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RESEARCH ARTICLE

ENHANCING STUDENT ENGAGEMENT AND LEARNING GAINS THROUGH MEME-INTEGRATED INQUIRY-BASED LEARNING IN CONTEMPORARY WORLD EDUCATION

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Abstract

The study examined the effectiveness of Meme-Integrated Inquiry-Based Learning (MI-IBL) approach in enhancing students' engagement and learning gains in the Contemporary World subject. Recognizing the need for more engaging and student-centered instructional approaches, the study explored how the integration of memes can support meaningful learning stimulate curiosity, and promote active participation among learners. A quantitative research design was employed, utilizing a one-group pretest-posttest approach to determine changes in students' cognitive gains, motivation, and engagement. The participants consisted of 154 first-year college students enrolled in the Contemporary subject. The data were collected using a validated 5-point Likert scale survey questionnaire measuring cognitive gains, motivation and engagement. Descriptive inferential statistics were also used to analyze data. Findings revealed a significant improvement in students' cognitive gains, motivation, and engagement following the implementation of Meme-Integrated IBL. Students demonstrated increased interest, improved comprehension of global concepts, and more active involvement in learning tasks. The null hypothesis was rejected, indicating a statistically significant difference in students' cognitive, motivational, and engagement outcomes before and after the implementation of Meme-Integrated Inquiry-Based Learning (MI-IBL). The study concluded that Meme-integrated IBL is an effective instructional approach in enhancing student engagement and learning gains. It is recommended that educators integrate relevant and context-based visual learning tools such as memes within an inquiry-driven approach to create more meaningful and engaging learning experiences.

Keywords: *Meme-integrated Inquiry-Based Learning, cognitive gains, student engagement, student motivation, Contemporary World.*

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INTRODUCTION

The 21st century learners think, communicate and learn differently through quick, visual and highly interactive manner. “*Digital native*” as coined by Marc Prensky (2001) where these generation grew up surrounded by technology and has been familiar with the Internet from an early age. In order to meet these evolving characteristics of learners, there’s a need for educators to turn into innovative approaches and strategies that promotes critical thinking, creativity and active participation. This is essential in understanding contemporary issues, as societies become more interconnected, students must be capable of understanding and interpreting global national and local issues, evaluating multiple perspectives, and making informed decisions that reflect an understanding of cultural, political and historical complexities. (CHED, 2017)

One approach that addresses these challenges is Inquiry-Based Learning (IBL), a student-centered pedagogy that promotes active learning through questioning, investigation and critical analysis. Grounded in constructivism, IBL encourage learners to construct knowledge through meaningful experiences rather than passive reception. Previous studies have demonstrated that IBL enhances critical thinking, motivation and academic performance across various discipline. However, its application in social science education, particularly in the Contemporary World subject

In parallel, the integration of digital and culturally relevant materials has gained attention in education. One of which is the integration of internet memes or memes in general have emerged as a potential instructional tool due to their visual, relatable and engaging nature. Research suggests that memes can support comprehension, stimulate interest and promote critical thinking by connecting academic content with students’ everyday digital experiences. Learners also reported positive perceptions of memes, emphasizing their ability to motivate engagement, evoke humor, promote critical thinking, and facilitate deeper comprehension. the Integration of Internet Memes in Teaching Social Studies and its Relation to the Development of Critical Thinking Skills revealed that using internet memes in teaching is directly related to improving the students' critical thinking skills (Cordova,2021; Matias, 2020). In a systematic review of Guillen et.al (2024) the findings indicate that memes are most applied in linguistics (31.43%), medicine (28.57%), education (14.29%), and engineering (5.71 %). Memes offer several pedagogical advantages, including enhanced engagement, increased motivation, emotional relief, feedback provision, and the promotion of critical thinking. Despite these benefits, the use of memes in formal instruction Is often perceived as informal and lacks sufficient empirical validation, particularly when combined with structured pedagogical approaches.

As a social science educator, it is indeed a challenge to make the students understand the concepts and engage them in a way that stimulate curiosity, critical and creative thinking. There it lies the integration of Inquiry-Based Learning approach and the use memes in order to engage the learners in constructing their own knowledge instead of relying only to teachers’ lecture. Given the scarcity of researches in the field of Inquiry-Based Learning in social science education, specifically in the subject contemporary world, this study is needed to fill the void as it explores how integrating memes within an inquiry-based learning approach can make complex global issues in the Contemporary World more engaging and comprehensible for students. By examining students’ experiences and learning gains in cognitive, affective and behavioral gains, the research provides practical insights that can help teachers adopt innovative, relevant, and student-centered strategies in social science education.

Statement of the Problem

Generally, this study aims to know the students’ learning gains and experiences in a meme-integrated Inquiry-Based Learning approach in teaching the contemporary world subject. Specifically, it sought to answer the following questions;

1. What is the level of students' knowledge of key concepts in the Contemporary World subject prior to the implementation of meme-integrated IBL?
2. What are the cognitive gains of the students before and after engaging with the meme-integrated Inquiry-Based Learning approach?
3. What are the affective and behavioral gains of the students before and after using meme-integrated IBL in terms of:
 - a. Student motivation
 - b. Student engagement
4. Is there a significant difference between the baseline level of students' knowledge of key concepts in the contemporary world before and after using Inquiry-Based Learning?
5. Is there a significant difference in the student cognitive gains before and after meme-integrated Inquiry-Based Learning?
6. Is there a significant difference in the students affective and behavioral gains in terms of students' motivation and engagement before and after meme-integrated Inquiry-Based Learning?

REVIEW OF RELATED LITERATURE

Inquiry-Based Learning is a pedagogical method developed during the discovery learning movement of the 1960s as a response to traditional forms of instruction, where people were required to memorize information from instructional materials. According to McLeod (2025) The central idea of IBL is grounded on constructivism which highlights that students actively create their own knowledge through interactions and experiences. This theory holds that critical and problem-solving skills should be emphasized in education, assisting the learners in making connections between new and existing knowledge. Instead of being passive consumers of information, learners create knowledge by connecting new concepts to pre-existing frameworks and experiences. The philosophy of inquiry -based learning finds its antecedents in constructivist learning theories such as Experiential learning of John Dewey (1859-1952) emphasizing that education must be grounded in real life activities. Another is the child-centered approach developed by Maria Montessori (1870-1952) where it valued self-directed, hands-on learning within a prepared environment. Furthermore, Lev Vygotsky (1896-1934) highlighted the social context of learning introducing the Zone of Proximal Development (ZPD) and stressing the critical role of social interaction and scaffolding. Discovery learning of Jerome Bruner (1915-2016) where new ideas is actively built upon existing knowledge, alongside the spiral curriculum concept.

Based on the article written by Ivory (2023) which focuses on Inquiry-Based Learning (IBL) in social studies defines the approach as one that empowers students to ask questions and investigate answers, thereby creating a more fulfilling learning experience. The application of IBL in social studies is supported by the work of Voet and De Wever (2016), who specifically define IBL investigations as emphasizing posing questions, gathering and analyzing data, and contrasting evidence-based arguments, with the teacher serving as a facilitator. Moreover, the key benefits of IBL in social studies includes the development of critical thinking skills, deepens understanding of complex topics, and supports differentiation in the classroom through varied opportunities for exploration and assessment.

In the Philippine context, the 2018 PISA result fifteen-year-old students scored lower in reading, mathematics and science than those in most of the countries and economies that participated in PISA 2018. The country's average score in reading was 340 score points, on a par with that of the Dominican Republic. Over 80% of students in the Philippines did not reach a minimum level of proficiency in reading, which is one of the largest shares of low performers amongst all PISA-participating countries and economies. If more than 80% of learners cannot reach the minimum level of reading proficiency, that would mean that they possibly could not

understand instructions, differentiate fact from opinion, or make informed decisions-what one would call the ability to conduct lifelong learning and responsible citizenship. This points to a lack in critical thinking that further affects how students engage in real-life issues, from interpreting news to solving everyday problems. Ultimately, the PISA 2018 results have brought into focus an urgent need to improve teaching practices beyond mere memorization to those that develop deeper comprehension, reasoning, and analytical thinking in students.

In a separate meta-analysis study of Mediana (2025) aimed at comprehensively estimating the overall effect of Inquiry-based Learning on improving students' conceptual understanding in science and mathematics, investigating further how this may vary across educational levels, academic disciplines, and the four predefined levels of IBL. The research design used was meta-analysis, adhering to the guidelines provided by PRISMA (2020), where 12 empirical studies that provided 14 effect sizes and involved 786 students were systematically reviewed, with the effectiveness magnitude quantified by the use of the Hedges' g statistic. The core result of the study showed that the overall impact of IBL, as reflected in its effect size, is large and positive, standing at $g=0.913$. Subsequently, it was also shown that this positive effect is most prominent in senior high school, $g=1.176$; within the area of mathematics, $g=1.191$; and when open inquiry is conducted, $g=1.530$, hence the importance of student autonomy within learning. Based on the findings from this paper, the authors strongly recommend that IBL be integrated into more educational curricula and training programs for teachers, given its promise to develop students' critical thinking and depth in conceptual learning, and also call for more research to be done on various strategies under IBL and point out the research gap regarding the exclusion of confirmation inquiry level studies.

Meanwhile, the exploratory literature review conducted by Matias (2020) on the Integration of Internet Memes in Teaching Social Studies and its Relation to the Development of Critical Thinking Skills revealed that using internet memes in teaching is directly related to improving the students' critical thinking skills.

Furthermore, on a systematic literature review conducted by Guillen et. al (2024) emphasized that the utilization of internet memes as educational tools is rising, driven by students' preferences for learning methods aligned with their digital-native identities. This study used a systematic review based on the PRISMA methodology, 35 scientific articles were analyzed to identify the academic disciplines where memes are predominantly used, as well as the associated benefits, and challenges. The findings indicate that memes are most applied in linguistics (31.43%), medicine (28.57%), education (14.29%), and engineering (5.71 %). Memes offer several pedagogical advantages, including enhanced engagement, increased motivation, emotional relief, feedback provision, and the promotion of critical thinking.

The literature review, however, highlights several key research gaps that must be addressed. While IBL shows strong positive effects globally, studies in the Philippines yielded small effect sizes, suggesting students may lack necessary experience or require longer exposure for significant results. There are also methodological gaps as research studies in IBL often focus on systematic review or meta-analysis. Moreover, the most explored subjects are in the field of sciences and mathematics, thus researchers also recommend to conduct similar studies but in the field of humanities and social sciences. Explicit research gaps include the exclusion of confirmation inquiry level studies in some meta-analyses, the need to examine IBL implementation in the seldom-researched humanities discipline, furthermore, there is also a recommendation for further study on the effects of internet memes in teaching Social Studies and their role in developing critical thinking. The current study seeks to address these gaps by specifically exploring the combined effectiveness of Inquiry-based Learning and memes to enhance critical thinking and learning gains in the Contemporary World subject, thereby using memes as stimuli for inquiry into global and contemporary concepts and issues.

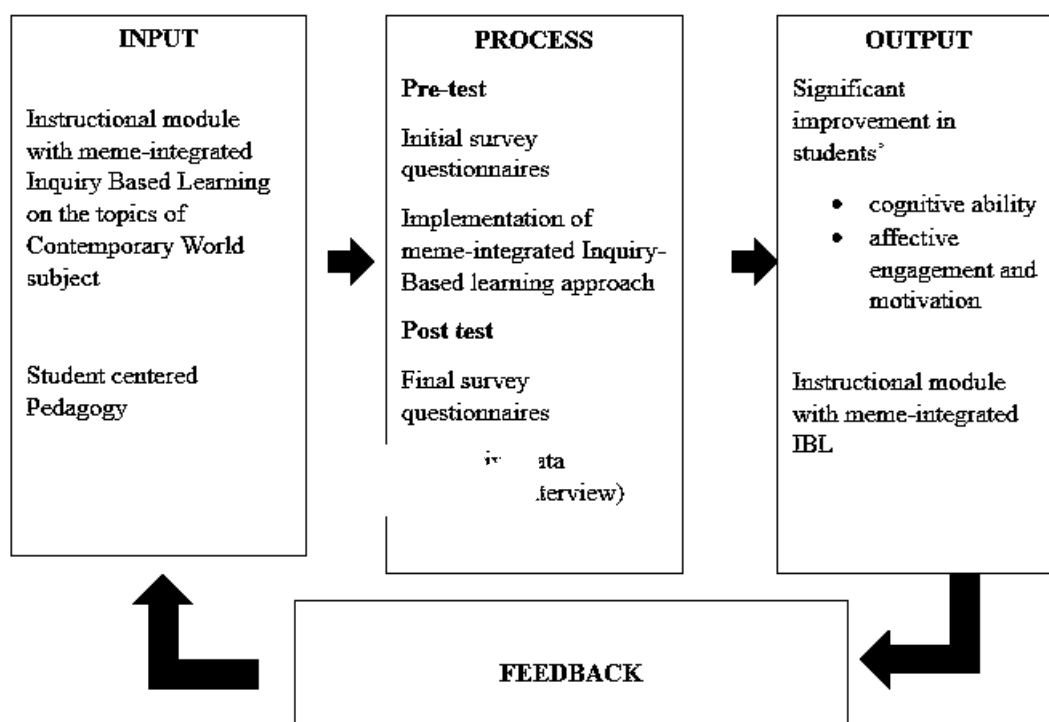


Figure 1: Conceptual Framework of the study

METHODOLOGY

A quantitative research design was employed, utilizing a one-group pretest-posttest approach to determine the effectiveness of Meme-Integrated Inquiry-Based Learning in enhancing students’ cognitive gains, motivation, and engagement.

The participants of the study consisted of 154 first-year students enrolled in the Contemporary World subject during the Second semester of the academic year 2025-2026. The respondents were selected using total enumeration sampling, as all the students in the identified classes participated in the study.

Instruments

Data were collected using two instruments. First, a researcher-developed pretest and posttest designed to measure students’ level of knowledge on concepts in the contemporary world subject prior and after the implementation of MI-IBL.

Moreover, an adapted validated survey questionnaire from the study of Pintrich et.al, (1991) titled *A manual for the use of the motivated Strategies for learning Questionnaire (MSLQ)* was validated on the study conducted by Dayel et. al., (2018). The study found that the motivation section of the MSLQ is a reliable measure for this group. Internal Consistency: The subscales showed satisfactory reliability, with Cronbach’s alpha values ranging from 0.75 to 0.89. Subscale Specifics: High reliability was particularly noted in the Self-Efficacy for Learning and Performance (alpha = 0.89) and Task Value (alpha = 0.86) subscales. Benchmark: All subscale scores exceeded the standard acceptable threshold of 0.70 for internal consistency. Furthermore, the survey questionnaire on student engagement was also adapted cited in the study of Cifuentes et. al., (2024) titled *Validation of the University student engagement Questionnaire in the field of Education* will be used to describe students’ affective and behavioral gains in learning topics in the course. The reliability of an instrument refers to its internal consistency, the Cronbach’s alpha

value of 0.94 which is considered to indicate excellent internal consistency. Prior to the actual data collection, these research instruments underwent pilot testing to establish their reliability and internal consistency. The pilot was test was conducted among students with similar characteristics to the target respondents but who were not included in the actual study.

Data Gathering Procedure

The study was conducted over an eight -week period. Initially, a pre-test was administered to determine the baseline level of students’ knowledge in the contemporary world subject. Moreover, an initial survey questionnaire was also gathered to determine the cognitive and affective gains of the students prior to the intervention. This was followed by the implementation of Meme-Integrated Inquiry-Based Learning (MI-IBL), where memes were used as prompts for inquiry-Based activities such as questioning, exploration, and analysis of contemporary issues. After the intervention, a posttest and final survey questionnaires were administered to determine the changes in cognitive gains, motivation and engagement.

Statistical tools

Descriptive statistics such as mean, frequency and percentages were used to describe students’ cognitive gains, affective and behavioral gains in terms of motivation and engagement. To determine the effectiveness of the intervention, a paired sample t-test was employed to identify significant differences between pretest and posttest scores. All statistical analyses were conducted at a 0.05 level of significance.

FINDINGS

Table 1: Level of Students’ Knowledge of Key Concepts in The Contemporary World Subject Prior and After the Implementation of Meme-Integrated Inquiry-Based Learning

Level of Students’ Knowledge of Key Concepts	Pre-test		Posttest	
	Frequency	Percent	Frequency	Percent
Novice	2	1.3	1	0.6
Beginning	88	57.1	17	11.0
Developing	57	37.0	58	37.7
Proficient	7	4.5	60	39.0
Advanced	0	0.0	18	11.7
Total	154	100.0	154	100.0

Table 1 presents the level of students’ knowledge of Key concepts in the Contemporary World subject prior and after the Implementation of a meme-integrated Inquiry-Based Learning (MI-IBL). The overall results reveal an increase in students’ knowledge levels after the intervention.

Prior to the implementation, the majority of students were at the Beginning level (57.1%) followed by developing (37.0%), with only small percentage reaching the Proficient level (4.5%) and none attaining the Advanced level. After the implementation, a significant shift in distribution is observed. Most students moved to the Proficient level (39.0%), followed by developing (37.7%) and a considerable increase in the Advanced level (11.7%). Meanwhile, the percentage of students at the Beginning level decreased drastically from (57.1%) to (11.0%), and those at the Novice level became almost negligible.

The Pretest scores of the students were largely concentrated at the beginning level, indicating a generally low level of prior knowledge regarding the concepts in the Contemporary World subject. This may be attributed to students limited exposure to the topic before the intervention, based on the result, there is an evident transition from lower to higher levels of understanding which demonstrates that students were able to move beyond basic comprehension toward more advanced conceptual mastery.

The observed improvement may be attributed to the interactive and contextual nature of meme-integrated inquiry-based tasks, which enabled students to connect abstract concepts to familiar social experiences.

Table 2. Cognitive Gains of the Students Before and After Engaging with Meme-Integrated Inquiry-Based Learning Approach

	Before Mean	DE	After Mean	DE
<i>Through meme-integrated Inquiry-based learning approach....</i>				
1. I can recall important terms and concepts related to globalization and contemporary society.	3.38	N	4.40	A
2. I can identify the main ideas presented in lessons about global and local issues.	3.09	N	4.29	A
3. I understand the relationships between political, economic, and cultural global processes.	3.18	N	4.40	A
4. I understand how contemporary global issues affect the Philippines.	3.21	N	4.28	A
5. I can clearly explain key concepts discussed in the Contemporary world.	2.89	N	4.20	A
6. I can explain the causes and consequences of global and local issues.	2.74	N	4.05	A
7. I can explain how memes reflect or critique contemporary global issues.	2.94	N	4.26	A
8. I can relate memes used in class to academic concepts being discussed.	2.94	N	4.31	A
9. I can use what I learned to better understand news and social media content.	3.06	N	4.29	A
10.I can apply lesson concepts to real-life situations and social issues.	2.98	N	4.25	A
11.I can transfer what I learned in class to other subjects or discussions.	2.95	N	4.21	A
12.I can analyze current events using concepts learned in the Contemporary World.	2.85	N	4.22	A
13.I can distinguish facts from opinions when examining global issues.	2.90	N	4.19	A
14.I can investigate global issues by gathering and interpreting information.	2.90	N	4.27	A
15.I can connect real-world problems to lesson concepts through inquiry activities.	3.07	N	4.34	A
16.I can evaluate different perspectives on contemporary global problems.	2.94	N	4.27	A
17.I can support my ideas with evidences during class discussions or activities.	2.96	N	4.21	A
18.I can draw conclusions based on the evidence gathered during inquiry tasks.	2.88	N	4.20	A
19.I can formulate meaningful questions about contemporary issues.	2.70	N	4.22	A

20.I can propose possible solutions to contemporary social problems discussed in class.	2.85	N	4.26	A
Grand Mean	2.97	N	4.25	A

Legend: 2.50-3.49 = Neither Agree nor Disagree (N); 3.50-4.49 = Agree (A)

Table 2 presents the perceived cognitive gains of the first-year students in learning lessons in the Contemporary World before and after using Meme-integrated IBL. The overall results show a substantial increase in the perceived cognitive gains of the students with the grand mean improving from 2.97 interpreted as *Neither Agree nor Disagree* before the intervention to 4.25 interpreted as *Agree* after the intervention. This indicates a shift from uncertainty to a clear recognition of cognitive development. Notably, all indicators showed improvement, suggesting consistent enhancement across different cognitive skills. The highest posttest mean was observed in the item related to **recalling important terms and concepts** with a (M=4.40) together with **understanding global processes** (M=4.40), indicating strong conceptual retention and comprehension. Furthermore, higher-order thinking skills such as **connecting real-world problems to lesson concepts through inquiry activities** (M=4.34), relating **memes used in class to academic concepts being discussed.** (M=4.31). These results indicate that students were not only acquiring knowledge but were also developing the ability to apply, analyze, and interpret information in meaningful contexts.

While table 1 reflects improvements in knowledge acquisition, Table 2 further demonstrates the development of higher-order cognitive skills. This suggests that meme-integrated Inquiry-Based Learning not only improved students' knowledge but also enhanced their understanding and critical thinking skills in the Contemporary world subject.

Table 3. Affective and Behavioral Gains of the Students Before and After Using Meme-Integrated IBL in Terms of Student Motivation

	Before Mean	Before DE	After Mean	After DE
Intrinsic Goal Orientation				
<i>In a class with meme-integrated Inquiry-based learning approach...</i>				
1. I prefer course material that really challenges me, so I can learn new things.	3.50	A	4.57	SA
2. I prefer course material that arouses my curiosity, even if it is difficult to learn.	3.29	N	4.38	A
3. When I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade	3.13	N	4.37	A
Category Mean	3.30	N	4.44	A
Extrinsic Goal Orientation				
<i>In a class with meme-integrated Inquiry-based learning approach...</i>				
4. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade	3.52	A	4.35	A
5. I want to get better grades in this class than most of the other students	3.14	N	4.27	A
6. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others	3.38	N	4.43	A
Category Mean	3.34	N	4.35	A
Task Value				
<i>Due to meme-integrated Inquiry-based Learning approach...</i>				
7. I will be able to use what I learn in this course in other courses.	3.19	N	4.26	A

8. It is important for me to learn the course material in this class.	3.16	N	4.37	A
9. I am very interested in the content area of this course.	3.17	N	4.41	A
10.I think the course material is useful for me to learn.	3.17	N	4.46	A
11.I like the subject matter of this course.	3.20	N	4.41	A
12.Understanding the subject matter of this course is very important to me	3.04	N	4.40	A
Category Mean	3.15	N	4.38	A
Control of Learning Beliefs				
13.If I study in appropriate ways, then I will be able to learn the material in this course.	3.19	N	4.38	A
14.It is my own fault if I don't learn the material in this course	3.09	N	4.29	A
15.If I try hard enough, then I will understand the course material	3.08	N	4.31	A
Category Mean	3.12	N	4.32	A
Self-Efficacy for Learning and Performance				
<i>Through meme-integrated Inquiry-based learning I am confident that...</i>				
16.I will receive an excellent grade in this class.	3.29	N	4.31	A
17.I can understand the most difficult material presented in the readings for this course	3.02	N	4.27	A
18.I can understand the basic concepts taught in this course.	2.99	N	4.40	A
19.I can understand the most complex material presented by the instructor in this course.	3.04	N	4.31	A
20.I can do an excellent job on the assignments and tests in this course	3.12	N	4.37	A
21.I can do well in this class.	3.12	N	4.33	A
22.I can master the skills being taught in this class.	3.03	N	4.27	A
23.Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.	3.18	N	4.36	A
Category Mean	3.09	N	4.32	A
Grand Mean	3.20	N	4.36	A

Legend: 2.50-3.49 = Neither Agree nor Disagree (N); 3.50-4.49 = Agree (A); 4.50-5.00 = Strongly Agree (SA)

Table 3 describes the perceived affective and behavioral gains of the First-Year students in learning lessons in the Contemporary World in terms of student motivation before and after using Meme-integrated IBL. The results indicate a significant positive shift, with the grand mean increasing from 3.20 interpreted as *Neither Agree nor Disagree* to 4.36 interpreted as *Agree* after the intervention, reflecting an overall improvement in students' motivational levels. Among the components, Intrinsic Goal Orientation (M=4.44) showed the highest level of improvement. Notably, the item "***I prefer course material that challenges me so I can learn new things***" obtained the highest mean score (M=4.57), interpreted as Strongly Agree, this suggests that students developed a preference for intellectually stimulating tasks and became more motivated to learn for personal growth rather than external rewards. indicating that students developed a preference for intellectually stimulating tasks.

Additionally, improvements were also observed in Extrinsic Goal Orientation (M=4.35), Task Value (M=4.38), Control of Learning Beliefs (M=4.32), and Self-Efficacy (M=4.36), which are interpreted as "*Agree*" reflecting increased confidence, perceived usefulness of the subject, and in their ability to succeed. These findings provide strong evidence that Meme-Integrated IBL significantly enhances students' motivation, encouraging both intrinsic interest and confidence in the learning process.

Table 4. Affective and Behavioral Gains of the Students Before and After Using Meme-Integrated IBL in Terms of Student Engagement

	Before Mean	DE	After Mean	DE
<i>Through Meme-Integrated IBL activities in the Contemporary world....</i>				
1. I have developed my capacity to judge alternative perspectives.	3.15	N	4.33	A
2. I have become more willing to consider alternative perspectives.	3.11	N	4.29	A
3. I have been motivated to use my own initiative.	3.05	N	4.38	A
4. I have been challenged to come up with new ideas.	2.89	N	4.32	A
5. I feel I am able to take responsibility for my own learning.	3.09	N	4.29	A
6. I have greater confidence in my capacity to continue learning.	2.99	N	4.22	A
7. I have learned to be more adaptable.	3.07	N	4.29	A
8. I have become more willing to change my perspective and accept new ideas.	2.93	N	4.25	A
9. I have improved my ability to use knowledge to solve problems in my field of study	2.90	N	4.25	A
10. I am able to offer information and different ideas to solve problems.	2.77	N	4.31	A
11. I have developed my ability to communicate effectively with others.	2.83	N	4.33	A
12. I have improved my ability to transmit ideas.	2.85	N	4.28	A
13. I have learned to be an effective team member during group work.	2.88	N	4.34	A
14. I feel confident dealing with a wide range of people.	2.64	N	4.13	A
15. I feel confident using computer applications when necessary	2.91	N	4.18	A
16. I have learned more about using computers to present information.	3.00	N	4.40	A
Category Mean	2.94	N	4.28	A
<i>In a Meme-Integrated IBL approach in the Contemporary world subject....</i>				
17. The teacher uses a variety of teaching methods.	3.37	N	4.48	A
18. Students are given the opportunity to participate in classes.	3.28	N	4.51	SA
19. The teacher makes an effort to help understand the course material.	3.17	N	4.37	A
20. The design of the course helps students understand its contents.	3.24	N	4.39	A
21. The explanations given by the teacher are useful when I have difficulties with the learning materials.	3.20	N	4.38	A
22. There is enough feedback on activities and tasks to ensure that we learn from the work we do.	3.09	N	4.29	A
23. The subject uses a variety of evaluation methods.	2.96	N	4.26	A
24. To do well when being evaluated in this subject you need to have good analytical skills.	2.95	N	4.27	A
25. The evaluation assesses our understanding of the key concepts in this subject.	3.16	N	4.29	A
26. There is good communication between the teacher and students.	3.34	N	4.40	A
27. The teacher helps when asked.	3.35	N	4.43	A
28. I am able to complete the program requirements without feeling excessively stressed.	3.02	N	4.34	A
29. The workload assigned is reasonable.	3.02	N	4.34	A
30. I have a strong sense of belonging to my class group.	3.06	N	4.26	A
31. I regularly work with peers in my classes.	2.84	N	4.24	A
32. I have regularly discussed course ideas with other students outside of class.	2.85	N	4.23	A

33. Discussing the course material with other students outside of class has helped me gain a better understanding of the subject.	3.05	N	4.31	A
34. I can see how the subjects fit together to make a coherent study program for my specialization.	3.05	N	4.25	A
35. The study program for my specialization is well-integrated.	3.09	N	4.33	A
Category Mean	3.11	N	4.35	A
Grand Mean	3.02	N	4.32	A

Legend: 2.50-3.49 = Neither Agree nor Disagree (N); 3.50-4.49 = Agree (A); 4.50-5.00 = Strongly Agree (SA)

Table 4 presents the perceived affective and behavioral gains of the First-Year students in terms of engagement before and after using Meme-integrated IBL. The results show significant improvement with a grand mean increasing from 3.02 interpreted as *Neither Agree nor Disagree* to 4.32 interpreted as *Agree* after the intervention, reflecting a higher level of student engagement.

The highest mean score was observed in the item “**students are given the opportunity to participate in classes**” (M=4.51) interpreted as Strongly Agree. This indicates that students became more actively involved in classroom discussions and activities.

Moreover, consistent improvement across all indicators suggests that students enhanced participation, collaboration and interaction during the learning process. The increase in engagement reflects a shift from passive learning to active involvement, where students take a more central role in constructing knowledge. This improvement may be attributed to the interactive and student-centered nature of meme-integrated IBL, which encourages discussion, creativity and peer collaboration. The findings demonstrate that meme-integrated IBL promotes active participation and fosters meaningful engagement, aligning with the principles of active and collaborative learning.

Table 5. Difference in the Level of Students’ Knowledge of Key Concepts in the Contemporary World Before and After Using Inquiry-Based Learning

	Mean	DE	N	SD	t-value	p-value
Pre-test	47.62	Beginning	154	12.85	-	.01
Posttest	67.74	Developing	154	14.81	19.09*	

Legend: * = significant at 0.05 level

Table 5 presents the difference in the Level of students’ knowledge of key concepts in the Contemporary World subject before and after using Meme-integrated IBL. A Paired Samples T-Test was utilized to determine whether a significant difference exists between the pretest and posttest scores. The results reveal a substantial increase in the mean score from 47.62, interpreted as Beginning level, to 67.74, interpreted as Developing level after the intervention. The computed t-value of -19.09 and p-value of .01 indicate that the difference is statistically significant at the 0.05 level. Consequently, the null hypothesis is rejected.

The significant improvement demonstrates that students were able to move from basic understanding toward a more developed level of conceptual mastery. The effectiveness of meme-integrated IBL may be attributed to its ability to provide contextualized and relatable learning experiences, allowing students to actively engagement with concepts rather than passively receive information. By integrating familiar cultural elements such as memes with inquiry-based tasks, students were able to construct meaning more effectively and retain knowledge more deeply. These findings provide strong empirical evidence that meme-integrated Inquiry-Based Learning is an effective pedagogical approach in improving students’

knowledge of key concepts in the Contemporary world subject.

Table 6. Difference in the Student Cognitive Gains Before and After Using Inquiry-Based Learning

	Mean	DE	N	SD	t-value	p-value
Before	2.97	Neither Agree nor Disagree	154	.70	-16.92*	.001
After	4.26	Agree	154	.51		

Legend: * = significant at 0.05 level

Table 6 presents the difference in students’ cognitive gains before and after engaging with meme-integrated IBL. A paired sample t-test was used to determine the significance of the observed differences. The results indicate in the mean score from 2.97, interpreted as Neither Agree nor Disagree, to 4.26, interpreted as Agree after the intervention. The computed t-value of -16.92 and p-value of .001 confirm that the difference is statistically significant. Thus, the null hypothesis is rejected.

The increase reflects a meaningful improvement in students’ cognitive abilities, particularly in understanding, analysis and application of concepts. The shift from uncertainty to agreement suggest that students became more confident in their ability to think critically and engage with complex ideas. Unlike mere knowledge acquisition, cognitive gains involve higher-order thinking processes. The improvement can be attributed to the inquiry-driven and interactive nature of the approach, which required students to actively process information, evaluate perspectives and construct their own understanding. These findings confirm that meme-integrated Inquiry-Based Learning significantly enhances students’ cognitive development and promotes higher-order thinking skills.

Table 7. Difference in the Students’ Affective and Behavioral Gains in Terms of Motivation and Engagement Before and After Using Meme-Integrated Inquiry-Based Learning

	Mean	DE	N	SD	t-value	p-value
Student Motivation						
Before	3.18	Neither Agree nor Disagree	154	.70	-15.99*	.01
After	4.36	Agree	154	.48		
Student Engagement						
Before	3.03	Neither Agree nor Disagree	154	.76	-15.59*	.01
After	4.31	Agree	154	.51		

Legend: * = significant at 0.05 level

Table 7 presents the difference in students’ affective and behavioral gains in terms of motivation and engagement before and after using meme-integrated IBL in the Contemporary World subject. Paired Samples T-Test was used to examine the significance of the differences.

In terms of student motivation, the mean score increased from 3.18, interpreted as Neither Agree nor Disagree, to 4.36, interpreted as Agree. The computed t-value of -15.99 and p-value of .01 indicate that the increase is statistically significant. Similarly, in terms of student engagement,

the mean score increased from 3.03, interpreted as Neither Agree nor Disagree, to 4.31, interpreted as Agree. The computed t-value of 15.99 and p-value of .01 confirm that the difference is also statistically significant.

These results indicate that students experienced a substantial improvement not only in their willingness to learn but also in their level of active participation in classroom activities. The enhancement of motivation may be linked to the relevance and creativity of meme-integrated tasks, which made learning more enjoyable and meaningful. At the same time, the improvement in engagement reflects the interactive and collaborative nature of the approach, which encouraged students to participate, share ideas, and take an active role in their learning.

DISCUSSION

The findings of the study revealed a significant improvement in students' knowledge and cognitive gains after the implementation of Meme-Integrated Inquiry-Based Learning (MI-IBL). This is significant as it directly addresses the initial problem of low student understanding of abstract concepts in the Contemporary World subject. The observed shift from lower to higher levels of understanding indicates that the intervention effectively enhanced conceptual mastery and higher-order thinking skills. These results support previous studies which found that inquiry-based learning improves students' conceptual understanding and critical thinking abilities (Mediana et al., 2025; Antonio & Prudente, 2024). The integration of memes as inquiry prompts may have further strengthened learning by making concepts more relatable and easier to interpret, allowing students to actively construct meaning.

Furthermore, the study found significant improvements in students' motivation and engagement, indicating that learners became more interested, confident, and actively involved in the learning process. This is consistent with prior research showing that student-centered and inquiry-based approaches increase engagement and participation (Kourti, 2019; Hagglund, 2022). The use of memes likely contributed to these outcomes by creating a more interactive and relatable learning environment.

CONCLUSION AND RECOMMENDATION

CONCLUSION

Based on the findings of the study, it can be concluded that Meme-Integrated Inquiry-Based Learning (MI-IBL) is an effective instructional approach in teaching the Contemporary World subject, as it significantly improved students' level of knowledge, enabling them to progress from lower levels of understanding toward higher levels of conceptual mastery. The approach also enhanced students' cognitive abilities, particularly in terms of understanding, analysis and application of concepts, by allowing them to actively engage with content through meaningful and context driven learning experiences. In addition, MI-IBL positively influenced students' affective and behavioral outcomes, as evidenced by increased motivation, improved self-efficacy, and greater appreciation of the value of learning tasks, alongside heightened engagement characterized by active participation, collaboration, and communication. Although some initial challenges were encountered, such as unfamiliarity with the approach and limitations in the internet access, these did not significantly hinder the overall effectiveness of the intervention. Overall, the study affirms that meme-integrated Inquiry-Based Learning is a relevant, innovative and impactful pedagogical strategy that enhances cognitive, affective and behavioral learning outcomes in the Contemporary World subject.

RECOMMENDATION

Based on the findings and conclusions of the study, the following recommendations are proposed:

1. For school administrators, it is recommended to support the implementation of innovative teaching strategies such as meme-integrated Inquiry-Based Learning by providing adequate technological resources, including reliable internet access, multimedia tools and digital platforms. Schools may also organize training programs and workshops for teachers to strengthen their skills in integrating digital and inquiry-based strategies effectively in the classroom.
2. For Teachers, it is recommended to integrate meme-based activities within an inquiry-based learning approach to enhance students' engagement, motivation and critical thinking skills. Teachers should ensure that memes are carefully selected or designed to align with lesson objectives and learning competencies. It is also suggested that teachers provide clear guidelines and scaffolding in analyzing and creating memes to avoid superficial understanding and to promote deeper interpretation of concepts. Additionally, incorporating structured reflection activities after meme-based tasks can further strengthen students' critical thinking and conceptual understanding.
3. For future Researchers, it is recommended to further investigate the effectiveness of meme-integrated Inquiry-Based Learning across different subject areas, grade levels, and educational settings. Future studies may consider using experimental or quasi-experimental designs to strengthen causal claims, as well as extending the duration of implementation to examine long-term effects. Additionally, exploring variables such as students' gender and programs may provide deeper insights into its effects when they are grouped according to their gender and to where program they belong.

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