalekan, 2016).

The family interactions with the student have been proved to have influence on students’ academic performance. Ngassa and Gundula (2019) have supported that parent affect students’ academic performance because they are committed to monitor students’ learning activities and give all kind of support they need. The school is also another important variable interacting and relate with the students’ academic performance. In the schoolteachers are key players to create a good environment which enables teaching and learning for high academic performance

among students (Boa, 2014).

The community is another variable in this study known as the neighbours are the people in the community that interact with the student. Studies have shown that neighbours as a social group have influence on students’ academic performance for example Coker (2016) revealed a negative relation between neighbourhood disadvantage and both GPA and educational Attainment.

This theory reveals and gives much understanding of the context in which a student develops and interacts, it draws the importance of social relationships in the development and learning of the student and is a benchmark to the topic under study which explores on the social relationships and the impact they have on students’ academic performance.

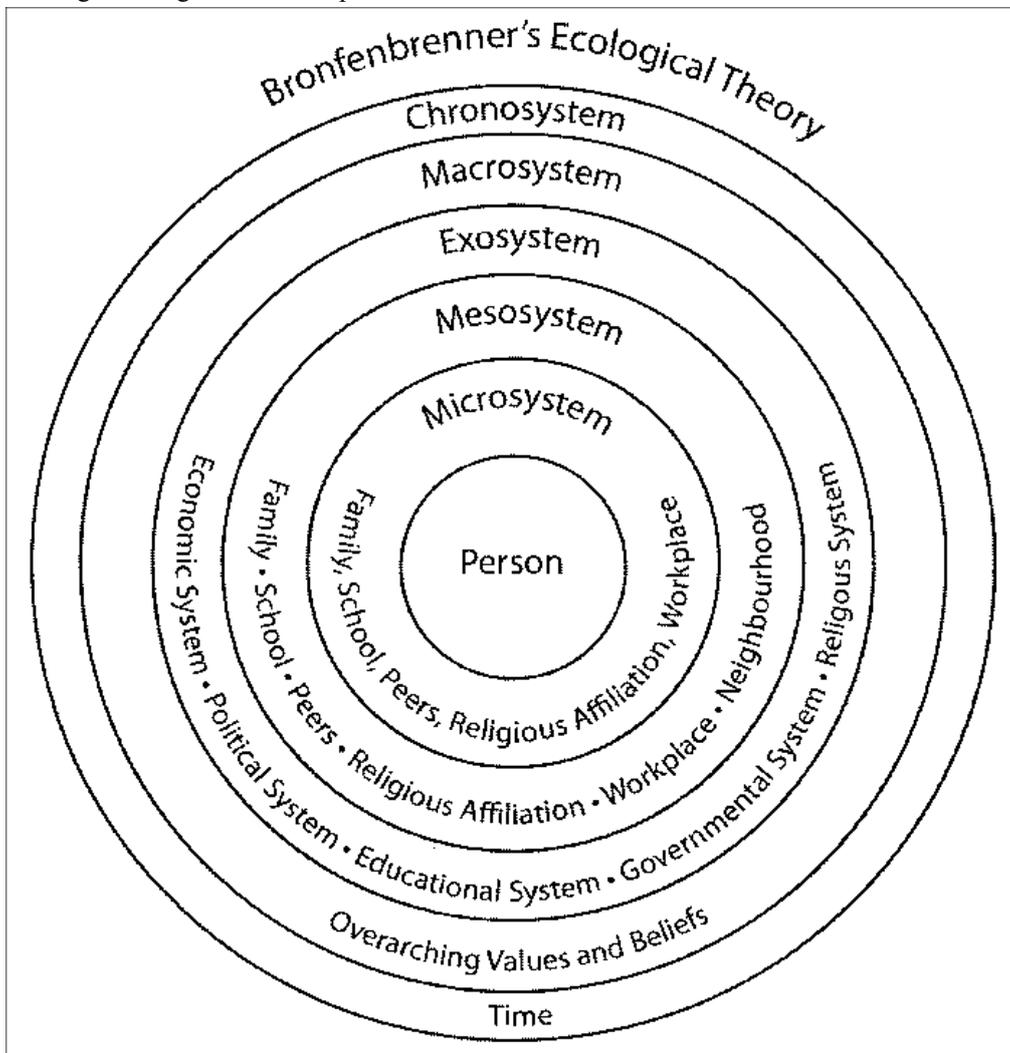


Fig.1: Bronfenbrenner Ecological System Model, adapted from Berger, 2007.

6.2 Empirical Literature Review

6.2.1 Social Relationship and Students’ Academic Performance

Study on academic progress in junior high school of the Dutch school system indicated that students who were accepted by their peers had lower probability to retain a grade or move to downward grades. This means peer

relationship is associated with good academic performance (Lubbers, Werf, Snijders & Creemers, 2006).

A study of neighbourhood effects on youth educational achievement in the Netherlands indicated that the impact of neighbourhood conditions on certain groups of youth may be obscured in studies that measure average neighbourhood effects across all individuals. It highlights that future study will examine the link between the neighbourhood, family and school context to better determine the neighbourhoods in youth education. The study indicated that students who had relatives in Netherlands achieved better compared to those who had not (Kuyper, 2008).

The study by Olalekan (2016) conducted in secondary schools of Atiba Local Government Area of Oyo State suggested that pupils are closer to their friends than their teachers and parents concerning their academics and that parents monitor their children's peer groups associations. In the study conducted in Jagobiao, Mandaue city argue that students' peer pressure in school affects the academic performance among students in terms of various content. (Moldes *et al.*, 2019).

Furthermore, Mosha (2017) in her study conducted in secondary school somewhere in Tanzania presents that peer groups have both positive and negative influences on adolescent students' academic performance. Mosha also highlights that there are several factors that influence students' academic performance. These factors are such as peer relationships, socialization, environment, globalization and drug use.

The study conducted by Kayombo (2017) in Ilala Municipality Tanzania found that parents are engaged in the school committees to discuss students' matters such as attendance and school dropouts. These studies stand as important information to tell the researcher that the people who are close to the student (parents, teachers, neighbours, peers) are crucial for the achievement of the students' academic.

6.2.2 Peer Relationship and Academic Performance

In the course of being in schools, children find themselves attached to other people, the kind of relationship known as peer relationship. Peers are a small group of related age, fairly close friends, sharing the same activities (Castro Giovanni, 2002). Peer relationships in schools and homes play an important role in the socialization of children (Olalekan, 2016). Furthermore, the nature of friendship students keep has the potential influence on their relationships at school rather than academic matters (Mosha, 2017). According to the cognitive development theory developed by Piaget (1932),

children's relationship is clearly distinguished from their relationship with their parents or other adults.

On the other hand, Feldman (2009) describes peer rejection as something that can lead to academic decline. Rejected peers are less likely to participate in classroom activities (Passer & Smith, 2007). Moreover, Mosha (2017) presents peer groups to have both positive and negative influences on adolescent students' academic performance. The study by Lubbers *et al* (2006) revealed peer relationship to be associated with good academic performance. According to Ryan (2000) students with high achieving friends have greater academic performance over time as compared to students with lower performing friends. Spadofora *et al* (2019) suggest, by associating with friends who have positive attitudes towards school, youth may enhance their own satisfaction with school.

6.2.3 Family Members and Students' Academic Performance

A study done by Baba and Yunus (2014) on the effect of family environment on student academic performance and adjustment problems in schools found that family environment has no effect on students' academic performance although family environment has effect on school adjustment which suggests the need for parents to pay attention on their relationship with children while in school as it may have effect on them negatively.

Another study by Boyraz, Akkus, Yoruk and Akkus (2012) found that fathers help their children on educational issues more than other members of the family. The latter study repeated that students have the idea of good self-motivation driven by the parents while other siblings took the lower rank. The study by Muthoni (2013) Conducted in secondary schools in Kenya reveals that parental marital status; family size, parental education level and family financial status had a positive relationship with academic performance of students. Parents with low level of education are less responsible for children schooling, low income of parents lead to insufficient home needs and school requirements for children; the situation that lead to students' poor performance (Mauka, 2015).

6.2.4 School Members Interaction and Students' Academic Performance

Supportive teacher-student relationships and academic press are significantly related to behavioural and emotional student engagement (Lee, 2012). The school climate (norms, values and expectations) is a leading factor in explaining student learning and achievement (Maxwell *et al.*, 2017). Teacher –student relationship is important to

student success (Tisome, 2009). Results supported the hypothesized reciprocal model, indicating the relationship between teacher acceptance and achievement in both directions (Kosir and Tement, 2013).

6.2.5 Neighbours and Students’ Academic Performance

Neighbourhood is among the factors that can have impact on students’ performance. Drawing on a unique data set that permits simultaneous estimation of neighbours and school contribution to student test score gains, it was found that the two are most important contextual settings in students’ lives (Carlson & Cowen, 2014). In the study using meta-regression, it was found that the relations between neighbourhoods and individual educational outcomes is a function of neighbourhood poverty, the neighbourhood education climate, the proportion of ethnic/migrant groups, and social disorganisation in the neighbourhood (Nieuwenhuis & Hooimeijer, 2015). In the study exploring the effects of the neighbourhood in which a school is located on children’s mathematics achievement in Chile, results indicate the positive effects related to participation in neighbourhood organisations. One critical finding in this study is that socio-economic polarisation has a negative and significant impact on the education achievement of sixth graders (Otero et al, 2017).

VII. METHODOLOGY

7.1 Methods

The study employed quantitative research approach and purposeful sampling was used to give 18 schools (9 public and 9 private) as well as form three and four students. Data was collected from 504 students. The researcher used purposeful technique because he wanted to collect data from schools, which are boarding and none boarding. This technique also was used to select schools which have both males and females’ students. The population of form three and four which consist of 8064 (Field data from Meru District Education officer, 2019) was used to draw the sample of this study and the formular adopted from (Loru, 2020) was applied.

$$n = \frac{N}{1 + N(e)^2}$$

n = represents the number of schools required

N = all schools in Meru DC

e =significance level (0.05)

l=K (constant)

Therefore,

$$n = \frac{8064}{1 + 8064(0.05)^2}$$

$$n = \frac{8064}{1 + 8064(0.0025)}$$

$$n = \frac{8064}{21.16}$$

$$n = 381$$

Therefore, sample size in this study was 381.

The number of schools to survey were also obtained using the following formula

$$n = \frac{N}{1 + N(e)^2}$$

Whereas;

n = represents the number of schools required

N = all schools in Meru DC

e =significance level (0.02)

l=K (constant)

Therefore;

$$n = \frac{68}{1 + 68(0.02)^2}$$

$$n = \frac{68}{1 + 68(0.0004)}$$

$$n = \frac{68}{1 + 68(0.04)}$$

$$n = \frac{68}{1 + 2.72}$$

$$n = \frac{68}{3.72}$$

$$n = 18.27$$

It was noted that many students showed up in the research making a total of 504 participants. Data collected through questionnaires were processed and analysed quantitatively. After data collection, questionnaires were

assigned with identifications (id) and data were coded. Coding is assigning numbers to the variables so that they can be analysed by computer software program (Rubin & Babbie, 2011). Rubin and Babbie highlighted that a code book is a document that describes the location of variables and lists the assignments of coded variables to the attributes composing those variables. The codebook is the primary guide used in the coding process, it helps locating variables and interpreting codes in the data file, it tells where to find the variable when needed for correction or any treatment. After the data has been coded and a codebook is constructed, data were entered into the statistical package for social sciences (SPSS version_20) to undergo a descriptive statistics analysis.

7.2 Ethical Considerations

Ethics are systems of principles which govern the dynamics of decision making of the choices of what is wrong or right. Scientific research work, as all human activities are governed individuals, community and social values (Fouke & Mantzorou, 2011). Understanding the importance of ethics in research, the researcher ensured the participants safety of their participation, such as confidentiality and through assurance of informed consent. An informed consent according to Feldman (2015) is a

document signed by participants affirming that they have been told the basic outlines of the study and are aware of what their participation will involve. For ethical considerations, each participant had the freedom to choose or refuse to participate; a research clearance was sought from the Directorate of Research and Publications, and a research permit was obtained from Meru District Council Director.

VIII. RESULTS

8.1 Forms of Relationships among Students in Secondary schools.

Respondents were asked to rate the forms of relationships among students in Meru secondary schools. Data indicated; Friendship 100%, Acquaintances 74.9%, Classmate 96.8%, Peers 96.2%, Support 89.3% and Romantic 8.4%. As summarized in table 1, it can be concluded that; friendship, acquaintances, classmates, peers and support are forms of relationships found among students in Meru secondary schools. It can also be said that romantic relationship is not much prevalent among students compared to other forms of relationships

Table 1 Descriptive analysis of Forms of Relationships among Students in Secondary Schools

Forms of relationships	SA	Ag	Und	Dis	SD	N/A	Cum
	%	%	%	%	%	%	%
Friendship	94.1	5.9	0.0	0.0	0.0	0.0	100
Romantic	3.5	4.9	7.0	9.1	9.8	65.9	100
Acquaintances	42.5	32.4	5.9	0.7	18.5	0.0	100
Classmate	49.1	47.4	3.1	0.0	0.3	0.0	100
Peers	73.9	22.3	3.8	0.0	0.0	0.0	100
Support	80.0	3.8	9.3	6.3	0.7	0.0	100

Source: Field data, 2020

8.2 Impacts of Friendship, Romantic, Acquaintances, Classmates, Support & Peers on Students Academic Performance

Descriptive analysis was done to find out the impact of friendship, romantic, acquaintances, classmates, support,

and peer relationships on students' academic performance. From Figure 2 it can be presented that relationships do contribute much on students' academic performance by; I did well in my exams because of my friend's help (friendship)-82%, Discussion with my acquaintances helped me to get good grades (acquaintances)-84%, My classmates have helped me to do well in my studies

(classmates) 91%, I have passed my exams due to help I receive from my peers (peer)-84%, there is someone who is like my brother or sister in the school, this person

encourages me to study hard (support)-62%, my boyfriend/girlfriend encourage me to study (romantic)-13%.

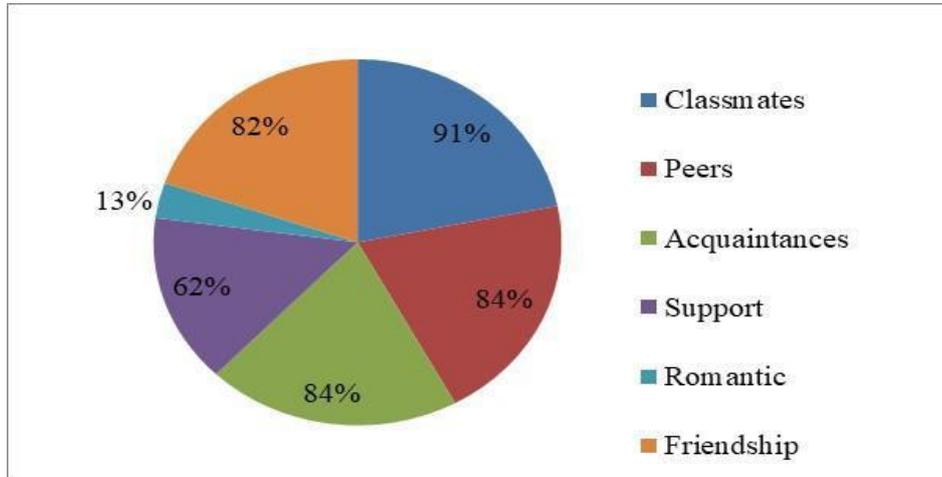


Fig.2: Impacts of Friendship, Romantic, Acquaintances, Classmates, Support & Peers on Students Academic Performance

8.3 Effects of Peers, Family and Neighbours on Academic Performance

In this section Kruskal –Walli’s test was run through one way groups’ analysis of variance (ANOVA) to find out the effects of peers, family, school and neighbours on students’ academic performance. Total scores on peers,

family members, school members and neighbours were compared to obtain the medium that were used to report these findings. Results in table 3 indicated that family members have higher contribution (26.00 median) to students’ academic performance followed by peers (25.00 median) and neighbours (18.0 median).

Table 2: ANOVA analysis of Effects of Peers’, Family, School and Neighbours on students’ academic performance

Sex	Total peer Effect	Total family Effect	Total school Effect	Total neighbors Effect
Male	N 293	293	293	293
	Median 24.00	26.00	22.00	17.00
Female	N 281	281	281	281
	Median 27.00	26.00	22.00	18.00
Total	N 574	574	574	574
	Median 25.00	26.00	22.00	18.00

Source: Filed data, 2020

IX. DISCUSSION OF THE FINDINGS

9.1 Forms of Relationships among students

Regarding the first objective, this study found out a few forms of relationships among students in secondary schools. The forms of relationships found are Friendship

100%, Acquaintances 74.9%, Classmate 96.8%, Peers 96.2%, Support 89.3% and Romantic 8.4%. In an open-ended question, which asked respondents to name other forms of relationships they know; roommate, religious, subject and sports relationships were highlighted. These relationships the researcher classified them under peer relationships.

From these findings it can be concluded that friendship, acquaintances, classmates, peers and support are forms of relationships among students in secondary schools in Meru District Council.

According to various studies, friendship in adolescents has influencing role on social development, shaping behaviour, fostering academic performance but also may lead to risk behaviours.

Individuals select peers as friends who are similar to themselves in specific behaviours or attitudes (Homphily, lazarsfeld & Merton, 1954). Friends and peers communicate in an easier way and find each other more trustworthy and predictable (Veenstra *et al.*, 2013).

These studies lie in line with the current study which investigates on the role of friendship in students' academic performance. They confirm that there are friendships that exist among students and that this relationship has something to do with students' progresses.

Peer relationship is a very famous kind of social relationships found among students. Apart from this study, other studies indicate the importance of peers in shaping student's development. Peers are available at home; school or other places where they meet and interact, share interests, hobbies and communicate in open or exclusively (Castrogiovanni, 2002; Olalekan, 2016). While in school settings, students meet with other students for group discussions. In this kind of relationships students are meeting to discuss a particular thing let say an assignment and the relationship marks to an end when the discussion is over. This kind of relationship is called acquaintance (Ekberg, 2013). Classmates mean everybody who is in the classroom except the teacher. Classmates offer informal support, and they are expected to naturally interact with their peers in many informal ways, particularly when they interact outside of the school setting (Ansong, Okumu, Bowen, Walker & Eisensmith, 2017). In the school students find other people who are like brothers and sisters in this study identified as support relationships. All these forms of relationships found among students have a potential role in shaping developing and moulding the student towards his or her academic performance.

9.2 Impacts of Friendship, Romantic, Acquaintances,

Classmates, Support & Peers on Students Academic Performance

Results from the descriptive analysis frequencies on the impact of the forms of relationships indicated friendship impacts was 82%, Acquaintances 84%, Classmates 91%, peers 84%, support 62% and romantic 13%. Other Studies also reveal how some of these

relationships impact students' academic performance. Students with high achieving friends have greater academic performance overtime and by associating with friends who have positive attitudes towards school; students may enhance their own satisfaction with school (Ryan, 2000; Spadafora, Schriralli & Jbouri, 2019). The discussions under peers, acquaintances, support, and friendship indicated the truth behind these social relationships impacts to students' academic performance.

9.3 Effects of Peers, Family, School and Neighbours

One way ANOVA analyses by Kruskal- Wallis test was conducted to find out the effects of peers, family, school and neighbours' relationships on students' academic performance. Results indicated to higher effects on students' academic performance with (26.00 median). According to Bronfenbrenner ecological system theory, the family is the immediate environment of the child. The student's interactions with family members influence school performance (Tylor & Gebre, 2016). It is pointed that parents are committed to monitor students learning activities and give all kind of support needed (Ngassa & Gundula, 2019).

Moreover, Baba and Yunus (2014) revealed that family environment has effect on student's school adjustment and suggested parents to pay attention on their relationships with children. Furthermore, Muchoni (2013) revealed parental marital status, family size, parental educational level and family financial status to have positive impact on student's academic performance.

This study also found that peer relationships (25.00 median) have impact on students' academic performance. Students learn various behaviours, motivation and skills and build much trust from their peers. According to Mosha (2017) peer groups have both positive and negative influences on adolescent students' academic performance. The study by Lubbers *et al* (2006) revealed peer relationship to be associated with good academic performance. On the other hand, Feldman (2009) describes peer rejection as something that can lead to academic decline. It has also been highlighted by Passar & Smith (2007) that rejected peers are less likely to participate in classroom activities.

Furthermore, school members (22.00 median) have been indicated to play a big role in helping students to perform well in their academic. The relationships students have with their teachers, school administration, School matrons and patrons have positive impact on their academic performance. As revealed by Maxwell *et al*, (2017) school climate which includes norms, values and expectations, is a leading factor in explaining students

learning and achievement.

Moreover, these results indicated a contribution of neighbours (18.00 median) on students' academic performance. According to the ecological system theory, neighbours are among the microsystems. They are people who are living near by the student. Positive relationships with these neighbouring surrounding and people do a lot in shaping students' performance. In the study exploring the effects of neighbourhood on children's mathematics performance Otero *et al.*, (2017) revealed positive effects related to participation in neighbourhood organisation.

X. CONCLUSIONS

While teachers, educational policy makers, and researchers are concentrating on the factors that lead to academic performance of students such as teacher training and competence, teaching and learning materials, teaching and learning environment and the like, this study informs on the need to explore more on other factors such as social relationships. This study has shown that students have several social relationships that impact their academic performances.

As shown by Bronfenbrenner ecological system theory, a child first develops in his microsystem such as family, peers, school and neighbours; this development eventually grows into the mesosystem whereby his/her microsystem interacts with others for example the school interaction with family. It is also true that parents/guardians' external activities in one way or another affects the child's growth. This ecosystem as explained earlier encompasses parents work, policies in the government, social changes and economic growth, a child more over encounters the macro system which characterises the values, ideologies and laws all which are socially constructed. The Chronosystem indicates that the child's' development is affected overtime by the environment surrounding him/her. In the process of schooling, these social relationships and constructions should be seen as important in the learning of the student.

Bronfenbrenner's theory has been a benchmark to help explaining the variables of this study and has helped in getting ideas to research on the subject under each objective. It can be concluded that all the three objectives got responses in thanks to the theory.

It was recommended that teachers pay attention on the kind of relationships among students because they may have both positive and negative outcomes, design guidance and counselling systems to guide students' social interactions; Schools should establish a mutual relationship between the school members and family

members for the sake of understanding and follow ups of students both academic and behavioural progresses. The school curricula should reflect components that touch students' interactions. Parents and guardians should help their children develop and grow into positive social relationships, provide positive parenting, have positive relationships other social relationships in which the students interact.

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Challenges Experienced in the Implementation of the Competency-Based Curriculum in Tanzania Public Secondary Schools

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Abstract— This study aims to examine challenges that hinder secondary school teachers on the implementation of Competency-Based Curriculum (CBC). The study guided by social constructivism development theory. This study used mixed research approach and convergent research design where quantitative and qualitative data was collected at the same time, analyzed separately. A sample size of 152 informants was selected. Interviews, focus group discussion (FGD), documentary review and observation were used as data collection tools. In data analysis both descriptive statistics and content analysis was used. Findings show that, 41.8% strongly agree and 37.6% agree that they don't know enough about how to apply CBC. Inadequate training has made the shift from traditional teaching methods to student-centered approaches challenging. The scarcity of instructional materials is another major obstacle; 25.5% and 53.9%, respectively, concur that inadequate resources impede the successful usage of CBC. Also, teachers are unable to receive timely feedback on their teaching effectiveness due to insufficient monitoring and evaluation, as expressed by 34.8% of respondents who strongly agreed and 30.5% agreed. Also, CBC implementation hindered by overcrowded classrooms where 52.5% strongly agree big class sizes hinder to provide each student personalized attention and includes them in engaging, student-centered activities. Other challenges included, limited training, lack of administrative support and insufficient planning time. Study recommends that teachers should be given opportunities for their participation in formulation and review of curriculum. This implies that training of teachers on how to implement the curriculum, provision of instructional materials and enough classrooms are crucial for effective implementation of CBC.

Keywords— Competence-Based Curriculum, implementation of the CBC, Tanzania Public Secondary School, Constructivism Development Theory, Training and Teaching Materials

I. INTRODUCTION

The Competency-Based Curriculum (CBC) is an educational approach planned to prepare students with practical skills, knowledge, and attitudes essential to thrive in the modern world. According to UNESCO (2015) Competence Based Curriculum is a vehicle through which a nation can empower its citizens with skills, knowledge and values that will help them fit in the global village which is characterized by advancing technology. Further, IBE-UNESCO (2017) emphasised that CBC permits students to perform practically and measurably, using the skills assimilated through learner-centered pedagogy. As a result, numerous countries have carried out reforms in

curricula in joining with the concepts of key competences and learning outcomes. The CBC has emerged as a prominent approach in Tanzania since 2005. The aim of this approach is to prepare students with broad perspectives, innovative problem-solving abilities, and employable skills to handle a variety of responsibilities (Nkya, Huang & Mwakabungu, 2021). The CBC offers a framework for joining the changing concepts of education, learning, and assessment. Constructivism, a broad word for a discovery-oriented method of teaching and learning, is the idea that CBC adheres to.

The concept of Education for Self-Reliance (ESR) was first introduced in 1967, which is when Tanzania's CBC

history began (Nyerere, 1967). Among other things, the main goals of ESR were to get students ready to engage in Tanzania's current development issues in an innovative and active way and to be self-sufficient in solving the country's challenges in the near future. This suggests that the educational philosophy placed a strong emphasis on the necessity of reforming the curriculum to combine theory with the learning of useful life skills and to foster the development of competences (Kemboi & Maina, 2021).

Theory and practice integration were highlighted in the new curriculum, which moved from a content-based to a competence-based approach. It creates opportunities for students to advance their expertise and skill in the disciplines they study. Competency-based instruction gives students the chance to conduct research, test hypotheses, build understanding and construct knowledge, and pose questions as they develop as social scientists (Makulova, et al., 2015). In contrast to conventional content-based curricula, competency-based learning (CBC) places a strong emphasis on critical thinking, real-world problem-solving, and teamwork. The move towards competency-based education is in line with global trends in educating students to handle the difficulties posed by society, technology, and quickly changing employment markets (Kitasse, & Ssembatya, 2024). However, there have been a number of obstacles that have hindered the proper implementation of the CBC shift, especially in public secondary schools as indicated by Kitasse and Ssembatya, (2024); Nkya, Huang and Mwakabungu, (2021).

Several factors contribute to the difficulties in implementing CBC in Tanzania. Inadequate teacher preparation and training is a major problem since numerous educators were trained in traditional content-based techniques and may not have the skills needed to effectively promote competency-based learning. Instead of depending solely on rote memorisation, teachers must now embrace learner-centred techniques, assist students in solving real-world problems, and evaluate competencies. Teachers find it difficult to apply CBC successfully in the absence of adequate training (Komba & Mwandanji, 2015). In addition, a lot of schools struggle with a lack of infrastructure, teaching tools, and textbooks—all of which are necessary for the kind of hands-on, participatory learning that CBC requires. Research indicates that insufficient resources impede the effective execution of Community-Based Correction (CBC), especially in remote regions (Sumra & Kataro, 2014).

Also, larger class size makes it difficult for teachers to give each student individualized attention and conduct thorough

assessments of their abilities, particularly in rural area located in Namtumbo district. The absence of programs for ongoing professional development that would assist educators in adjusting to CBC standards and staying current with cutting-edge teaching techniques exacerbates this issue (Tilya & Mafumiko, 2010). Teachers encounter great difficulties in integrating the CBC framework into their instructional methods in the absence of continuous guidance. With an emphasis on finding viable ways to improve the competency-based curriculum's successful implementation, this study attempts to examine the challenges experienced in Namtumbo District.

II. LITERATURE REVIEW

The current section present review related to the challenges facing the secondary school teachers in implementation of CBC. Starting with Mutai, Chebet, and Oranga (2024) from Kenya investigated the challenges associated with implementation of the Competency-Based Curriculum (CBC) in public pre-primary schools. Their findings established that, most teachers struggled to integrate educational technology into teaching and learning. Others challenges included heavy teacher workloads and insufficient preparation, which hinder the effective delivery of quality education under the CBC framework. Similarly, Diffang, (2019) from Southwest region of Cameroon examine obstacles that teachers encounter when implement Competency schools into practice. His results exposed most commonly mentioned challenges were those related to inadequate teaching material, large class size, lack of CBA text books, inadequate CBA skills for teachers, unclear CBA assessment techniques and lack of understanding of the CBA concept.

Moreover, Shiboko and Mrema, (2024) from same district, Tanzania investigated the Challenges facing during the Implementation of Primary Secondary School CBC. Their investigation used mixed methods and convergent design, with the sample of 289 respondents from 32 public primary schools. A result revealed that, implementation of CBC is rendered ineffective due to nonexistence of learner-centred interactive teaching strategies as essential by the CBC. In Tanzania, studies by Issa et al. (2024), Mathias et al. (2023), and Ndimbo (2023) revealed both promising opportunities and notable challenges in CBC implementation as perceived by students and teachers. The curriculum was commended for fostering skill development, critical thinking, and real-world application. However, several challenges were reported, including overcrowded classrooms, shortages of textbooks, desks, and other teaching resources. Additionally, external

pressures—often influenced by political and educational authorities—hampered effective CBC adoption, resulting in rushed syllabus coverage (Issa et al., 2024).

Likewise, in Uganda, Atuhura and Nambi (2024), Namubiru et al. (2024) and Tumuheise et al. (2023) exposed that teachers facing with challenges of inadequate preparation and limited teacher participation in workshops and seminars, insufficient classroom infrastructure, time constraints and scarcity of housing options for teachers. Thus, in a way, the introduction of CBC was preceded by inadequate teacher preparation and those other challenges (Kidega et al.; 2024; Wambi et al., 2024). In Kenya, Muchira et al. (2023) found that CBC models enhanced learners' problem-solving skills, lifelong learning abilities, self-efficacy, and autonomy. Despite these benefits, evidence on CBC's impact on learners' core competencies remained scarce. Key challenges included inadequate teacher training opportunities, limited funding, inconsistent teaching methods, absence of clear policies for effective CBC implementation, questionable validity and reliability of learner assessments, and insufficient ICT infrastructure (Cheruiyot, 2024; Kubai, 2023; Njiru & Odundo, 2024). Hussein (2023) emphasized that the success of curriculum implementation is closely linked to teacher quality. To maintain high teaching standards in the long term, Kenya needs to assess teachers' preparedness for the new curriculum and consider establishing a professional development program (Cherotich, 2023; Njiru & Odundo, 2024).

For instance, Harriet, et al, (2021) explores challenges teachers face in implementation of the Competency Based Curriculum (CBC) in public pre-primary schools in Kenya. Their findings showed that, the implementation of CBC there is a greatly challenged by lack of adequate learning facilities, lack of adequate training of teachers on how to implement the Curriculum, large class sizes, lack of adequate teachers, lack of adequate materials, ignorance and lack of cooperation from parents. Their study conducted in Kenya, thus this study add context research gap in Tanzania, specifically Namtumbo district. Similarly, Makunja, (2016) examine the challenges facing teachers in Implementing Competence-Based Curriculum in Community Secondary Schools located in Morogoro Municipality. The study found that teachers were faced by challenges such as lack of in-service training on CBC, insufficient teaching and learning resources, overcrowded classrooms, low ability of students joining secondary schools and students' readiness to accept the learner center approach. Nevertheless, none of these studies applied theoretical review, thus this study add theoretical gap using social constructivism development theory.

Nyoni, (2023) conducted a study on challenges facing teachers in the implementation of Competence-Based Curriculum in Secondary Schools in Iringa Municipal. Finding revealed that, shortage of time, limited knowledge, and shortage of teaching and learning resources are prevailing challenges faced secondary school teacher in implementation of CBC. Moreover, Chacha and Onyango, (2022) from Nyamagana District revealed that many public secondary schools in Nyamagana district in Mwanza region do not have enough qualified and competent chemistry teachers which are very important in enhancing the implementation of competence-based curriculum in chemistry subject. This implies that the implementation of CBC in Nyamagana district was ineffective teachers were still using traditional method of teaching. Moreover, Hawa, (2023) examine factor hinder Biology teachers' implementation of the competence-based curriculum in Iringa Region. Results revealed that Biology teachers encounter several hurdles, including insufficient knowledge, to effectively implement CBC, irregular and inadequate staff training related to CBC, insufficient teaching and learning resources, and inadequate laboratory space for equipment storage.

In Mhangura in the Makonde District in Zimbabwe, Mpofo and Sefotho (2024) exposed that, implementing competency-based curricula for students with learning disabilities presented a number of difficulties for the participants. The difficulties mentioned were inadequate teamwork, inadequate teacher preparation, bad attitudes towards students with learning problems, and a lack of resources. The study revealed that while CBC has good intentions for students, there are inequalities in their application. Again, their study conducted in Zimbabwe, but this study adds context research gap in Tanzania specifically in Namtumbo district.

Theoretical Review

This study is guided by the social constructivism development theory established by Vygotsky's, (1978). Social constructivist theory essentially about how an individual socially constructs knowledge. Vygotsky believed that learning could not be separated from social context. Social constructivist theory is social interaction which plays a fundamental role in the development of cognition. Vygotsky viewed the interaction of peers as an effective way of developing skills and knowledge (Pauline, 2016). In learner centered teaching and learning approaches, peer assessments and performance tasks are highly encouraged as students learn through others. Another assumption of the social constructivist theory is that, there should be a facilitator in the process of learning. The assumption is normally referred to as More

Knowledgeable Other (MKO). According to Ally, (2021) MKO refers to anyone who has a better understanding than the learners with respect to a particular task, process or concept. As students construct their own knowledge based on their experiences, there should be a facilitator to focus their effort towards specific tasks at a given time.

Theory related to the challenges in implementing the CBC into practice since both place a strong emphasis on learning via social interaction. In CBC, knowledge is created through social interaction amongst students and teachers, which is consistent with Vygotsky's theory. Effective collaboration is hindered by issues that come from scarce resources or teacher ability. Also, theory highlights the fundamental aspect of CBC—that of teachers serving as learning facilitators. Although it can be challenging for some to move away from traditional teacher-centered techniques, teachers are required to assist students in building knowledge. Likewise, a crucial component of CBC is collaborative learning, which Vygotsky supports; yet, its efficacy is hampered by big class sizes and inadequate infrastructure.

III. METHODOLOGY

The study was conducted for public secondary school located at Namatumbo district in Ruvuma Region. This study used convergent research design where quantitative and qualitative data was collected at the same time, analyzed separately. Respondents were district education officers, quality assurance officers, head of school and ward education officers to learn about their difficulties in putting the CBC into practice. Data were collected through questionnaires to quantify the challenges hinder implementation of CBC.

Moreover, study consisted population of 496 which categories into six (6) District secondary education officers, twenty-one (21) ward educational officers, twenty-five (28) head of School and ten (10) district quality education assurance officers and four hundred and thirty-one (431) Public Secondary school Classroom teachers. From population of 495, study used a sample size of 152 informants. These included three (3) heads of schools, one district Secondary education officer, six (6) Ward education officer, One (1) district Quality assurance officer and one hundred and fourth-one (141) Secondary school teachers.

In sample selection, study used purposive sampling to get informants of implementation of CBC in public secondary school through involving the District education secondary officer, the District School quality assurance officer, Head of school and Ward education officers. Moreover, random sampling used to 141 select secondary school teachers for

quantitative. In data collection, Interviews, conducted with one (1) DSEO, one (1) DSQAO, and three (3) Head of schools. Moreover, questionnaire was used in data collection where a total of 141 questionnaires distributed to secondary teachers. Also, study employed focus group discussions which comprised of interviewing six Ward education officers two from each zone such as Undendeule, Mkongo and Sasawala zone. Further, study used focus group discussion (FGD), Documentary review and Classroom observation. In this study, both quantitative and qualitative data analysis was used. Qualitative data recorded from interview whose contents summarized in a narrative format. Moreover, Quantitative data analysed using descriptive statistics such as frequency and percentage. Thematic analysis was used to explore patterns and themes within qualitative data, while content analysis focuses on quantifying and categorizing specific elements within that data.

IV. FINDINGS

Challenges Experience in the Implementation of the CBC

The current section present challenges that Secondary School teachers experience in the implementation of the competency-based curriculum in Namatumbo district located in Ruvuma region. Finding from Table 1 exposed that, 14.2% suggested doesn't face any challenges during implementation of CBC while 85.5% of secondary school teachers faced various challenges during implementation of CBC as discussed in next subsection. Finding implies that majority of public secondary teachers from Namatumbo district faced with numerous challenges as discussed in next subsections.

Table 1: Challenges during Implementation of CBC

Challenges During Implementation of CBC	Frequency	Percent (%)
No	20	14.2
Yes	121	85.8
Total	141	100.0

Source: Field Data, (2024)

Limited Knowledge of CBC

This section required to find out if limited knowledge among teacher hinders implementation of CBC. Table 2 show that 41.8% and 37.6% of secondary school teachers strongly agree and agree that limited knowledge of CBC among public secondary teachers is prevailing challenges faced during implementation of CBC in Namatumbo district. In addition, 9.9% were neither agree nor disagree that limited knowledge of competency-based curriculum

among public secondary teachers is prevailing challenges faced during implementation of CBC in Namtumbo district. Moreover, 5.0% and 5.7% disagree and strongly disagree that limited knowledge of competency-based curriculum among public secondary teachers is prevailing challenges faced during implementation of CBC in Namtumbo district respectively. The challenge of teachers' limited knowledge in implementing CBC is often rooted in insufficient or ineffective professional development. A finding indicates that CBC demands a shift from traditional, teacher-centered methods to student-centered, interactive approaches, which teachers are not well-prepared for instance, Mosha (2012) found that many teachers lack exposure to modern pedagogical instructive methods, particularly those required by CBC, which emphasizes skills and competencies over rote memorization.

Findings supported with interview results with head of schools which revealed that;

"One of the biggest challenges we face is that many of our teachers are not fully equipped with the knowledge and skills needed for CBC. We try to offer support, but the professional development opportunities are limited, and those that are available often focus more on theory than practical application." (Participant 1)

"It's a struggle because CBC requires teachers to shift from a traditional way of teaching to more interactive, student-centered methods. However, many teachers haven't received sufficient training on how to implement these new strategies, which makes it difficult for them to follow through with the curriculum's objectives." (Participant 2)

Finding correspond with the study conducted by Harriet et al. (2021), which indicated that parents' lack of participation, ignorance, and inadequate teacher training regarding curriculum implementation pose major obstacles to the implementation of CBC. Furthermore, the findings are consistent with a research by Nyoni (2023) which indicate that two of the biggest issues encountered during CBC implementation are limited knowledge and time constraints. Also, Hawa's (2023) revealed that Biology teachers encounter several challenges, including insufficient knowledge, to effectively implement CBC. Furthermore, Komba and Mwandangi (2015) find it challenging to think critically and analytically as a result of this shortcoming, which further reduces the efficacy of CBC in promoting critical and serious thinking in students.

Limited Teaching and Learning Materials

Finding from Table 2 revealed that, 53.9% and 25.5% of teachers strongly agree and agree that limited in teaching and learning materials is among predominant challenges

faced during implementation of CBC in Namtumbo district. In addition, 8.5% and 5.7% of secondary school teachers disagree and strongly disagree that limited in materials is among predominant challenges faced during implementation of CBC in Namtumbo district. The inadequate of teaching and learning materials constrains teachers' ability to implement CBC's student-centered and experiential learning methods. CBC requires that students engage in practical tasks, projects, and hands-on learning activities, but without the necessary teaching and learning materials, it is difficult to achieve these outcomes. Teachers often rely on outdated or inadequate resources, limiting their ability to foster competencies such as thinking and problem-solving in students. Findings align with interview with headmaster, district education officer, district school quality assurance officer and ward education officer as explained below:

"A serious problem here is the shortage of instructional resources. It's common to be left with out-of-date textbooks and inadequate supplies, which makes it extremely difficult for instructors to successfully adopt CBC. The lack of tools required for student-centered approaches forces teachers to employ conventional methods." (Participants 3)

"The lack of necessary instructional resources is one of the biggest issues that schools report to us. We try to help, but funds are tight. Lack of resources prevents teachers from carrying out the hands-on, project-based learning activities mandated by CBC, which reduces students' total educational opportunities." (Participants 4)

Furthermore, the findings are consistent with a research by Nyoni (2023) show shortage of teaching and learning resources as major challenges face during implementation of CBC. Similarly, results align with Chacha and Onyango, (2022) from Nyamagana District their results revealed that many public secondary schools in Nyamagana district in Mwanza region do not have enough qualified and competent chemistry teachers which are very important in enhancing the implementation of competence-based curriculum in chemistry subject. Similarly, results line up with Hawa, (2023) which revealed that Biology teachers encounter several challenges, including insufficient irregular and inadequate staff training related to CBC, insufficient teaching and learning resources, and inadequate laboratory space for equipment storage.

Monitoring and Evaluation

Moreover, Table 2 show that 34.8% and 30.5% of secondary school teachers strongly agree and agree that monitoring and evaluation is among challenges faced during implementation of CBC in Namtumbo district. Also, 13.5% and 5.0% disagree and strongly disagree that monitoring and evaluation is among challenges faced

during implementation of CBC in Namtumbo district. Effective monitoring and evaluation are critical components of implementing any curriculum. In the case of CBC, M&E ensures that the teaching methods, learning outcomes, and student progress align with the curriculum's objectives. The absence of a robust M&E framework can result in inconsistencies in how CBC is applied across schools, leading to a gap between policy and practice.

This challenge attributed to several factors. First, inadequate training of school administrators and education officers in M&E tools and processes can hinder their ability to effectively assess CBC implementation. Additionally, Makunja (2016) emphasizes that without sufficient M&E systems, teachers may not receive the feedback necessary to improve their delivery of CBC. As a result, secondary school teacher efforts become dispersed since they are unable to determine whether their methods are in line with the objectives of the curriculum. Additionally, there are M&E-related logistical difficulties. Schools in remote locations, such as Namtumbo District, frequently lack the funding necessary to conduct thorough assessments. Schools might only do assessments sometimes due to a lack of devoted staff, technology resources, and data collection techniques, which lowers the efficacy of these initiatives. The results align with the interviews that have been conducted with the district education officer, the ward education officer, the headmaster, and the district school quality assurance officer, as described below:

"Despite our secondary school teachers' best efforts; we are unable to determine whether or not what we are doing is appropriate due to a lack of oversight and assessment. We require more education officers to visit us and more precise instructions on how to assess our own performance when applying CBC..." (Participants 1)

"Monitoring and evaluation are vital, but we face a lot of challenges in this phase of implementation of CBC. In most of our secondary school from Namtumbo district we are don't have enough trained personnel or resources to carry out regular assessments. This means that many schools are left to figure things out on their own, and we miss opportunities to correct issues early." (Participants 2)

Lack of funding and resources for M&E is another common problem, especially in rural residence schools where funding and assessment tool access are limited. According to Nakabugo et al. (2010), schools in rural areas typically face severe financial constraints that limit their ability to carry out comprehensive evaluations. These schools lack the equipment and trained assessors necessary

to track student development and teacher performance. Furthermore, different schools and communities apply CBC differently due to a lack of comprehensive M&E systems. When there is little supervision, there is often a mismatch between the expected curriculum objectives and the real practices that are observed in classrooms, according to Moshia (2012). Schools in urban areas have better access to resources and support, while those in rural areas are left to implement the curriculum without sufficient guidance, resulting in significant variations in educational quality.

Large Class Size

In addition, 52.5% and 13.5% strongly agree and agree that large class size is predominating faced during implementation of CBC in Namtumbo district respectively. Also, 9.9% and 5.7% of secondary school teachers disagree and strongly disagree that, large class size is predominate faced during implementation of CBC in Namtumbo district respectively. Finding implies that, as number of students within a classroom increase tends to increase in difficulties in implementing competency-based curriculum. Large class sizes cause extensive challenge to the effective delivery of CBC, which is designed to promote student-centered learning approaches such as group work, discussions, and individualized instruction. As the number of students in a classroom increases, it becomes more difficult for teachers to engage students individually or assess their learning progress. Teachers in overcrowded classrooms often find themselves unable to provide the personalized attention required by CBC, making it harder to foster the competencies of critical thinking, problem-solving, and collaboration that the curriculum demands.

"Class size is one of the most frequent complaints teachers have when we visit their schools. They claim they want to properly apply CBC, but because there are so many kids, they are forced to employ antiquated, lecture-based teaching strategies because they are the only ones that can keep the classroom in order. I witnessed a class of more than eighty children in one school. Half of the class was unable to view the practical experiment that the teacher was attempting to do. Reaching CBC's goals is challenging under these circumstances." (Participant 1)

The results are consistent with a research by Kidega et al. (2023) their findings, one classroom's teacher-to-student ratio of 1:70 was excessively high, which had an impact on implementation. Also, Hipolite's (2019) showed that teachers were aware of the difficulties associated with CBC, such as crammed classrooms, a lack of clarity regarding CBC, a lack of teaching and learning resources, and students' readiness to embrace a learner-centred

approach. Furthermore, the study found that although teachers were able to use a variety of innovative teaching techniques to address the issue, the solutions employed to solve the CBC issues were only somewhat successful. Finding align with Harriet, et al, (2021) who showed that, the implementation of CBC there is a greatly challenged by large class sizes and lack of adequate number of teachers. Finding agree with Harriet et al. (2021) who investigate the difficulties teachers have when implementing the Competency Based Curriculum (CBC) in Kenya's state pre-primary schools. Their results demonstrated that there are significant obstacles to the adoption of CBC, including huge class sizes and a shortage of qualified teachers. The results are consistent with Makunja's (2016) discovered that teachers encountered difficulties due to overcrowded classes and pupils' poor academic performance while entering secondary schools.

Lack of Training

This subsection display finding related to challenge of inadequate training for secondary school teachers in Namtumbo District when implementing the Competence-Based Curriculum (CBC). Table 2 reveals that a significant proportion of the teachers (56.0%) strongly agree that carrying out the CBC is difficult due to a lack of training. This demonstrates that the majority of secondary educators were insufficiently prepared to carry out the requirements of the curriculum. Besides from the 56.0% of teachers who strongly agree, 20.6% more teachers agree that inadequate training is a problem. The teachers' collective 76.6% indicates a strong agreement that inadequate training is a major obstacle. Also, 12.8% of a smaller portion of educators have no opinion, indicating that they are unsure about the consequences of inadequate training. 3.5% of teachers strongly disagree while 7.1% of minority of teachers thinks that inadequate training is a serious problem.

The majority of secondary school teachers in Namtumbo District show that inadequate training is a major obstacle to the effective implementation of CBC, according to the findings. Teachers find it difficult to implement the student-centered, pragmatic, and competence-based teaching methods mandated by CBC if they lack the necessary training. Finding align with Harriet, et al, (2021) showed that, the implementation of CBC there is a greatly challenged by lack of adequate training of teachers on how to implement the Curriculum. Similarly, Makunja, (2016) found that teachers were faced by challenges such as lack of in-service training on CBC implementations. Moreover, results align with Hawa, (2023) from Iringa Region in Tanzania, which revealed that Biology teachers encounter

several hurdles, including irregular and inadequate staff training related to CBC implementations.

Inadequate Administrative Support

In accordance to analysis, a substantial proportion of teachers in Namtumbo District consider the lack of administrative support for the Competence-Based Curriculum (CBC) implementation to be a significant barrier. More than 52.5% of teachers strongly agree, and another 34.0% agree, that administrators' lack of support makes it difficult for them to successfully implement the CBC. Teachers who experience this lack of support includes restricted access to resources, poor training opportunities, and a lack of direction or supervision from school administrators feel alone and ill-prepared to make the shift to student-centered, competency-based teaching approaches. The fact that just 5.6% of teachers disagreed with the statement suggests that some schools have more robust administrative frameworks in place to facilitate the implementation of CBC. Finding align with Harriet, *et al*, (2021) who showed that, the implementation of CBC there is a greatly challenged by lack of cooperation from parents and administrative support. Makunja, (2016) exposed that; teachers were faced by challenges such as lack of support on CBC implementation. Moreover, results are consistent with Martinez and McAbee's (2020) study, which found that certain administrative strategies whether employed singly or in combination—are useful in assisting teachers. These strategies include induction, mentoring, staffing support, course assignment modifications, resource and professional development enhancement, increased autonomy and agency, meaningful and constructive evaluations, reduction of workload, enforcement of rules and discipline, and assistance with difficult parents.

Insufficient Planning Time

Finding show that 66.7% of the majority of secondary school teachers in Namtumbo District agree or strongly agree that they do not have enough time to properly plan for the Competency-Based Curriculum (CBC), as indicated by Table 2 findings regarding insufficient planning time. Because the CBC places a greater emphasis on student-centered activities, critical thinking, and the development of practical skills, it requires more preparation than standard curriculum. It might be difficult for teachers to achieve CBC standards since they struggle to balance their workload, which includes class planning, administrative duties, grading, and extracurricular activities. While 17.1% of secondary instructors from Namtumbo district disagree or strongly disagree with the idea of inadequate preparation time, 16.3% of teachers are neutral, suggesting that some educators or schools have

successfully created time-management solutions. The quality of CBC implementation is significantly impacted by the lack of preparation time. Time-pressed educators turn to conventional, lecture-based teaching strategies, which are at odds with CBC's emphasis on engaged and hands-on learning. Schools deal with this problem by giving teachers more opportunities for collaborative planning, administrative support, and a reduction in workload so that teachers have the time to provide excellent, student-centered lessons.

Finding align with Harriet, *et al*, (2021) showed that, the implementation of CBC there is a greatly challenged by insufficient planning time among teachers. Likewise, results consistence with Nyoni, (2023) established shortage of time is prevailing challenges faced teacher in implementation of CBC. Finding consistence with Mpofo and Sefotho (2024 show that, inadequate teamwork and inadequate teacher preparation, hinder CBC implementation.

Resistance to Change by Teachers

Finding show the majority of secondary school teachers in Namtumbo District disagree that resistance to change is a

serious problem, as shown by Table 2, which shows a broad openness to the adoption of the Competence-Based Curriculum (CBC).

The idea that resistance to change prevents the adoption of CBC is rejected by a sizable 41.8% of teachers, of whom 41.1% strongly disagree. These teachers probably see the modifications as beneficial and support the curriculum's emphasis on student-centered learning and practical skills. Given their desire to use CBC, it appears that many teachers are ready for the change, maybe as a result of receiving sufficient training or being exposed to cutting-edge pedagogical approaches. But only a tiny 2.1% of teachers agree or 10.6% strongly agree that it can be difficult to deal with resistance to change. These instructors find it difficult to leave conventional techniques like rote memorization or get overwhelmed by CBC requirements. With 82.9% of teachers not viewing resistance to change as a problem, the general positive outlook towards CBC is optimistic for its successful implementation.

Table 2: Challenges during Implementation of CBC

Challenges	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Limited knowledge of CBC	59(41.8%)	53(37.6%)	14(9.9%)	7(5.0%)	8(5.7%)
Limited teaching and learning Materials	76(53.9%)	36(25.5%)	9(6.4%)	12(8.5%)	8(5.7%)
Monitoring and evaluation	49(34.8%)	43(30.5%)	23(16.3%)	19(13.5%)	7(5.0%)
Class size	74(52.5%)	19(13.5%)	26(18.4%)	14(9.9%)	8(5.7%)
Lack of Training	79(56.0%)	29(20.6%)	18(12.8%)	10(7.1%)	5(3.5%)
Resistance to change by teachers	15(10.6%)	3(2.1%)	6(4.3%)	59(41.8%)	58(41.1%)
Inadequate administrative support	74(52.5%)	48(34.0%)	11(7.8%)	5(3.5%)	3(2.1%)
Insufficient planning time	39(27.7%)	55(39.0%)	23(16.3%)	17(12.1%)	7(5.0%)

Source: Field Data, (2024)

Support from School Management to Implement CBC

This subsection secondary school teachers were required to indicate the support they receive from school management to implement the Competence-Based Curriculum in Namtumbo District. Finding showed that a noteworthy 42.6% of teachers rate the support they receive as "average," telling that while they receive some level of assistance from school management, it not adequate to address the challenges of implementing CBC. Teachers experience occasional support in the form of resources or administrative engagement. Moreover, results from Table 3 show 9.2% and 22.0% of teachers indicates brilliant and

fine respectively about the level of support they receive. Strong administrative support is vital in creating a positive environment for curriculum reforms, as highlighted by Leithwood et al. (2004), who argue that leadership suggestively impacts teachers' capacity to adopt new academic practices. Likewise, Day et al. (2011), argue that effective school leadership is critical in creating the conditions for successful curriculum change, as it fosters a helpful and cooperative school culture.

Table 3: Support from School Management to Implement CBC

Support	Frequency	Percent
Brilliant	13	9.2
Fine	31	22.0
Average	60	42.6
Poor	25	17.7
Very poor	12	8.5
Total	141	100.0

Source: Field Data, (2024)

V. CONCLUSION

The study concludes that the CBC implementation in Namtumbo District is hindered in its efficacy by a number of important problems; one of the main problems is that teachers don't know enough about CBC, and they all agree that they haven't had enough training to switch from traditional to student-centered teaching methods. Implementing CBC is difficult due to a lack of teaching resources, huge class sizes, and knowledge gaps. Lack of resources, as noted by more than half of the teachers, limits their capacity to support project-based learning and experiential learning. Furthermore, with 52.5% of instructors considering class size as a serious issue, packed classrooms make it difficult for teachers to deliver the individualized attention required for student-centered learning. These issues are made worse by inadequate monitoring and evaluation (M&E) systems, which deprive teachers of the feedback they need to, modify their teaching strategies. This is especially true in rural areas where resources for systematic evaluations are few.

RECOMMENDATION

This study recommends that, for effectively implement CBC; teachers must be provided with comprehensive and ongoing professional development programs by the government and educational partners. As over half of the teachers report that there is a shortage of supplies, which makes it difficult for them to engage their students in project-based learning and hands-on learning—two crucial CBC model components—allocating resources must also be given top attention. In addition, it's critical to solve the issue of packed classrooms so that educators can provide individualized, student-centered instruction. In especially in rural areas, the government ought to think about expanding classrooms and recruiting more teachers in order to lower class sizes.

Also, study recommended that teachers should be given opportunities for their participation in formulation and review of curriculum. This implies that training of teachers on how to implement the curriculum, provision of instructional materials and enough classrooms are crucial for effective implementation of CBC. Moreover, this study recommended that teachers should be given opportunities for their participation in formulation and review of curriculum. This implies that training of teachers on how to implement the curriculum, provision of instructional materials and enough classrooms are crucial for effective implementation of CBC.

AREA FOR FURTHER STUDIES

This study examines the Challenges Experienced in the Implementation of the Competency-Based Curriculum in Tanzania Public Secondary Schools. This study used convergent research design where quantitative and qualitative data was collected at the same time, analyzed separately. Future studies could employ a panel or longitudinal design, as these approaches offer the advantage of tracking changes and trends over time, establishing causal relationships more effectively, and providing deeper insights into the long-term effects and sustainability of CBC implementation.

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Managerial Strategies and their Mediating Effects on Ethical Leadership and Job Satisfaction Among Secondary School Teachers in Tanzania

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Abstract— *This study examined the mediating role of managerial strategies in the relationship between ethical leadership and job satisfaction among secondary school teachers in Tanzania, focusing on Temeke Municipality. Using a mixed-methods design, the study engaged 150 teachers through structured questionnaires and 14 educational leaders-10 school heads, 3 Ward Education Officers (WEOs), and 1 District Secondary Education Officer (DSEO)-via in-depth interviews. Quantitative data were analyzed using structural equation modeling (SEM) to assess direct and mediated effects, while qualitative data were interpreted through thematic analysis. Findings revealed that ethical leadership positively influences teachers' job satisfaction, and this relationship is partially mediated by managerial strategies such as participatory decision-making, teacher support, and transparent communication. Thematic insights echoed these results, highlighting that strategic leadership enhances school climate and teachers' professional commitment. The study concludes that although ethical leadership is essential, effective managerial strategies amplify its impact on job satisfaction. It recommends targeted training for school leaders in ethical conduct and management to boost teacher motivation and school performance. These findings are valuable for policymakers and education stakeholders seeking sustainable ways to enhance teacher satisfaction in Tanzanian secondary schools.*

Keywords— *ethical leadership, managerial strategies, job satisfaction, secondary education*

I. INTRODUCTION AND BACKGROUND TO THE STUDY

The effectiveness of school leadership has increasingly become a central concern in education reform efforts, particularly in developing countries. Ethical leadership—defined by principles of fairness, integrity, and respect—has gained recognition for its potential to influence teachers' motivation and job satisfaction. In secondary schools, ethical leadership is often demonstrated through transparency, equitable treatment, and the modeling of professional values. However, emerging research suggests that ethical leadership alone may be insufficient to fully address persistent job dissatisfaction among teachers.

In recent years, empirical studies have pointed to the critical role of managerial strategies in translating ethical leadership into measurable workplace outcomes. For example, evidence from school-based studies in sub-Saharan Africa indicates that leadership practices such as participatory decision-making, supportive supervision, recognition of teacher efforts, and professional development planning are essential in shaping teacher experiences. These managerial strategies mediate the influence of ethical leadership by operationalizing its core principles into daily administrative actions. Without such strategic reinforcement, ethical leadership may remain a passive ideal with limited impact on teacher retention, motivation, and performance.

In Tanzania, job dissatisfaction among secondary school teachers continues to undermine instructional quality, often linked to inadequate support systems, inconsistent leadership practices, and poor engagement in decision-making processes. These challenges point to a leadership gap—not merely in ethical orientation, but in the strategic execution of leadership roles. This study therefore seeks to examine how managerial strategies mediate the relationship between ethical leadership and teacher job satisfaction in secondary schools, using Temeke Municipality as a case. By investigating this relationship, the study aims to inform leadership development models that combine ethical values with effective management to improve outcomes in the education sector.

II. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Literature Review

Ethical leadership is increasingly recognized as a foundation for effective school management, emphasizing integrity, fairness, and transparency in decision-making (Brown & Treviño, 2006). Within school settings, ethical leaders foster trust and a sense of justice, which in turn can influence teacher morale and organizational commitment (Nguyen et al., 2021). However, studies suggest that ethical leadership alone may not fully account for variations in teacher job satisfaction.

Recent empirical research has identified managerial strategies—such as participatory decision-making, supportive supervision, and teacher recognition—as essential in translating ethical leadership into positive workplace outcomes (Khan et al., 2020; Mollel & Chong, 2022). These strategies act as operational tools through which ethical values are embedded in the daily management of schools. Without such strategies, ethical leadership may be perceived as rhetorical rather than practical, thereby limiting its impact on staff motivation.

In Tanzania, teacher dissatisfaction has been linked to limited involvement in leadership processes, poor communication, and inconsistent managerial practices (Moshia & Kilango, 2020). Although school heads are expected to act ethically, gaps in leadership capacity and strategy implementation continue to affect teacher retention and performance.

2.2 Conceptual Framework

This study is guided by a conceptual model where ethical leadership serves as the independent variable, teachers’ job satisfaction as the dependent variable, and managerial strategies as the mediator. Figure 1 shows the relationship between independent and dependent variables as well as mediating variables of the research problem. The framework assumes that while ethical leadership directly influences job satisfaction, the presence of strong managerial strategies amplifies and sustains this effect

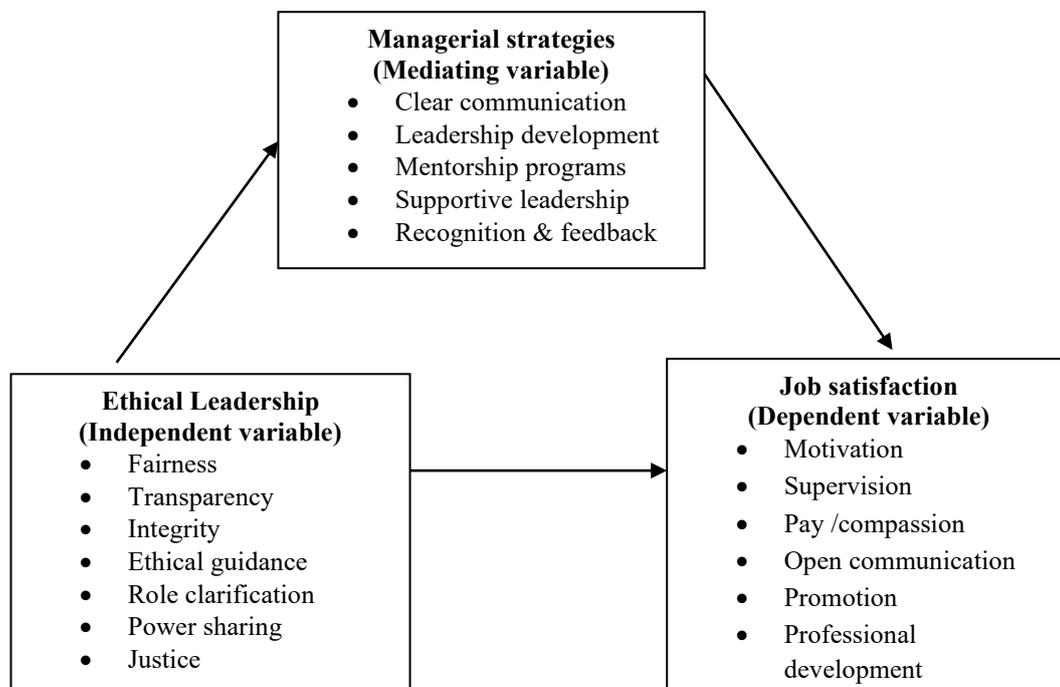


Fig. 1. Managerial strategies as a mediator between ethical leadership and teachers’ job satisfaction

Figure 1 shows that ethical leadership affects teachers' Job Satisfaction both directly and indirectly through managerial strategies. This model supports testing for partial mediation using techniques like Structural Equation Modeling (SEM).

III. METHODOLOGY

3.1 Research Approach

This paper employed a convergent mixed-methods research approach to gain a comprehensive understanding of how managerial strategies mediate the relationship between ethical leadership and teachers' job satisfaction. The use of both quantitative and qualitative approaches allowed for triangulation of findings and richer interpretation of leadership dynamics in secondary schools.

3.2 Research design

The quantitative strand used a cross-sectional survey to examine statistical relationships among variables, while the qualitative strand involved semi-structured interviews to explore deeper insights into leadership and management practices. The two data sets were collected concurrently and integrated during interpretation to support or elaborate on quantitative findings.

3.3 Study Area and Population

The study was conducted in Temeke Municipality, Dar es Salaam Region, selected due to its large number of public secondary schools and documented challenges in leadership and teacher morale. The target population included secondary school teachers and educational leaders, such as school heads, WEOs and DSEO. A total of 150 secondary school teachers were selected using simple random sampling, ensuring equal representation across schools. Additionally, 14 educational leaders were purposively selected for interviews, comprising: 10 school heads, 3 Ward Education Officers (WEOs), 1 District Secondary Education Officer (DSEO). This purposive sample provided relevant administrative perspectives on ethical leadership and management practices.

3.4 Data collection methods

Multiple tools were used to ensure triangulation and strengthen data credibility. Quantitative data were collected using a close-ended items on a 5-point Likert scale structured questionnaire comprising three validated scales capturing views on: ethical leadership, managerial strategies and job Satisfaction. So, quantitative data were collected using a structured questionnaire comprising three validated scales measuring: Ethical Leadership by

Kalshoven et al (2011), managerial strategies, and job satisfaction scale by Paul Eliot Spector(1985)

Qualitative data were gathered through interview guides focusing on leadership behaviors, management approaches, and teacher motivation. Document reviews (e.g., teachers and students' attendance register, welfare files, permission record files, supervision logs) supplemented these insights.

3.5 Data analysis and Procedures

Data were processed using SPSS software version 22. Quantitative data were analyzed using descriptive statistical analyses and Structural Equation Modeling (SEM) to examine direct and indirect (mediated) relationships between variables. Reliability and validity tests were conducted prior to modeling. Qualitative data were analyzed thematically, following coding and categorization procedures. Emerging themes were integrated with quantitative findings to enhance interpretation and confirm mediation pathways. Meanwhile, ethical clearance was obtained from relevant authorities. Participation was voluntary, and informed consent was secured from all respondents. Anonymity and confidentiality were strictly maintained throughout the research process.

IV. RESULTS

The aim of this study was to assess the influence of ethical leadership and managerial strategies on job satisfaction among teachers in secondary schools. This section presents both descriptive and inferential as well as thematic statistical analyses in this paper.

4.1 Descriptive Statistical Analyses

Descriptive statistics were computed to assess participants' overall perceptions of Ethical Leadership, Managerial Strategies, and Job Satisfaction. Teachers rated ethical leadership practices and managerial strategies as moderately high, with job satisfaction levels also showing positive tendencies. This study employed four constructs: ethical leadership, managerial strategies and job Satisfaction constructs. Ethical leadership construct was of the multilevel i.e had sub-scales Likert scale the questionnaire. The reliability tests of each subscale were conducted. The interpretation of these results was based on the composite score rating scale as given in Table 1

Table 1: Composite Score rating scale

SN	Weighted Mean	Level of Agreement
1	1.00 - 1.80	Very Low

2	1.81 - 2.60	Low
3	2.61 - 3.40	Average
4	3.41 - 4.20	High
5	4.21 - 5.00	Very High

Source: Abu-Baker et al. (2019)

The. Indictors with loading less than 0.4 is considered extremely low to be considered. Indictors with loading less than (also not significant) are items 12, 14 and 15 for a case of job satisfaction construct as indicated in Table 2

4.1.1 Ethical Leadership Construct:

Ethical leadership is leadership demonstrating and promoting normatively appropriate conduct through

Table 2: Teachers' perceptions of school Heads' ethical leadership behaviors (n = 150)

Dimension	Item (Shortened)	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD	Remark
Fairness	1.Focus on org. goals	14 (9.3)	11 (7.3)	25 (16.7)	63 (42.0)	37 (24.7)	3.65	1.198	Low perception
	2.Doesn't blame me for what I can't control	15 (10.0)	18 (12.0)	30 (20.0)	60 (40.0)	27 (18.0)	3.44	1.207	Low perception
	3.Doesn't blame me for others' faults	15 (10.0)	18 (12.0)	35 (23.3)	54 (36.0)	28 (18.7)	3.41	1.211	Low perception
	4.Avoids success at others' expense	16 (10.7)	14 (9.3)	34 (22.7)	56 (37.3)	30 (20.0)	3.47	1.219	Low perception
	5.Doesn't manipulate subordinates	18 (12.0)	17 (11.3)	25 (16.7)	54 (36.0)	36 (24.0)	3.49	1.299	Low perception
	6.Doesn't assign work I can't control	15 (10.0)	17 (11.3)	28 (18.7)	53 (35.3)	37 (24.7)	3.53	1.257	Low perception
Integrity	1.Keeps promises	11 (7.3)	8 (5.3)	16 (10.7)	69 (46.0)	46 (30.7)	3.87	1.131	High perception
	2.Honors commitments	9 (6.0)	5 (3.3)	17 (11.3)	76 (50.7)	43 (28.7)	3.93	1.037	High perception
	3.Keeps words	9 (6.0)	8 (5.3)	16 (10.7)	77 (51.3)	40 (26.7)	3.87	1.057	High perception
	4.Can be trusted	9 (6.0)	5 (3.3)	19 (12.7)	63 (42.0)	54 (36.0)	3.99	1.081	High perception
Ethical Guidance	Rewards ethical conduct	11 (7.3)	6 (4.0)	24 (16.0)	67 (44.7)	42 (28.0)	3.82	1.112	Low perception
	1.Discusses code of conduct	13 (8.7)	4 (2.7)	17 (11.3)	80 (53.3)	36 (24.0)	3.81	1.101	Low perception
	2Clarifies unethical consequences	11 (7.3)	8 (5.3)	20	68	43	3.83	1.128	Low

personal actions and interpersonal relationships, and the promotion of such conduct to followers through two- way communication, reinforcement, and decision making. Christie (2010) asserts that the theory of ethical leadership and trust are repeatedly employed interchangeably in the context of school settings. Ethical leadership in this study refers to the nine dimensions proposed by Kalshoven and Colleagues namely people-oriented, justice, power-sharing concern for sustainability, ethical guidance, role explanation and integrity as well as fairness. Table 2 presents school heads' ethical leadership fundamental dimensions with their subscales/ dimensions used in this paper

Dimension	Item (Shortened)	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	SD	Remark
				(13.3)	(45.3)	(28.7)			perception
	3.Ensures code adherence	13 (8.7)	4 (2.7)	19 (12.7)	59 (39.3)	55 (36.7)	3.93	1.176	High perception
	4.Clarifies guidelines	10 (6.7)	7 (4.7)	16 (10.7)	66 (44.0)	51 (34.0)	3.94	1.113	High perception
	5.Explains codes of conduct	10 (6.7)	6 (4.0)	24 (16.0)	65 (43.3)	45 (30.0)	3.86	1.099	High perception
	6.Explains ethical expectations	10 (6.7)	7 (4.7)	19 (12.7)	64 (42.7)	50 (33.3)	3.91	1.117	High perception
Power Share	1.Delegates challenging duties	12 (8.0)	9 (6.0)	15 (10.0)	60 (40.0)	54 (36.0)	3.90	1.191	High perception
	2.Allows influence in decisions	9 (6.0)	10 (6.7)	12 (8.0)	68 (45.3)	51 (34.0)	3.95	1.110	High perception
	3.Seeks subordinates' advice	10 (6.7)	12 (8.0)	10 (6.7)	64 (42.7)	54 (36.0)	3.93	1.162	High perception
	4.Reconsiders based on feedback	10 (6.7)	11 (7.3)	12 (8.0)	65 (43.3)	52 (34.7)	3.92	1.150	High perception
	5.Permits goal setting	9 (6.0)	11 (7.3)	10 (6.7)	64 (42.7)	56 (37.3)	3.98	1.132	High perception
	Involves others in decision-making	9 (6.0)	8 (5.3)	13 (8.7)	58 (38.7)	62 (41.3)	4.04	1.123	High perception
Role Clarification	1.Explains expectations	12 (8.0)	8 (5.3)	10 (6.7)	77 (51.3)	43 (28.7)	3.87	1.131	High perception
	2.Indicates performance expectations	11 (7.3)	8 (5.3)	14 (9.3)	66 (44.0)	51 (34.0)	3.92	1.144	High perception
	3.Communicates individual expectations	12 (8.0)	7 (4.7)	11 (7.3)	67 (44.7)	53 (35.3)	3.95	1.157	High perception
	4.Clarifies responsibilities	10 (6.7)	8 (5.3)	12 (8.0)	64 (42.7)	56 (37.3)	3.99	1.129	High perception
	5.Clarifies group roles	11 (7.3)	7 (4.7)	10 (6.7)	71 (47.3)	51 (34.0)	3.96	1.123	High perception
	6.Communicates priorities	14 (9.3)	6 (4.0)	10 (6.7)	73 (48.7)	47 (31.3)	3.89	1.173	High perception
	7.Explains responsibilities clearly	11 (7.3)	9 (6.0)	14 (9.3)	67 (44.7)	49 (32.7)	3.89	1.148	High perception
Scale Mean							3.83	0.177	

Note: SD=strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly agree,

Source: Field Data (2025)

The results in Table 2 indicate that teachers' overall perception of school heads' ethical leadership is moderately high, with a scale mean of 3.83. Among the five ethical leadership practices assessed, power sharing, role clarification, and integrity received consistently high mean scores across all items (ranging from 3.87 to 4.04), indicating strong positive perceptions in these areas. Specifically, teachers agreed that school heads actively involve them in decision-making, delegate responsibilities, and communicate expectations clearly. Likewise, heads were seen as trustworthy and consistent in keeping promises and honoring commitments.

In contrast, the fairness practice showed the lowest mean scores, ranging from 3.41 to 3.65, all classified under "low perception." This suggests that teachers perceive school heads as less consistent in treating staff fairly, avoiding manipulation, and refraining from blame-shifting. Meanwhile, the ethical guidance behaviors presented mixed results: while items related to clarifying codes of conduct and expectations were rated highly, those concerning rewarding ethical behavior and initiating ethics-related discussions received lower ratings. This

implies that school heads may communicate ethical standards clearly but do not consistently reinforce or promote them through active leadership practices.

Overall, these findings suggest that while ethical leadership is generally well-practiced, there is room for improvement in enhancing fairness and the consistent reinforcement of ethical behavior in schools.

4.1.2 The Job Satisfaction Construct:

Job satisfaction is the subjective experience which refers to the degree at which employees (Teachers) feel positive about various issues of their job, including the intrinsic factors of the work, relationships with co-workers, supervisory support and work-life balance as posited by scholars such as Bakker & Demerouti (2017). In regard to current study, teachers' job satisfaction was handled as a dependent variable for school heads' ethical leadership practices. However, the researcher used 15 items which were measuring the Level of job satisfaction among secondary school teachers in Temeke Municipality, Tanzania. Table 3 presents the perceptions of secondary school teachers' levels of job satisfaction.

Table 3: Teachers' Perceptions on Levels of Job Satisfaction (N = 150)

Item Statement	SD	D	N	A	SA	Mean	SD	Remarks
1.I feel I am being paid a fair amount for the work I do.	18 (12.0%)	15 (10.0%)	55 (36.7%)	37 (24.7%)	25 (16.7%)	3.24	1.202	Low perception
2.There is really too little chance for promotion on my job.	11 (7.3%)	24 (16.0%)	37 (24.7%)	50 (33.3%)	28 (18.7%)	3.40	1.176	Low perception
3.My supervisor is quite competent in doing his/her job.	9 (6.0%)	8 (5.3%)	20 (13.3%)	71 (47.3%)	42 (28.0%)	3.86	1.075	High perception
4.I like the people I work with.	8 (5.3%)	6 (4.0%)	13 (8.7%)	73 (48.7%)	50 (33.3%)	4.01	1.033	High perception
5.The benefits we receive are as good as other organizations offer.	10 (6.7%)	17 (11.3%)	35 (23.3%)	61 (40.7%)	27 (18.0%)	3.52	1.116	Low perception
6.I have too much to do at work.	6 (4.0%)	7 (4.7%)	40 (26.7%)	56 (37.3%)	41 (27.3%)	3.79	1.025	High perception
7.I enjoy my co-workers.	8 (5.3%)	5 (3.3%)	25 (16.7%)	65 (43.3%)	47 (31.3%)	3.92	1.046	High perception
8I feel a sense of pride in doing my job.	8 (5.3%)	8 (5.3%)	21 (14.0%)	66 (44.0%)	47 (31.3%)	3.91	1.070	High perception
9.I feel satisfied with my chances for salary increases.	12 (8.0%)	12 (8.0%)	42 (28.0%)	49 (32.7%)	35 (23.3%)	3.55	1.167	Low perception
10.There are benefits we do not have which	8 (5.3%)	10	25	59	48	3.86	1.105	High

Item Statement	SD	D	N	A	SA	Mean	SD	Remarks
we should have.		(6.7%)	(16.7%)	(39.3%)	(32.0%)			perception
11.I like my supervisor.	10 (6.7%)	8 (5.3%)	21 (14.0%)	55 (36.7%)	56 (37.3%)	3.93	1.153	High perception
12Work assignments are not fully explained.	17 (11.3%)	30 (20.0%)	36 (24.0%)	38 (25.3%)	28 (18.7%)	3.40	2.747	Low perception
13.I feel my efforts are rewarded the way they should be.	14 (9.3%)	24 (16.0%)	37 (24.7%)	43 (28.7%)	32 (21.3%)	3.37	1.245	Low perception
14.My supervisor shows too little interest in the feelings of subordinates.	25 (16.7%)	36 (24.0%)	26 (17.3%)	41 (27.3%)	22 (14.7%)	2.99	1.334	Low perception
15.The goals of this organization are not clear to me.	41 (27.3%)	34 (22.7%)	12 (8.0%)	36 (24.0%)	27 (18.0%)	2.83	1.505	Low perception
Scale Overall						3.88	0.166	

Note: SD=strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly agree,

Source: Field Data (2025)

Findings show that job satisfaction construct had overall mean of 3.57 and standard deviation of 0.353 indicating that the respondents had an average perception on the statements given by researchers which were measuring the level of job satisfaction in secondary school. Relative to the overall mean, the following items had high perception: 2, 3, 6-8, and 10-11. Conversely, items 11. However, items 12,14, and 15 poor mean and standard deviation.

4.1.3 The Managerial Strategies Construct:

In this study, five managerial strategies dimensions or themes were used to evaluate the managerial strategies employed towards enhancing ethical leadership Skills for improving teachers' job satisfaction in secondary schools in Tanzania. Therefore, Table 3 presents managerial strategies employed to enhance ethical leadership principles.

Table 4 Teachers' Perceptions on Managerial Strategies for Enhancing Ethical Leadership (N = 150)

Item Statement	SD	D	N	A	SA	Mean	SD	Remarks
1.Providing regular training programs on ethical leadership for secondary school heads.	7 (4.7%)	10 (6.7%)	31 (20.7%)	72 (48.0%)	30 (20.0%)	3.72	1.011	Low perception
2.Establishing mentorship programs for secondary school heads to enhance ethical leadership skills.	7 (4.7%)	9 (6.0%)	22 (14.7%)	75 (50.0%)	37 (24.7%)	3.84	1.017	Low perception
3.Including ethical leadership as a core component in school heads certification programs.	6 (4.0%)	7 (4.7%)	20 (13.3%)	79 (52.7%)	37 (24.7%)	3.90	0.964	High perception
4.Creating a supportive environment that encourages ethical leadership practices among secondary school heads.	5 (3.3%)	9 (6.0%)	17 (11.3%)	72 (48.0%)	47 (31.3%)	3.98	0.986	High perception
5.Establishing forums for secondary school heads to share best practices in ethical leadership.	4 (2.7%)	9 (6.0%)	14 (9.3%)	76 (50.7%)	47 (31.3%)	4.02	0.945	High perception
Scale Overall						3.89	0.106	

Note: SD=strongly disagree, D= Disagree, N= Neutral, A= Agree, SA= Strongly agree,

Source: Field Data (2025)

The findings in Table 4 reveal the perceptions of secondary school teachers on various managerial strategies applied by school heads to enhance ethical leadership and promote job satisfaction. The results show that all five strategy items were generally perceived positively, with item means ranging from 3.72 to 4.02, indicating a moderate to high level of agreement among respondents.

Items MS1 and MS2 recorded mean scores of 3.72 and 3.84 respectively, which fall under the category of low perception though close to the threshold of high. This suggests that while some strategies are moderately practiced, there is still room for improvement in consistency or implementation.

In contrast, items MS3, MS4, and MS5 had mean scores of 3.90, 3.98, and 4.02 respectively, interpreted as *high perception*. This indicates that many teachers perceive these managerial strategies as actively supporting ethical leadership and enhancing satisfaction at work.

The overall mean score for the managerial strategy scale is 3.89 with a low standard deviation of 0.106, showing a generally consistent and favorable perception across participants.

These results imply that while school heads in Temeke Municipality employ various managerial strategies that are generally well-received, strengthening the less perceived areas (MS1 and MS2) could further enhance ethical leadership practices and teacher satisfaction. This supports the broader notion that ethical leadership is reinforced not only by values but also by the strategic actions school leaders take to cultivate a supportive work environment.

4.2 Inferential Statistical Analyses

In this paper, inferential statistics was conducted to the research questions through hypotheses testing. Based on the conceptual frame works structural equation modelling (SEM) is preferred instead of multiple linear regression due the presence of a mediating variable (Managerial strategies). The free R package SEMinR was used in conducting SEM in this study. Commercial software such as SmartPLS could also be used.

Before proceeding to the thematic statistical analyses, it absolutely crucial to conduct pair wise correlation analyses for the sake of more accurate determination of validity and reliability of the study constructs for all 3 study variables in this paper. Construct reliability and validity were tested using confirmatory factor analysis. Most indicator loadings exceeded 0.70, supporting construct validity. This study experience two ie Model 1 and model 2. Model was handled as refined model and further discussions and analyses were based on model 29 Refined model) since it

had comprehensive insights than model 1(Original model). Table 5 presents indicator loading for the refined measurement model

Table 5 Indicator Loadings for Refined Measurement Model

Construct	Indicator	Loading
Ethical Leadership	EL1 (Integrity)	0.887
	EL2 (Guidance)	0.879
Managerial Strategies MS1 (Planning)	MS3 (Supervision)	0.931
	MS4 (Supervision)	0.931
Job Satisfaction	JS2 (Recognition)	0.781
	JS4 (Workload)	0.411

Source: Researchers' insights (2025)

Note; All values above 0.7 meet standard thresholds. Conversely, items below 0.5 were considered for removal. Findings in Table 5 show that over 99 % of the tested items for research constructs of this study met standard thresholds eg for ethical leadership, managerial strategies, and majority items for job satisfaction unlike workload management which scored 0.411 that was below standards.

Further, a structural equation model was used to test the hypothesized paths or relationships for study variables. R-squared values Table 6 presents R-squared value for the refined structural model for this research problem.

Table 6 R-Squared Values for the Refined Structural Model

Endogenous Variable R ²	Adjusted R ²
Managerial Strategies	0.194
Job Satisfaction	0.609

Source: Field Data (2025)

Findings in Table 6 of R-squared value for a refined structural model 2 (SEM output) demonstrates that ethical leadership behaviors and managerial strategies explain a substantial portion of the variance in teachers' job satisfaction

4.2.1 The total effects analysis in Refined Model/ Model 2: Interestingly, the total effects analysis in model 2 as a refined model provides a comprehensive view of how school heads' ethical leadership practices influences teachers' job satisfaction in secondary schools, managerial

strategies both directly and indirectly. This analysis helped researcher(s) to understand the overall impact of ethical leadership within school setting by considering not only direct relationships but also indirect pathways that contribute to teachers' job satisfaction in secondary schools and workplace ethics. Table 7 gives a clear illustration.

Table 7 Structural Total Effects for the Refined Model/ Model 2

Pathway	Standardized Estimate	T-Statistic	95% CI
Ethical Leadership → Managerial Strategies	0.440	4.408	0.244 – 0.627
Ethical Leadership → Job Satisfaction	0.599	6.897	0.412 – 0.753
Managerial Strategies → Job Satisfaction	0.294	3.439	0.127-0.460

Source; Researchers' Insights (2025)

Study findings of this paper reveal that ethical leadership has a total effect of 0.440 on managerial strategies, with a bootstrap mean of 0.447 and a standard deviation of 0.100. The T-statistic of 4.408 confirms the statistical significance of this relationship, with a confidence interval of 0.244 to 0.627, further supporting the robustness of this effect.

Moreover, findings of this research paper indicate that total effect of ethical leadership on job satisfaction is 0.599, with a bootstrap mean of 0.603 and a standard deviation of 0.087. The T-statistic of 6.897 is well above the 1.96 threshold, confirming strong statistical significance. The confidence interval, ranging from 0.412 to 0.753.

Additionally, results show that total effect of managerial strategies on teachers' job satisfaction was 0.294, with a bootstrap mean of 0.293 and a standard deviation of 0.085. The T-statistic of 3.439 confirms statistical significance, with a confidence interval of 0.127 to 0.460. These findings suggest that while managerial strategies do influence teachers' job satisfaction, their effect is moderate.

4.3 Qualitative Findings

Interviews with 10 school heads, 3 WEOs and 1 DSEO produced two dominant themes that illuminate how ethical

leadership is translated into teachers' job satisfaction through concrete managerial actions.

Table 8. Thematic analyses on managerial strategies and their mediating effects on ethical leadership and job satisfaction (n= 14)

Themes and Categories
Theme 1 – Ethical Leadership Practices Influence Job Satisfaction
Category 1: Fairness & Transparency
Category 2: Respect & Recognition
Category 3: Integrity in Resource Use
Theme 2 – Managerial Strategies as a Channel of Ethical Leadership
Category 4: Participatory Planning
Category 5: Supportive Supervision
Category 6: Continuous Communication

Source: Field Data, 2025

The table shows that respondents consistently tied ethical conduct to practical managerial behaviors-reinforcing the quantitative finding that managerial strategies mediate ethical leadership's effect on job satisfaction.

4.3.1 Theme 1: Ethical Leadership Practices Influence Job Satisfaction

Most respondents via interview sessions totaling to 12 (98%) emphasized that ethical leadership practices, particularly fairness in decision-making, respect for teachers' rights, and transparency-help foster a more positive school environment. A school head noted that:

“Teachers become motivated when they feel respected and when their concerns are considered seriously. That is the kind of ethical leadership we are trying to implement here.”

Respondents reported that school leaders who demonstrated consistent ethical values contributed to increased trust, morale, and teacher retention. Conversely, unethical behavior was seen as a source of dissatisfaction and staff turnover.

4.3.2 Theme 2: Managerial Strategies as a Channel of Ethical Leadership

Participants highlighted that managerial practices - including supervision, communication, and staff involvement in planning, act as a bridge between ethical

leadership and job satisfaction where over 13 interviewees (99%) highlighted similarly on this. For instance, a WEO revealed that:

“If a school head is ethical but fails to supervise or plan well, teachers may still be frustrated. Managerial strategies are how leadership becomes visible.”

This confirms the mediating role of managerial strategies in operationalizing ethical leadership into concrete practices that support teachers’ work satisfaction.

4.3 DISCUSSION OF THE FINDINGS

The findings of this study focused on three major variables: teachers’ perceptions of ethical leadership behaviors of school heads, levels of teacher job satisfaction, and the managerial strategies used to promote ethical leadership.

The findings of this study reveal that secondary school heads in Tanzania generally demonstrate ethical leadership behaviors at a moderately high level, particularly in the areas of integrity, power sharing, and role clarification. These results align with previous literature (e.g., Brown, Treviño, & Harrison, 2005; Kalshoven et al., 2011), which emphasizes that ethical leaders are those who communicate clearly, involve subordinates in decisions, and act with honesty and reliability. However, the fairness dimension received consistently lower ratings, indicating that some teachers perceive their leaders as inconsistent in avoiding blame, manipulation, or unfair treatment. Additionally, although school heads performed well in communicating ethical guidelines, the ethical guidance dimension showed mixed perceptions suggesting that ethical expectations are communicated but not always reinforced through tangible actions such as rewards or consequences. These gaps may limit the impact of ethical leadership on teacher motivation and job satisfaction. Therefore, improving fairness and actively reinforcing ethical behaviors should be considered in future leadership development programs.

In regard to levels of teachers’ job satisfaction as shown in Table 3, teachers reported mixed levels of job satisfaction, with several items scoring below the mean threshold of 3.50, indicating low satisfaction, particularly in areas such as recognition, reward systems, and promotion opportunities. While some aspects—such as interpersonal relationships and autonomy, garnered relatively high ratings, the overall mean ($M = 3.57$; $SD = 0.353$) reflected moderate satisfaction levels. These findings suggest that despite the presence of ethical leadership, certain institutional and motivational aspects remain unaddressed. The low satisfaction in areas tied to career advancement

and remuneration may demoralize teachers and impact their long-term commitment and performance.

Additionally, concerning managerial strategies for promoting ethical leadership Findings in Table 4 demonstrate that most managerial strategies intended to promote ethical leadership were perceived positively by teachers, with an overall mean of 3.89. Strategies such as collaborative decision-making, feedback mechanisms, ethical role modeling, professional development, and mentoring were rated highly. However, two items showed slightly lower means, indicating areas needing reinforcement. These results indicate that managerial strategies—if well-aligned and consistently implemented can mediate and strengthen the influence of ethical leadership on job satisfaction. Their success hinges on context-specific application and sustained follow-up.

Overall, the findings align with the study's conceptual model, which assumes that managerial strategies play a mediating role between ethical leadership and job satisfaction. While ethical leadership is generally strong, its full impact on teacher satisfaction is realized only when supported by structured managerial strategies that address systemic challenges.

V. RECOMMENDATIONS

Based on the findings, the study recommends the following:

1. Strengthen leadership development. This study recommends that school heads should undergo regular in-service training focused on ethical leadership principles such as integrity, fairness, and transparency. This ensures consistent modeling of ethical behavior across all schools.
2. Address key satisfaction drivers. Moreover, the study recommended that the Ministry of Education, Science and technology and local authorities should revise policies on teacher promotion, recognition, and reward systems. A fair, transparent, and merit-based promotion framework is essential to improve teacher motivation and retention.
3. Institutionalize effective managerial strategies. Additionally, this study recommends that managerial practices such as participatory decision-making, feedback channels, mentoring programs, and ethical audits should be formalized at school levels to support the work of school heads.

4. Develop school-based support systems. Moreover, this study recommends that schools should be encouraged to create internal support systems that foster communication, emotional well-being, and peer support among teachers. This helps address both the intrinsic and extrinsic dimensions of job satisfaction.
5. Monitor and evaluate strategy implementation. Lastly, the study recommends that District Education Office should establish regular monitoring and evaluation mechanisms to assess the effectiveness of managerial strategies and their outcomes on teacher satisfaction and leadership quality.

DISCLAIMER

Author(s) declare that no generative artificial intelligence, or technologies, large language models such as ChatGPT or copilot were employed in preparing or editing the current research paper. All study content is as a consequence of personal skills, personal struggles, and knowledge. The commitment underscores the authenticity and integrity of the work, hence absolutely ensuring that entire ideas and descriptions stem singly from personal creativeness without any automated help.

COMPETING AND PERSONAL INTERESTS

It should be absolutely noted that, Authors have declared that no competing interests exist.

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Understanding the Generalization of the Chinese Address Term “Laoshi” from Prototype Theory

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Abstract— In recent years, the use of the address term “laoshi” (teacher) has become extremely common in both real-life and online communication. This social address term is no longer synonymous solely with “educator” but carries richer referential meanings. As for the reasons for the generalization of “laoshi”, they extend beyond linguistic factors such as its inherent characteristics and gaps in the Chinese address system, also including social factors like widespread recognition of the teaching profession, alignment with public psychology, and the profound influence of Confucian thought over millennia. Therefore, the term “laoshi” with cognitive fuzziness has important functions in our lives. This research adopts the perspective of cognitive linguistics, applying prototype theory to analyze this cognitive fuzziness and demonstrate that the generalization of “laoshi” positively facilitates communication.

Keywords— *Prototype theory; Cognitive linguistics; Social address term; Laoshi*

I. INTRODUCTION

Address terms are expressions that reflect the identity and role of individuals within specific interpersonal relationships in human society. They mirror relationships within a given socio-cultural or linguistic context, revealing social attributes, values, and close ties to broader cultural, political, traditional, and aesthetic factors, all constrained by specific social systems. The term “laoshi” (teacher) falls into the category of social address terms, characterized by the social relationship of “imparting knowledge and educating students”. Using “laoshi” to address individuals who do not directly perform this role constitutes the generalization of this address term. It is evident that “laoshi” is prevalent not only in education but also widely used in other fields. Linguists have paid

considerable attention to this generalization phenomenon.

Research on the generalization of “laoshi” has started (Huang,1988), and proliferated with increasingly diverse perspectives. Studies have examined its diachronic development (Wang & Yang, 2005; Tian & Zhang, 2007; Long, 2021), analyzed the sociolinguistic reasons for its generalization (Zha, 2010), and explored regional manifestations in areas like Jinan (Gao & Cui, 2016), Chongqing (Chen, 2020), and Pingdingshan (Xu, 2021). Scholars have also analyzed the phenomenon from pragmatic perspectives (Guo, 2013). Furthermore, comparative studies between “laoshi” (teacher) and “jiaoshi” (teacher) exist (Bai, 2011; Hua, 2010). These studies have deepened understanding and provided new research angles. Given the recent advancements in

cognitive linguistics and the intrinsic link between language generation, comprehension, and cognition, scholars have begun studying the generalization of kinship terms from this perspective (Wu & Han, 2020). This paper will utilize prototype theory and categorization within cognitive linguistics to explore the causes of “laoshi” generalization and its cognitive fuzziness, enriching understanding and promoting its appropriate use in communication.

II. PROTOTYPE THEORY

To understand the world, humans must categorize entities within it. Cognitive linguists Ungerer & Schmid (2001) argue that this psychological process of classification, termed “categorization,” is an interactive process between humans and the objective world, resulting in cognitive categories. The period from Aristotle to Wittgenstein, spanning over two millennia, belonged to the era of classical category theory. This theory held that categories could be defined by a cluster of features or a set of necessary and sufficient conditions. Features were seen as binary, category boundaries as clear-cut, and category membership as equal. Objectivist philosophy was built upon this foundation. However, in the humanities, the classical theory proved less convincing, for instance, while we have “male” and “female,” expressions like “androgynous” or “neutral” exist. Post-Wittgenstein, new understandings emerged, gradually leading to prototype category theory.

Wang Yin (2006) summarizes the core tenets of prototype theory as follows: firstly, a category is a “gestalt” concept formed by features that typically cluster together. These features are not necessary and sufficient conditions for defining the category. Second, categories have a radial structure. Prototypes occupy the core. Basic-level categories are the primary tools humans use to classify surrounding concrete entities and organisms. Third, category boundaries are indeterminate and fuzzy.

Organisms seek maximum information about their environment with minimal expenditure of limited cognitive resources. Categorization reduces cognitive complexity (cognitive economy) but inevitably leads to category fuzziness, a necessary consequence of this economy. Then, category members exhibit varying degrees of membership (graded centrality), possessing family resemblances. Prototypical and non-prototypical members are not equal, and the distinction between them lacks a clear-cut threshold, exhibiting fuzziness. Finally, due to differing socio-cultural constraints on cognition, the perception of category divisions, basic-level categories, and prototypes varies across time, regions, and ethnic groups.

Unlike the classical theory, prototype theory is philosophically grounded in experiential realism, based on human experience and observation of the objective world, offering a fresh perspective on categorization.

III. REASONS FOR THE GENERALIZATION OF THE ADDRESS TERM “LAOSHI”

There are five reasons for the generalization of the address term “laoshi”. First, focus on the word itself, it has intrinsic characteristics: one is elegant connotation, another is political distance. About elegant connotation: “laoshi” inherently carries connotations of mentorship, knowledge, and cultivation, giving it an elegant, refined aura. It possesses positive affective meaning. About political distance: Since the 1980s, as societal focus shifted from politics to economics, values changed, fostering a tendency towards political distance. “laoshi” avoids the excessive formality or seriousness of terms like “comrade” (tongzhi) and lacks their political overtones. This made “laoshi” a natural replacement for such terms (e.g., addressing scholar Feng Youlan as “Feng Youlan laoshi”). These intrinsic features “elegance and political distance” are fundamental reasons for its generalization.

Second, about the historical and cultural factors, China has a long tradition of “respecting teachers and valuing education” (zun shi zhong dao). As knowledge transmitters, teachers (“shi”) naturally commanded respect from students (“sheng”). Historically, except during specific periods, teachers held high social status, commanding respect and awe. This tradition elevated those imparting knowledge or skills above other professions. Consequently, anyone possessing superior knowledge, ability, or experience in any field tends to be respected.

Third, it is because the socio-economic development. Social progress abolished rigid hierarchies, establishing equality among professions. In this context, “laoshi” gained new meaning. As education became increasingly valued, the role of teachers as guides in both knowledge and character development became paramount. Teachers garnered exceptional respect, reflecting societal recognition of their labor and dedication. Beyond education, booming industries like film, media, and healthcare required experienced individuals to train newcomers. Senior figures in these fields fulfilled educational and guiding roles akin to teachers, leading to the widespread adoption of “laoshi” (e.g., host He Jiong being called “He Laoshi”). This phenomenon is intertwined with socio-cultural development.

Then, the gap in the Chinese address system, which means economic transition and social change created new social strata and professions, expanding social roles and communicative circles. When interacting with acquaintances or strangers outside kinship relations, appropriate address terms are sometimes lacking. Using “laoshi” as a polite, vague term to fill these gaps is a convenient and tactful solution. The absence of suitable address terms is thus a key factor in the generalization of “laoshi” (e.g., addressing administrative, library, or accounting staff in schools; using “laoshi” for bus drivers or chefs in Shandong dialect).

Finally, about public psychological factors, language

is a communicative tool, and users' psychological factors heavily influence word choice. For instance, hairdressers might be addressed as “Little X Laoshi”; using “Little X” alone might seem disrespectful, while “Stylist Little X” sounds unnatural. The cultural inclination towards respect makes “laoshi” a psychologically acceptable address term.

In a word, the generalization of “laoshi” results from the interplay of these factors, bringing convenience to daily communication. However, it is not universally applicable. Whether in its narrow or broad sense, “laoshi” typically refers to respected individuals with certain cultural attainment and refinement. Understanding its cognitive fuzziness and limitations is crucial for its appropriate use; otherwise, it risks losing its original vitality and appeal.

IV. COGNITIVE FUZZINESS OF “LAOSHI” AND ITS FUNCTION

Historically, “laoshi” first appeared in the Zuo Commentary on the Spring and Autumn Annals (“Lao shi fei cai, yi wu yi ye” (“Aging teachers exhausting resources is also useless”). Here, “lao shi” were two separate words: “lao” meaning aged senior, “shi” meaning knowledge transmitter. Its use as a specific honorific began in the Tang Dynasty, initially for Buddhist monks. The respectful prefix “lao-” became customary, and “shi” stood in contrast to “sheng” (student), solidifying “laoshi” as a distinct address. Later, it referred to masters of manual crafts. By the Jin Dynasty, it acquired a meaning closer to today's “educator.” During the Ming and Qing dynasties, it became a term used by students to honor their examiners. By then, “lao-” had become a true prefix, losing its meaning of old age and retaining only connotations of virtue and erudition. From the late Qing to the early 20th century, it evolved into a general honorific for teachers. For a long period in the early 20th century, “xiansheng” (Mr./Sir) largely replaced it. After the founding of the PRC, “laoshi” regained ground, replacing “xiansheng” in

primary and secondary schools. Today, its usage is increasingly frequent and widespread, evolving from specifically denoting educators to becoming a general term of respect.

According to prototype theory, the core prototype of the “laoshi” category is “one who imparts knowledge and educates students.” We judge whether to address someone as “laoshi” by comparing their occupational characteristics to this prototype. For instance, a piano “laoshi” or guitar “laoshi” imparts “skills” rather than strictly “knowledge,” but due to high family resemblance within the category, the address is appropriate. In other service industries like healthcare (doctors, nurses), whose core function is “treating/caring for patients,” the resemblance to “imparting knowledge” is low. Thus, in a hospital, “daifu” (doctor) or “Dr. X” better conveys respect and aligns with professional and institutional characteristics. Similarly, using “laoshi” for bus drivers (Shandong dialect) or strangers when asking directions is acceptable because the driver “provides a service” and the stranger “provides help,” actions bearing resemblance to “imparting knowledge.” However, outsiders might find this confusing due to lower resemblance to the prototype. Effective communication in such regions requires understanding and mastering this localized usage.

Simultaneously, “laoshi” exhibits cognitive fuzziness. The boundaries of the “laoshi” category are blurred; modern Chinese dictionaries lack precise criteria for membership. Furthermore, societal development drives cognitive shifts, leading to corresponding changes in address terms. Perfectly “correct” usage is unattainable. Examples include hairdressers calling themselves “XX Laoshi,” netizens addressing bloggers as “X Laoshi,” or close friends using “X Laoshi.” Individual cognitive variations regarding “laoshi” result in differing usage. Because “laoshi” primarily conveys respect and has strong positive connotations, effectively embodying the cognitive feature of “respected person,” its generalized use faces

minimal constraints and generally facilitates positive communication.

V. CONCLUSION

Language, particularly address terms, though presented as words or characters, involves complex underlying cognitive processes reflecting the speaker's experiences, conceptual identifications, and thought patterns, making it highly valuable for research. Address terms serve crucial socio-cultural marking functions, identifying the identity, status, and relationship between communicators. Compared to kinship terms, social address terms appear more subjective, but their evolution is not entirely arbitrary; it is closely tied to societal development and human cognition. We cannot arbitrarily deny their legitimacy. The evolution of “laoshi” from a specific referent to a generalized term for individuals with certain characteristics follows human cognitive patterns and embodies linguistic economy. Humans constantly integrate new knowledge into existing frameworks: an efficient learning strategy.

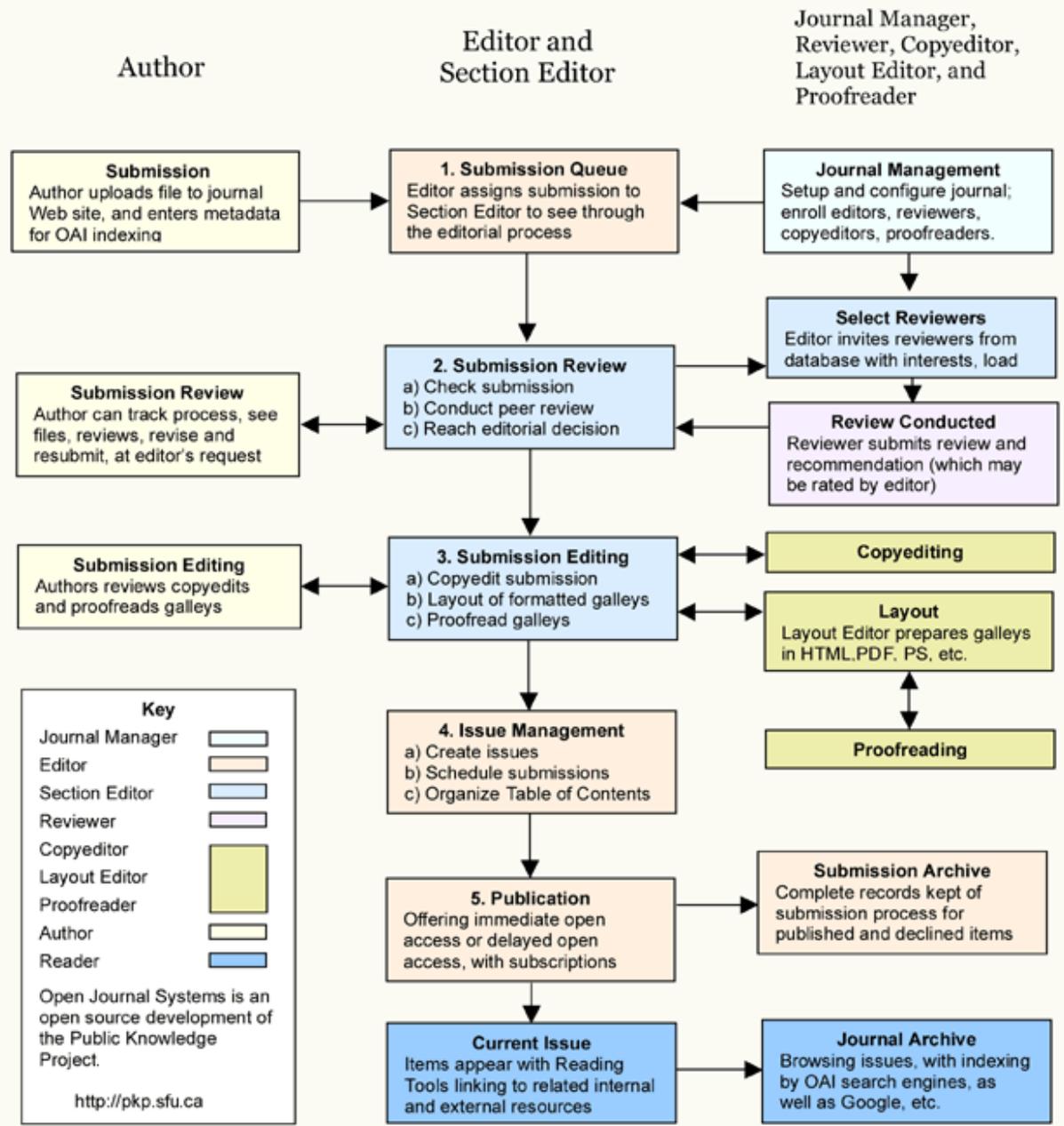
Therefore, we should neither rigidly regulate nor suppress the generalization of “laoshi”. Instead, based on a thorough examination of its evolution and user adaptation and acceptance, appropriate guidance should be provided. We should neither pessimistically assume its generalization will inevitably follow the paths of terms like “xiaojie” (Miss) or “tongzhi” (comrade), nor allow uncontrolled expansion. Only then can the use of “laoshi” become more user-friendly and aligned with linguistic reality. As the generalization of “laoshi” results from multiple linguistic and social factors, a comprehensive and objective understanding requires integrating perspectives beyond cognitive linguistics.

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