

# ASSESSMENT STRATEGIES UTILIZED BY THE TEACHERS IN LYCEUM NORTHWESTERN UNIVERSITY URDANETA CAMPUS

JENNYFER S. LIMON

Teacher I

Lyceum Northwestern University

*Abstract* : This study aimed to examine the assessment strategies teachers at Lyceum Northwestern University - Urdaneta Campus utilized, determine their effectiveness, explore the relationship between these strategies and teachers' profile variables, and uncover the challenges they encountered. Based on the data gathered, several findings emerged. The study also examined the relationship between assessment strategies and the teachers' profile variables. Statistical analysis using Spearman Correlation revealed no significant relationship between the utilization of assessment strategies and highest educational attainment ( $p = 0.460$ ), number of years in teaching ( $p = 0.745$ ), or number of related seminars attended ( $p = 0.538$ ).

Challenges in utilizing assessment strategies were found to be moderately serious, with an overall seriousness rating of 3.28. The most pressing problem identified was the lack of time to conduct assessments effectively ( $AWM = 3.52$ ). Other notable issues included technical problems with online assessments, limited resources, difficulty in designing authentic assessments, and challenges in assessing higher-order thinking skills.

To address these gaps, a training program was proposed. It focused on integrating authentic, online, and AI-supported assessments; promoting efficient resource and time management; enhancing skills in designing assessments that target higher-order thinking; and overcoming resistance to innovative assessment methods.

Based on the findings, the researcher came up with the following conclusions: Teachers at LNU-Urdaneta Campus employ a wide range of assessment strategies, with a preference for traditional methods (written tests and oral questioning) alongside performance-based activities. Despite varying educational attainment, years of teaching, and professional development experiences, there was no significant variation in the choice or effectiveness of assessment strategies among teachers, suggesting institutional or systemic influences over individual qualifications. Teachers face moderate challenges in assessment implementation, notably time constraints and lack of resources, which, if unresolved, could limit the quality and diversity of student assessments. There is a critical need for targeted professional development focused on modernizing assessment approaches, optimizing assessment time management, and strengthening teachers' competencies in designing complex, real-world assessments.

In light of the findings and conclusions, it was recommended that conduct regular workshops on innovative assessment techniques, particularly authentic assessments, online tools, and AI-assisted methods, to enhance teachers' assessment repertoire. Develop and provide standardized templates, rubrics, and question banks to reduce preparation time and ensure consistency in assessments. Introduce seminars and mentorship programs focusing on efficient assessment planning, feedback mechanisms, and classroom management techniques to mitigate time-related challenges. Offer specialized training in designing assessments that measure critical thinking, creativity, and real-world application, anchored on Bloom's Taxonomy and other educational frameworks. Strengthen the ICT infrastructure to support seamless integration of online and AI-based assessments and encourage collaborative peer-review and mentoring systems to ease resistance toward innovative methods. Future studies could explore student perceptions of assessment strategies to offer a more holistic view of assessment effectiveness and student learning outcomes.

*IndexTerms* - Component, formatting, style, styling, insert.

## INTRODUCTION

Assessment plays a critical role in the educational process as it provides insights into student learning, instructional effectiveness, and areas requiring improvement (Irons & Elkington, 2021). Effective assessment allows educators to evaluate student understanding, identify gaps in knowledge, and tailor instructional strategies to meet diverse needs (Race, 2019). In mathematics education, assessment is particularly important as it guides teachers in understanding students' grasp of complex concepts and procedural fluency. When effectively implemented, assessment fosters a learning environment that supports continuous improvement, empowering students to build the necessary skills and knowledge to succeed in their academic journey.

Multigrade classrooms, where students of different age groups and academic levels are taught simultaneously, present unique challenges in assessment practices (Recla & Potane, 2023). In these settings, teachers often use a combination of formative and summative assessment tools to gauge student progress. Globally, common strategies in multigrade classrooms include peer assessments, portfolio-based evaluations, and adaptive quizzes that cater to varied skill levels (Bajaj et al., 2022).

According to Arias et al. (2023), in Southeast Asia, including countries like Thailand and the Philippines, multigrade teachers increasingly employ differentiated instruction techniques alongside individualized assessments to address the needs of diverse learners.

In the Philippines, assessment tools frequently include oral questioning, performance tasks, and diagnostic tests, adjusted to reflect the mixed-age composition of the classroom (Arzadon & Nato, 2015).

Despite the innovative assessment tools available, teachers in multigrade classes, especially in mathematics, encounter significant challenges. Among these challenges are the difficulty of crafting assessments that accurately measure diverse learners' capabilities, the time constraints associated with grading multiple levels, and the lack of resources for developing age-appropriate materials (Autor, 2024; Stewart, 2024). Studies from developed countries such as Canada highlight that multigrade teachers often struggle with balancing curriculum standards across grade levels, making it challenging to ensure equitable assessment (Lu, 2022; Phiri, 2019). In developing regions, similar difficulties are compounded by limited access to teaching aids, training, and support systems, resulting in increased teacher workload and stress.

This study is aligned with the United Nations Sustainable Development Goals (SDGs), specifically Goal 4 (Quality Education), Goal 10 (Reduced Inequalities), and Goal 8 (Decent Work and Economic Growth). Goal 4 emphasizes inclusive and equitable quality education, which is directly related to the need for effective assessment strategies that cater to students of all backgrounds. Goal 10 seeks to reduce inequalities, including disparities in educational access and achievement, while Goal 8 promotes decent work conditions, which resonate with the need to alleviate the high demands placed on multigrade teachers.

In conclusion, this study seeks to provide valuable insights into the assessment strategies utilized by teachers at Lyceum Northwestern University Urdaneta Campus. By examining the effectiveness and challenges of these strategies, the study aims to contribute to the continuous improvement of assessment practices that support student learning and academic achievement. The findings will serve as a basis for developing more effective and adaptive assessment methods, ensuring that teachers can accurately measure students' progress while addressing their diverse learning needs. Ultimately, this research aspires to enhance the overall quality of education and assessment within the institution.

### NEED OF THE STUDY.

Under **Republic Act 10533** otherwise known as the K-12 curriculum, it emphasizes that we should make education learner-oriented and responsive to the needs, cognitive and cultural capacity, the circumstances and diversity of learners, schools and communities through the appropriate languages of teaching and learning as a learning resource. **DepEd Order No. 8, s. 2015 (Policy Guidelines on Classroom Assessment)** supports the use of creative and contextualized learning strategies, ensuring that student assessment includes diverse and interdisciplinary methods (DepEd, 2015).

The conceptual framework of this study focuses on the assessment strategies in teaching mathematics and its effectiveness. The independent variables of the study are the highest educational attainment, number of years in teaching, and number of related seminars attended of the respondents. Meanwhile, the effectiveness of assessment strategies utilized by teachers and the problems encountered the dependent variables. After investigating the significant relationship of the effectiveness to the profile variables, the researcher will propose training programs to improve assessment strategies.

### 3.2 Data and Sources of Data

This study investigates the assessment strategies employed by the teachers at LNU Urdaneta Campus. It examines the effectiveness of these strategies in assessing students' learning outcomes and seeks to identify the relationship between teachers' profiles (educational attainment, years of teaching experience, and related seminars attended) and the strategies used. The study also aims to uncover challenges faced by teachers in implementing these strategies and propose training programs to enhance their effectiveness. The research is limited to data collected through surveys and interviews with elementary-level teachers in the said institution, ensuring the findings are specifically relevant to their unique educational setting.

The delimitation of this study lies in its focus on a single institution, which may not fully capture the diversity of assessment practices in other schools or regions. Furthermore, it only includes elementary mathematics teachers, excluding other subjects and grade levels. The study does not evaluate the students' performance outcomes directly but relies on teachers' perspectives and self-reported data to assess the effectiveness of strategies. As such, the findings may provide insights specific to the context of LNU Urdaneta Campus but might not be entirely generalizable to other educational contexts.

### 3.3 Theoretical framework

The study on the assessment strategies in mathematics in multigrade classes, the challenges and coping mechanisms are related to the following educational theories:

**Constructivist Theory.** Rooted in the work of Jean Piaget and later expanded by Lev Vygotsky, posits that learning is an active, constructive process where learners build upon their previous knowledge through experiences and social interaction (Vygotsky, 1978). In the context of multigrade classrooms, constructivist principles support assessment strategies that recognize students' unique learning paths and developmental stages. This theory encourages formative assessments, such as self-reflection and peer assessments, which allow students to actively engage in their learning process. It is highly applicable to multigrade mathematics as it emphasizes creating assessments that reflect students' individual progress and allow teachers to adapt instruction based on students' readiness and knowledge levels.

**Differentiated Instruction Theory.** introduced by Carol Ann Tomlinson, focuses on tailoring instruction and assessment to meet the diverse needs, readiness levels, and learning profiles of students within a single classroom (Tomlinson, 2001). This theory is especially pertinent to multigrade settings where students differ in age, cognitive abilities, and background knowledge. Differentiated Instruction Theory supports the use of varied assessment methods, such as tiered assignments and flexible grouping, to allow students to demonstrate understanding in ways that align with their individual skills. In mathematics, this theory can guide the creation of assessment tasks that accommodate different learning paces, enabling teachers to fairly evaluate each student while managing a range of proficiency levels.

## RESEARCH METHODOLOGY

This study employs a descriptive-developmental research design to examine the assessment strategies utilized by teachers in LNU-Urdaneta Campus. The descriptive aspect of the study aimed to determine the profile of the respondents, the assessment strategies they use, their effectiveness, and the challenges they encounter in implementation.

According to Creswell and Creswell (2023), descriptive research is useful in providing an in-depth understanding of existing conditions and behaviors within a specific population. Meanwhile, the developmental aspect of this study involved proposing a training program based on the findings to enhance teachers' assessment practices.

Developmental research focuses on designing and improving educational programs by systematically analyzing current practices and identifying areas for improvement (Richey & Klein, 2020).

A study by Baloran and Hernan (2021) on assessment strategies in higher education found that teachers rely on diverse assessment methods, including formative and summative assessments, to measure student learning effectively. Their study emphasized the need for professional development programs to help educators refine their assessment techniques. Aligning with these findings, this study seeks to identify the gaps in teachers' assessment strategies and develop a targeted training program to address their challenges and enhance instructional effectiveness.

### Sources of Data

The subjects of this study are teachers of Lyceum Northwestern University, Urdaneta Campus for Second Semester, A.Y. 2024 – 2025.

**Table 1**

**Distribution of Respondents**  
**N = 29**

Department	No. of Teachers	Percentage
Elementary	3	10.34
Junior High School	8	27.60
Senior High School	9	31.03
College	9	31.03
<b>TOTAL</b>	<b>29</b>	<b>100.00</b>

### Instrumentation and Data Collection

The researcher used the questionnaire as the major data instrument in this study.

The researcher adopted a questionnaire of similar research on the Strategies being used in teaching which consists of (1) The profile of respondents in terms of highest educational attainment, major/minor field of specialization, years of experience in teaching, relevant seminars/in-service training attended; the frequency counts and corresponding percentage (%) was computed for each of the aforementioned variables.

Before the conduct of the study, the researcher strictly observed the following standard operating procedures: Secure a permit from the Managing Director, and a letter of permission was sent to the teachers and learners to administer the questionnaires. The researcher personally administered and retrieved the instrument. Data was based on the respondent's answers, and was carefully tallied, tabulated, and analyzed.

### Tools for Data Analysis

Appropriate statistical tools were utilized to enable the researcher to come up with a valid and reliable interpretation of the data gathered.

**For sub-problem no. 1** on the profile of the respondents, frequency counts and percentages was used.

$$P = \frac{f}{n} \times 100\%$$

where: p = percentage  
 f = frequency  
 n = number of cases

**For sub-problem no. 2** On the assessment strategies utilized by by teachers, the average weighted mean and a four-point Likerts scale was used.as shown below and the descriptive equivalent.

$$AWM = \frac{\sum fx}{n}$$

where: AWM= Average Weighted Mean

$\sum fx$  = sum of the product of responses and the level  
 n = number of respondents

Unit Weight	Equivalent Weighted Points	Interpretation
4	3.50 - 4.00	Highly utilized
3	2.50 - 3.49	Utilized
2	1.50 - 2.49	Slightly utilized
1	1.00 - 1.49	Not at all

**For sub-problem no. 3,** On the significant relationship between the assessment strategies utilized in teaching and the profile variables, Spearman Coefficient Correlation was used..

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}$$

Where:

$\rho$  = Spearman's rank correlation coefficient

$d_i^2$  = difference between the two ranks of each observation

n = number of observations

**For sub-problem no. 4** On the problems encountered by the teachers in utilizing the assessment strategies, the average weighted mean and a five-point Likert Scale was used.. as shown below and the descriptive equivalent.

Rating Scale	Point Range	Descriptive Equivalent
5	4.50 – 5.00	Very Serious
4	3.50 – 4.49	Serious
3	2.50 – 3.49	Moderately Serious
2	1.50 – 2.49	Fairly Serious
1	1.00 – 1.49	Not Serious

**For sub-problem No. 5** The researcher developed Training Program to address the problems encountered and improve performance.

### Ethical Consideration

As a form data-privacy is concern, all actions pertaining to personal information and identity of all involved in this investigation will be kept confidential. This study investigation assures all will keep all responses concealed. As a result, participants will be advised not to include any personally identifiable information in their questionnaire or test material. Their responses will likewise be kept confidential. To preserve each subject's identity, the researcher will keep their information confidential; all information acquired from the study will be coded. No names or other identifying information will be used while discussing or reporting data. The researcher will securely preserve any files and data gathered. Once the data has been completely analyzed, it will be discarded.

## IV. RESULTS AND DISCUSSION

This chapter features the presentation, analysis and interpretation of the data gathered in this study. It is discussed in the following order: the demographic profile of the respondents, assessment strategies utilized by teachers, significant relationships of using assessment strategies to profile variables, problems encountered in utilizing assessment strategies, and proposed training program.

### Demographic Profile of Respondents

Table 2 presents the demographic profile of the respondents based on their highest educational attainment, number of years in teaching, and number of related seminars attended. This information provides insight into their academic background, teaching experience, and professional development activities

**Table 2-a**  
**Demographic Profile of the Respondents on Highest Educational Attainment**

N = 29

Highest Educational Attainment	frequency	Percentage
Bachelor's Degree	8	27.59%
Master's Degree (Units Earned)	18	62.07%
Master's Degree (Completed)	0	0.00%
Doctorate Degree (Units Earned)	2	6.90%
Doctorate Degree (Completed)	1	3.45%
<b>TOTAL</b>	<b>29</b>	<b>100.00%</b>

**Highest Educational Attainment.** The data shows that most respondents, 62.07%, have earned units toward a Master's degree but have not yet completed it. A smaller portion, 27.59%, hold only a Bachelor's degree. Meanwhile, a few have pursued further studies, with 6.90% having earned units toward a Doctorate degree, and only 3.45% having fully completed their Doctorate. Interestingly, no respondents have completed their Master's degree, which suggests that while many are seeking higher education, they are still in progress and have not yet reached the next level of academic achievement.

**Table 2-b**  
**Demographic Profile of the Respondents on**  
**Number of Years in Teaching**

N = 29

Number of Years in Teaching	frequency	Percentage
1-5 years	25	86.21%
6-10 years	2	6.90%
11-15 years	2	6.90%
16-20 years	0	0.00%
More than 20 years	0	0.00%
<b>TOTAL</b>	<b>29</b>	<b>100.00%</b>

**Number of Years in Teaching.** Most of the respondents, 86.21%, have only been teaching for 1-5 years, indicating a very young or relatively new group of educators. A small percentage, 6.90% each, have between 6-10 years and 11-15 years of teaching experience. Notably, no respondents have 16-20 years or more than 20 years of teaching experience. This could imply that the group is primarily composed of early-career teachers who may still be establishing their professional footing in the field.

**Table 2-c**  
**Demographic Profile of the Respondents on Number of Related Seminars Attended**

N = 29

Number of Related Seminars Attended	frequency	Percentage
None	1	3.45%
1-3 Seminars	12	41.38%
4-5 Seminars	8	27.59%
7-9 Seminars	2	6.90%
10 or more Seminars	6	20.69%
<b>TOTAL</b>	<b>29</b>	<b>100.00%</b>

**Number of Related Seminars Attended.** Regarding professional development, the data reveals that 41.38% of respondents have attended 1-3 related seminars, and 27.59% have participated in 4-5 workshops. Only 3.45% have not attended any seminars at all, indicating an overall active participation in professional development activities. Additionally, 20.69% have attended 10 or more seminars, and 6.90% have attended 7-9 seminars, showing that a significant portion of the group is highly engaged in continuous learning and skill enhancement beyond the classroom setting.

**Assessment Strategies Utilized by Teachers**

Table 3 presents the different assessment strategies used and their corresponding Average Weighted Mean (AWM) and Descriptive Equivalent (DE). It provides insight into which strategies are most and least utilized in a given educational setting.

**Table 3**

**Assessment Strategies Utilized by Teachers and Its Effectiveness**  
 N = 29

Assessment Strategies	AWM	DE
1. Written Tests (e.g., quizzes, exams)	3.76	Highly Utilized
2. Performance-Based Assessment (e.g., role-plays, presentations)	3.76	Highly Utilized
3. Portfolio Assessment	3.14	Utilized
4. Rubric-Based Evaluation	3.59	Highly Utilized
5. Peer Assessment	3.31	Utilized
6. Self-Assessment	3.41	Utilized
7. Oral Questioning (e.g., recitations, Socratic method)	3.72	Highly Utilized
8. Online Assessments (e.g., LMS quizzes, Google Forms)	2.76	Utilized
9. Project-Based Assessment	3.34	Utilized
10. Case Study Analysis	2.52	Utilized
11. Assessment Using AI	3.03	Utilized
<b>OVER-ALL WEIGHTED MEAN</b>	<b>3.30</b>	<b>Utilized</b>

**Legend:**

Point Value	Descriptive Equivalent
3.50-4.00	Highly Utilized
2.50-3.49	Utilized
1.50-2.49	Slightly Utilized
1.00-1.49	Not at All

The three highest AWM scores are for Written Tests (AWM = 3.76), Performance-Based Assessment (AWM = 3.76), and Oral Questioning (AWM = 3.72). All three are labeled as "Highly Utilized" in the DE category, suggesting their strong presence in current assessment practices.

Written Tests and Performance-Based Assessments share the highest AWM, indicating that both traditional and interactive forms of evaluation are equally favored. Their high utilization reflects a balance between assessing theoretical knowledge and practical application, critical for holistic learning. Oral Questioning also ranks closely, emphasizing the importance of real-time understanding checks and verbal articulation skills, often used in dynamic classroom discussions or assessments.

Conversely, the three lowest AWMs are Case Study Analysis (AWM = 2.52), Online Assessments (AWM = 2.76), and Assessment Using AI (AWM = 3.03). These methods are all categorized as "Utilized," but with noticeably lower engagement compared to other strategies.

Case Study Analysis being the lowest suggests that more complex, analytical approaches to assessment are less frequently employed, possibly due to time constraints or perceived difficulty in grading. The low use of Online Assessments and AI-based Assessments hints at either technological limitations, lack of familiarity, or skepticism about their effectiveness, despite the digital shift in education.

Overall, the OVER-ALL WEIGHTED MEAN of 3.30 indicates that assessment strategies are generally well-utilized but tend toward traditional and interactive in-person methods rather than newer, tech-driven approaches. This suggests a preference for tried-and-tested methods over experimental ones.

This study can be related to the findings of Sotiriou and Bogner (2021), who found that even during the pandemic shift to online learning, traditional written assessments remained more trusted and widely used than newer digital tools. Conversely, it contrasts with the study of Huang, Ritzhaupt, and Sommer (2020), which highlighted a growing acceptance of online and AI-supported assessments in higher education, emphasizing their effectiveness and efficiency in blended learning environments.

**Significant Relationship between Assessment Strategies and Profile Variables**

Table 4 presents the summary of the Spearman correlation results on the relationship between assessment strategies and selected profile variables. The variables analyzed include the highest educational attainment, the number of years in teaching, and the number of related seminars attended.

The computed p-values (Sig. 2-tailed) for all three profile variables are greater than the set alpha level of 0.05: highest educational attainment (p = 0.460), number of years in teaching (p = 0.745), and number of related seminars attended (p = 0.538). This indicates no statistically significant relationship between any of the profile variables and the assessment strategies used.

**Table 4**  
**Summary of Spearman Correlation of Significant Relationship**

Profile Variables	Sig (2 tailed)	$\alpha$	Interpretation
Highest Educational Attainment	0.460	0.05	Not significant at 0.05
Number of Years in Teaching	0.745	0.05	Not significant at 0.05
Number of Related Seminars Attended	0.538	0.05	Not significant at 0.05

The result suggests that regardless of a teacher’s educational background, length of teaching experience, or number of seminars attended, their choice or utilization of assessment strategies remains relatively similar. This implies that external factors like training or experience might not strongly influence how teachers select or implement different assessment methods.

Overall, this finding highlights a uniformity in assessment practices across various teacher profiles, possibly suggesting that institutional guidelines or curriculum standards, rather than personal qualifications, dictate the choice of assessments. It may also reflect a need for differentiated professional development programs to foster innovation in assessment strategies.

**Problems Encountered in Utilizing Assessment Strategies**

In this section presents the problems encountered by LNU Urdaneta Teachers in utilizing assessment strategies as shown in Table 5.

**Table 5**  
**Problems Encountered by Teachers in Utilizing Assessment Strategies**  
 N = 29

Problems Encountered	AWM	DE
1. Lack of time to conduct assessments effectively	3.52	Serious
2. Large class size affecting individualized assessment	3.21	Moderately Serious
3. Limited resources (e.g., rubrics, digital tools)	3.38	Moderately Serious
4. Difficulty in designing authentic assessments	3.34	Moderately Serious
5. Students’ lack of motivation in assessments	3.34	Moderately Serious
6. Difficulty in providing immediate feedback	2.97	Moderately Serious
7. Challenges in assessing higher-order thinking skills	3.28	Moderately Serious
8. Inconsistencies in assessment scoring	3.17	Moderately Serious
9. Resistance to innovative assessment methods	3.10	Moderately Serious
10. Technical issues in online assessments	3.48	Moderately Serious
<b>OVER-ALL WEIGHTED MEAN</b>	<b>3.28</b>	<b>Moderately Serious</b>

**Legend:**

Point Value	Descriptive Equivalent
4.50-5.00	Very Serious
3.50-4.49	Serious
2.50-3.49	Moderately Serious
1.50-2.49	Fairy Serious
1.00-1.49	Not Serious

The problem with the highest AWM is the lack of time to conduct assessments effectively (AWM = 3.52), which is classified as "Serious." This indicates that teachers struggle to allocate sufficient time for developing, administering, and evaluating assessments, likely due to heavy teaching loads and administrative responsibilities. Following this are technical issues in online assessments (AWM = 3.48) and limited resources such as rubrics and digital tools (AWM = 3.38), both rated "Moderately Serious." These findings suggest that while efforts to integrate technology into assessment have increased, the supporting infrastructure remains inadequate. Consequently, time constraints, limited technological support, and insufficient materials critically hinder the ability of teachers to implement diverse and effective assessment strategies.

Meanwhile, the issues with the lowest AWMs include difficulty in providing immediate feedback (AWM = 2.97), resistance to innovative assessment methods (AWM = 3.10), and inconsistencies in assessment scoring (AWM = 3.17). Although these concerns are still categorized as "Moderately Serious," their relatively lower means suggest that teachers may have found ways to partially manage feedback mechanisms, adapt to new methods, and maintain grading consistency through experience or professional development. This indicates some positive shifts in teachers’ adaptability and openness to evolving assessment practices despite systemic challenges.

The overall weighted mean of 3.28, interpreted as "Moderately Serious," implies that while teachers encounter notable obstacles, these problems are manageable and not yet at a crisis level. However, if left unaddressed, they could escalate and negatively impact both instructional quality and student outcomes. The implications of these findings are significant: institutions must prioritize strategic interventions such as providing additional planning time, offering more accessible technological resources, investing in training for authentic and digital assessments, and creating support systems for feedback and innovative practices. Without these measures, teachers may continue to rely on limited, traditional assessment methods, potentially hindering students' critical thinking and real-world application skills.

This study echoes the findings of Adedoyin and Soykan (2020), who highlighted that time constraints and technical barriers are major challenges in delivering effective assessments, especially in a remote learning context. However, it contrasts with Rapanta et al. (2020), who observed that with institutional support and proper professional development, teachers could overcome these barriers and maintain assessment quality. This suggests that while challenges persist, strategic institutional efforts can empower teachers to navigate and adapt their assessment strategies more effectively.

#### REFERENCES

- [1] Ali, A. 2001. Macroeconomic variables as common pervasive risk factors and the empirical content of the Arbitrage Pricing Theory. *Journal of Empirical finance*, 5(3): 221–240.
- [2] Basu, S. 1997. The Investment Performance of Common Stocks in Relation to their Price to Earnings Ratio: A Test of the Efficient Markets Hypothesis. *Journal of Finance*, 33(3): 663-682.
- [3] Bhatti, U. and Hanif. M. 2010. Validity of Capital Assets Pricing Model. Evidence from KSE-Pakistan. *European Journal of Economics, Finance and Administrative Science*, 3 (20).



#### Copyright & License:

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.