

Instructional and Affective Behavioral Factors to the Students' Metacognitive Skills

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Abstract—This study determined the significant relationship between Instructional Factors, Affective Behavioral Factors, and Students' Metacognitive Skills. Specifically it investigated the level of instructional factors in terms of teaching methodologies, appropriateness of reading materials, availability of reading materials, and collaboration and interaction with peers; the level of affective behavioral factors in terms of empathy, respect and fairness, encouragement and support, and patience and understanding; and the level of students' metacognitive skills in terms of self-control, self-regulation, self-reflection, self-monitoring, and task completion. The researcher employed a quantitative research design using the descriptive-correlational method. Data were gathered from 210 student-respondents through a validated survey questionnaire and were evaluated using weighted mean, standard deviation, and Pearson Product Moment Correlation Coefficient. The result showed that the respondents of instructional factors and affective behavioral factors were very high, while students' metacognitive skills were high. Moreover, there was a significant positive relationship between instructional factors and students' metacognitive skills, as well as a significant positive relationship between affective behavioral factors and students' metacognitive skills, indicating that both instructional practices and supportive teacher behaviors contribute to the improvement of students' metacognitive skills. Therefore, the first null hypothesis stating that there is no significant relationship between instructional factors and students' metacognitive skills was rejected. Likewise, the second null hypothesis stating that there is no significant relationship between affective behavioral factors and students' metacognitive skills was also rejected. This implies that effective instructional strategies and positive behavioral support play an essential role in enhancing students' metacognitive skills and overall academic development. The researcher recommended that the school may continue to contribute sufficient and accessible learning materials to strengthen students' self-directed learning, the teachers may continuously improve the instructional practices and supportive classroom behaviors equally to strengthening the students' independent and reflective learning abilities, the students may continue to improve their learning goals to develop better learning habits and lifelong learning competencies.

Keywords— instructional factors, affective behavioral factors, metacognitive skills, descriptive-correlational design, students' learning outcomes

I. INTRODUCTION

Education was one of the important characteristics of life that allowed the people to become knowledgeable about the values and skills that will be beneficial in the future. In addition, education impacted a person's behavior and intellect which was a major factor. Academic performances not only needed intellectual but also the metacognition to plan on how to gain knowledge and select the best strategies to explicitly learn on

their own. Conversely, regardless of its importance, various students encounter challenges in accomplishing outstanding learning performance due to challenges in study methods and unawareness of how they study efficiently.

Contrarily, Sword (2021) stated that "metacognition described an individual's capacity to organize, supervise, evaluate, and alter their own learning activities in order to meet difficulties more efficiently". Having students' metacognitive skills will help them to offer and recognize the new learnings and to be able to complete tasks easily. Through this, it will help the students in all learning areas, with the help of the teachers as the instruments to develop their capabilities to learn more. According to Quigley et al. (2018) metacognitive strategies support learners in becoming more aware of their learning process by helping them establish goals and monitor their performance. In line with this, Metacognitive skills including self-control, self-regulation, self-reflection, self-monitoring and task completion influences these two factors such as instructional factor and affective behavioral factor.

In addition, instructional factors including teaching methodologies, appropriateness of reading materials, availability of reading materials, and collaboration and interaction with peers will be beneficial to the learners cognitive development with the right use of planning, strategies, and materials. While the affective behavioral factors including empathy, respect and fairness, encouragement, support, patience, and understanding that influenced the behavior of the learners in terms of their learning development.

Since the world was constantly changing, it was significant to be knowledgeable how the instructional and affective behavior factors influenced the BIS students' metacognitive skills. This study considered the relationship of this as a more understanding that will help the teachers in planning the effective learning environment for the students to be able to maintain the development of the students' metacognitive skills.

This study was a great tool for the students of Binahaan Integrated School whose learning experiences had been greatly influenced by the lack of use of metacognitive development skills. And it also investigated the relationship of metacognitive skills to the two factors such as instructional and affective behavioral factors.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The study aimed to determine the “Instructional and Affective Behavioral Factors to the students’ Metacognitive Skills.”

Specifically, it sought to answer the following problems:

1. What is the level of Instructional Factors in terms of:
 - 1.1. Teaching Methodologies
 - 1.2. Appropriateness of Reading Materials
 - 1.3. Availability of Reading Materials
 - 1.4. Collaboration and Interaction with Peers
2. What is the level of Affective Behavioral Factors in terms of:
 - 2.1. Empathy
 - 2.2. Respect and Fairness
 - 2.3. Encouragement and Support
 - 2.4. Patience and Understanding
3. What is the level of Students’ Metacognitive Skills in terms of:
 - 3.1. Self-Control
 - 3.2. Self-Regulation
 - 3.3. Self-Reflection
 - 3.4. Self-Monitoring
 - 3.5. Task Completion
4. Is there a significant relationship between Instructional Factors and students’ metacognitive skills?
5. Is there a significant relationship between Affective Behavioral Factors and Students’ Metacognitive Skills?

II. METHODOLOGY

The researcher employed a quantitative research design using the descriptive-correlational method. Data were gathered from 210 student-respondents through a validated survey questionnaire and were evaluated using weighted mean, standard deviation, and Pearson Product Moment Correlation Coefficient.

III. RESULTS AND DISCUSSION

This part presented the different results and discussed the results from treating the data gathered in this study. All specific questions in Chapter 1 under the statement of the problem were answered in this chapter supported by tables. It presented the data gathered about the significant relationship between Instructional Factors, Affective Behavioral Factors and students’ metacognitive skills.

Level of Instructional Factors

In this study, the level of Instructional Factors referred to Teaching Methodologies, Appropriateness of Reading Materials, Availability of Reading Materials, and Collaboration and Interaction with Peers.

The following tables showed the statement, mean, standard deviation, remarks and verbal interpretation from the perspectives of respondents.

The statement “my teacher explains the lessons and gives appropriate examples” had a mean of 4.60 which suggested a very high level of Instructional Factors in terms of Teaching Methodologies and supported with Standard Deviation of 0.60. Also, the statements deliver lessons effectively to encourage students’ active participation. While a slightly

lower mean score of 4.29 with Standard Deviation of 0.70 was obtained in the statement that indicated my teacher modifies the teaching style to suit the learning needs of the students.

The level of Instructional Factors in terms of Teaching Methodologies attained a weighted mean score of 4.43 and a standard deviation of 0.64 and was verbally interpreted as very high among the respondents.

In summary, the outcome revealed that teachers demonstrated a very high level of effectiveness in their teaching methodologies. Clearly explained lessons, provided appropriate examples, implemented both group and individual reading activities, and modified their teaching style to meet students’ learning needs. The highest-rated behaviors were explaining the lessons and gives appropriate examples. ($M = 4.60$, $SD = 0.60$) and delivers lessons effectively to encourage students’ active participation. ($M = 4.58$, $SD = 0.58$), while modifying teaching style received a slightly lower, yet still very high rating ($M = 4.29$, $SD = 0.70$). Overall, the weighted mean ($M = 4.43$, $SD = 0.64$) implied that students identify their teacher as highly effective in employing various and engaging instructional strategies that promoted active learning.

Table 1. Level of Instructional Factors in terms of Teaching Methodologies

Statements	Mean	SD	Remarks
My teacher...			
...explains the lessons and gives appropriate examples.	4.60	0.60	Strongly Agree
...uses different strategies to make the reading lesson more engaging and fun.	4.31	0.71	Strongly Agree
...implements group and individual reading activities to enhance students’ reading comprehension.	4.44	0.67	Strongly Agree
...modifies the teaching style to suit the learning needs of the students.	4.29	0.70	Strongly Agree
...delivers lessons effectively to encourage students’ active participation.	4.58	0.58	Strongly Agree
Weighted Mean	4.43		
SD	0.64		
Verbal Interpretation	Very High		

Table 1 showed the level of Instructional Factors. Also displayed the statements, mean, standard deviation and remarks.

Table 2. Level of Instructional Factors in terms of Appropriateness of Reading Material

Statements	Mean	SD	Remarks
The reading materials are...			
...aligned with the lesson objectives.	4.36	0.69	Strongly Agree
...suited to the students’ grade level and comprehension ability.	4.23	0.75	Strongly Agree
...relevant in supporting students’ vocabulary development and comprehension skills.	4.47	0.67	Strongly Agree
...matched to the students’ level of understanding.	4.18	0.76	Agree
...interesting and related to daily life experiences.	4.26	0.77	Strongly Agree
Weighted Mean	4.30		
SD	0.70		
Verbal Interpretation	Very High		

Table 2 showed the level of Instructional Factors in terms of Appropriateness of Reading Materials. Also displayed the statements, mean, standard deviation and remarks.

The statement that the teaching materials are relevant in supporting students' vocabulary development and comprehension skills had mean of 4.47 suggested a very high level of Instructional Factors in terms of Appropriateness of Reading Materials and supported with Standard Deviation of 0.67. Also, in the statement aligned with the lesson objectives. While a slightly lower mean score of 4.18 with Standard Deviation of 0.76 was obtained in the statement that indicated it matched the students' level of understanding.

The level of Instructional Factors in terms of Appropriateness of Reading Materials attained a weighted mean score of 4.30 and a standard deviation of 0.70 and was verbally interpreted as very high among the respondents.

In summary, the outcomes revealed that the instructional materials used were strongly aligned with lesson objectives, relevant for vocabulary development and comprehension, and suited to the students' grade level and daily life experiences. Whereas one statement about matching the students' level of understanding scored slightly lower, it still reflected a positive perception. In general, the very high weighted mean ($M = 4.30$, $SD = 0.70$) demonstrated that students observed the reading materials as highly suitable and supportive of their learning needs, identifying the effectiveness of the instructional resources in enhancing understanding and engagement.

Table 3. Level of Instructional Factors in terms of Availability of Reading Materials

Statements	Mean	SD	Remarks
The reading materials are ...			
...available in sufficient copies for all students.	4.15	0.71	Agree
...easily accessible to students whenever needed.	4.09	0.74	Agree
...provided both in printed and digital formats.	4.09	0.76	Agree
...updated and available in the classroom and school library.	4.06	0.81	Agree
...supplemented by teachers to help students complete their reading tasks.	4.45	0.66	Agree
Weighted Mean	4.17		
SD	0.71		
Verbal Interpretation	High		

Table 3 showed the level of Instructional Factors in terms of Availability of Reading Materials. Also displayed the statements, mean, standard deviation and remarks.

The statement the reading materials are supplemented by teachers to help students complete their reading tasks had median of 4.45 suggested a very high level of Instructional Factors in terms of Availability of Reading Materials and supported with Standard Deviation of 0.66. Also, in the statement available in sufficient copies for all students. While a slightly lower mean score of 4.06 with Standard Deviation of 0.81 was obtained in the statement that indicated updated and available in the classroom and school library.

The level of Instructional Factors in terms of Availability of Reading Materials attained a weighted mean score of 4.17 and a standard deviation of 0.71 and was verbally interpreted as high among the respondents.

In summary, the outcomes revealed that the availability of reading materials was generally adequate, with most resources accessible in sufficient copies, formats, and locations to

support student learning. The reading materials were supplemented by teachers to help students complete reading tasks, which received the highest rating ($M = 4.45$, $SD = 0.66$), reflecting strong instructional support. Despite some aspects, such as updated and available in the classroom and school library scored slightly lower, they still received positive evaluations. In general, the students observed the availability of reading materials as high with weighted mean ($M = 4.17$) with ($SD = 0.71$) implying that the instructional resources were sufficiently provided to promote effective learning.

Table 4. Level of Instructional Factors in terms of Collaboration and Interaction with Peers

Statements	Mean	SD	Remarks
As a student, I can...			
...learn better through peer collaboration in reading.	4.29	0.73	Strongly Agree
...share ideas and opinion with classmates about the reading text.	4.28	0.76	Strongly Agree
...engage in reading discussions with classmates to enhance comprehension.	4.28	0.77	Strongly Agree
...complete reading tasks more effectively through group reading activities.	4.19	0.82	Agree
...participate in classroom discussions that promote respectful sharing of ideas about readings.	4.43	0.68	Strongly Agree
Weighted Mean	4.28		
SD	0.72		
Verbal Interpretation	Very High		

Table 4 showed the level of Instructional Factors in terms of Collaboration and Interaction with Peers. Also displayed the statements, mean, standard deviation and remarks.

The statement as a student, I can participate in classroom discussions that promote respectful sharing of ideas about readings had mean of 4.43 suggests a very high level of Instructional Factors in terms of Collaboration and Interaction with Peers with Standard Deviation of 0.68. Also, in the statement learn better through peer collaboration in reading. While a slightly lower mean score of 4.19 with Standard Deviation of 0.82 was obtained in the statement that indicated complete reading tasks more effectively through group reading activities.

The level of Instructional Factors in terms of Collaboration and Interaction with Peers attained a weighted mean score of 4.28 and a standard deviation of 0.72 and was verbally interpreted as very high among the respondents.

In summary, the outcome revealed that peer collaboration and interaction played a significant role in enhancing students' reading comprehension and engagement. Students strongly agreed that participating in classroom discussions, sharing ideas, and engaging in group reading activities help them learn more effectively, with the highest rating given to respectful classroom discussions ($M = 4.43$, $SD = 0.68$). Even the slightly lower-rated aspects, such as completing reading tasks through group activities ($M = 4.19$, $SD = 0.82$), still reflected positive perceptions. In general, the weighted mean ($M = 4.28$) with ($SD = 0.72$) demonstrated that collaboration and interaction with peers were highly appreciated by students as part of the instructional process, contributing essentially to their learning experience.

Level of Affective Behavioral Factors

In this study, the level of Affective Behavioral Factors referred to Empathy, Respect and Fairness, Encouragement and Support, and Patience and Understanding.

The following tables showed the statement, mean, standard deviation, remarks and verbal interpretation from the perspectives of respondents.

Table 5. Level of Affective Behavioral Factors in terms of Empathy

Statements	Mean	SD	Remarks
The teacher...			
...shows concern and gives advice when we have problems.	4.45	0.62	Strongly Agree
...expresses understanding when we experience difficulties.	4.31	0.67	Strongly Agree
...listens to our personal concerns.	4.43	0.64	Strongly Agree
...understands our struggles in learning.	4.31	0.70	Strongly Agree
...encourages us to understand and support their classmates' feelings.	4.44	0.64	Strongly Agree
Weighted Mean	4.39		
SD	0.63		
Verbal Interpretation	Very High		

Table 5 showed the level of Affective Behavioral Factors in terms Empathy. Also displayed the statements, mean, standard deviation and remarks.

The statement the teacher shows concern and gives advice when we have problems had mean of 4.45 suggested a very high level of Affective Behavioral Factors in terms of Empathy with Standard Deviation of 0.62. Also, in the statement encourages us to understand and support their classmates' feelings. While a slightly lower mean score of 4.31 with Standard Deviation of 0.67 was obtained in the statement that indicated expresses understanding when we experience difficulties. Together with, understands our struggles in learning had mean of 4.31 with Standard Deviation of 0.70.

The level of Affective Behavioral Factors in terms Empathy attained a weighted mean score of 4.39 and a standard deviation of 0.63 and was verbally interpreted as very high among the respondents.

In summary, the outcomes revealed that teachers demonstrate a very high level of empathy toward students. They showed genuine concern, provide advice, listen to personal concerns, and understand students' learning struggles, with the highest-rated behavior being giving advice and showing concern ($M = 4.45$) with ($SD = 0.62$). Even the slightly lower-rated behaviors, such as expressing understanding and recognizing students' difficulties ($M = 4.31$) with ($SD = 0.67-0.70$), still demonstrated strong positive understanding. In general, the weighted mean ($M = 4.39$) with ($SD = 0.63$) suggested that students observed their teacher as highly understanding, supportive, and observant to students' emotional and learning needs.

Table 6 showed the level of Affective Behavioral Factors in terms Respect and Fairness. Also displayed the statements, mean, standard deviation and remarks.

Table 6. Level of Affective Behavioral Factors in terms of Respect and Fairness

Statements	Mean	SD	Remarks
The teacher...			
...treats all of us equally and fairly.	4.53	0.63	Strongly Agree
...applies classroom rules equally to all of us.	4.44	0.69	Strongly Agree
...gives fair and unbiased grades.	4.41	0.70	Strongly Agree
...guides us to demonstrate respect for everyone inside the classroom.	4.49	0.63	Strongly Agree
...leads us to value and respect the differences and opinions of others.	4.56	0.57	Strongly Agree
Weighted Mean	4.47		
SD	0.62		
Verbal Interpretation	Very High		

The statement the teacher leads us to value and respect the differences and opinions of others had mean of 4.56 suggested a very high level of Affective Behavioral Factors in terms of Respect and Fairness with Standard Deviation of 0.57. Also, in the statement treats all of us equally and fairly. While a slightly lower mean score of 4.41 with Standard Deviation of 0.70 was obtained in the statement that indicates gives fair and unbiased grades.

The level of Affective Behavioral Factors in terms Respect and Fairness attained a weighted mean score of 4.47 and a standard deviation of 0.62 and was verbally interpreted as very high among the respondents.

In summary, the outcomes revealed that teachers exhibit a very high level of respect and fairness toward students. The teacher always treated students equally, applied classroom rules fairly, gave unbiased grades, and guide students to respect others' differences and opinions. The highest-rated behavior was leading students to value and respect differences ($M = 4.56$) with ($SD = 0.57$), while giving fair and unbiased grades received a slightly lower, but still very high rating ($M = 4.41$) with ($SD = 0.70$). in general, the weighted mean ($M = 4.47$) with ($SD = 0.62$) showed that students observed their teachers as highly fair, respectful, and dedicated to promoting an unbiased classroom environment.

Table 7. Level of Affective Behavioral Factors in terms of Encouragement and Support

Statements	Mean	SD	Remarks
The teacher...			
...provides encouragement whenever we make mistakes.	4.43	0.65	Strongly Agree
...gives positive feedback to help us improve our performance.	4.47	0.62	Strongly Agree
...helps us achieve their goals through appropriate support.	4.49	0.63	Strongly Agree
...promotes a learning environment that motivates us to work harder and not give up.	4.46	0.71	Strongly Agree
...motivates us to perform in our best in all learning activities.	4.47	0.69	Strongly Agree
Weighted Mean	4.45		
SD	0.63		
Verbal Interpretation	Very High		

Table 7 showed the level of Affective Behavioral Factors in terms Encouragement and Support. Also displayed the statements, mean, standard deviation and remarks.

The statement the teacher helps us achieve their goals through appropriate support had mean of 4.49 suggested a very high level of Affective Behavioral Factors in terms of Encouragement and Support with Standard Deviation of 0.63. Also, in the statement gives positive feedback to help us improve our performance and motivates us to perform in our best in all learning activities. While a slightly lower mean score of 4.43 with Standard Deviation of 0.65 was obtained in the statement that indicates provides encouragement whenever we make mistakes.

The level of Affective Behavioral Factors in terms of Encouragement and Support attained a weighted mean score of 4.45 and a standard deviation of 0.63 and was verbally interpreted as very high among the respondents.

In summary, the outcomes revealed that teachers established a very high level of encouragement and support toward students. They helped students achieve their goals through appropriate guidance, positive feedback, motivate students to perform their best, and create a learning environment that motivates them to work hard. The highest-rated behavior was helping students achieve their goals through support ($M = 4.49$) with ($SD = 0.63$), while providing encouragement after mistakes received a slightly lower, yet still very high rating ($M = 4.43$) with ($SD = 0.65$). In general, the weighted mean ($M = 4.45$) with ($SD = 0.63$) showed that students observed their teachers as highly supportive and motivating, supporting both confidence and effective learning.

Table 8. Level of Affective Behavioral Factors in terms of Patience and Understanding

Statements The teacher...	Mean	SD	Remarks
...remains calm even when we struggle.	4.35	0.68	Strongly Agree
...understands when we need extra help in class.	4.34	0.65	Strongly Agree
...gives enough time for us to learn difficult topics.	4.41	0.72	Strongly Agree
...demonstrates patience in managing our behavior.	4.37	0.67	Strongly Agree
...patiently explains lessons until we fully understand them.	4.52	0.65	Strongly Agree
Weighted Mean	4.39		
SD	0.65		
Verbal Interpretation	Very High		

Table 8 showed the level of Affective Behavioral Factors in terms of Patience and Understanding. Also displayed the statements, mean, standard deviation and remarks.

The statement the teacher patiently explained lessons until we fully understand them had mean of 4.52 suggested a very high level of Affective Behavioral Factors in terms of Patience and Understanding with Standard Deviation of 0.65. Also, in the statement gives enough time for us to learn difficult topics. While a slightly lower mean score of 4.34 with Standard Deviation of 0.65 was obtained in the statement that indicates understands when we need extra help in class. The level of Affective Behavioral Factors in in terms of Patience and Understanding attained a weighted mean score of 4.39 and a standard deviation of 0.65 and was verbally interpreted as very high among the respondents.

In summary, the outcomes revealed that teachers showed a very high level of patience and understanding toward students. The teacher patiently explained lessons until students fully understand the content, gives enough time to learn difficult topics, remain calm during struggles, and provide extra help when needed. The highest-rated behavior was patiently explaining lessons for full understanding ($M = 4.52$) with ($SD = 0.65$), while understanding students' needed for extra help received a slightly lower, but still very high rating ($M = 4.34$) with ($SD = 0.65$). In general, the weighted mean ($M = 4.3$) with ($SD = 0.65$) showed that students observed their teacher as highly patient, supportive, and observant to individual learning needs, fostering a positive and effective classroom environment.

Level of Students' Metacognitive Skills

In this study, the level of Students' Metacognitive Skills referred to Self-Control, Self-Regulation, Self-Reflection, Self-Monitoring, and Task Completion.

The following tables showed the statement, mean, standard deviation, remarks and verbal interpretation from the perspectives of respondents.

Table 9. Level of Students' Metacognitive Skills in terms of Self-Control

Statements As a student, I can...	Mean	SD	Remarks
...remain calm and composed during stressful situations.	4.14	0.80	Agree
...control my emotions when encountering difficult lessons.	4.04	0.79	Agree
...manage my behavior to remain productive in learning.	4.09	0.83	Agree
...stay focused on school tasks even when there are distractions.	4.11	0.83	Agree
...reflect before responding during class activities.	4.11	0.76	Agree
Weighted Mean	4.10		
SD	0.60		
Verbal Interpretation	High		

Table 9 showed the level of Students' Metacognitive in terms of Self-Control. Also displays the statements, mean, standard deviation and remarks.

The statement as a student, I can remain calm and composed during stressful situations had mean of 4.14 suggested a very high level of Students' Metacognitive Skills in terms of Self-Control with Standard Deviation of 0.80. Also, in the statement stay focused on school tasks even when there were distractions and reflect before responding during class activities. While a slightly lower mean score of 4.04 with Standard Deviation of 0.79 was obtained in the statement that indicated control my emotions when encountering difficult lessons.

The level of Students' Metacognitive in terms of Self-Control, attained a weighted mean score of 4.10 and a standard deviation of 0.60 and was verbally interpreted as high among the respondents.

In summary, the outcomes revealed that students showed a high level of metacognitive skills in terms of self-control. The students were able to remain calm during stressful situations, manage behavior to remain productive, stay focused on school

tasks even when there were distractions, and reflected before responding in class activities. The highest-rated behavior was remaining calm and composed during stressful situations ($M = 4.14$) with ($SD = 0.80$), while controlling emotions during difficult lessons received a slightly lower, but still positive rating ($M = 4.04$) with ($SD = 0.79$). In general, the weighted mean ($M = 4.10$) with ($SD = 0.60$) indicated that students observed themselves as mostly efficient of self-regulation, providing to more effective learning and classroom participation.

Table 10. Level of Students' Metacognitive Skills in terms of Self-Regulation

Statements	Mean	SD	Remarks
As a student, I can...			
...maintain concentration to complete tasks effectively.	4.22	0.72	Strongly Agree
...monitor my actions to achieve our learning goals.	4.11	0.71	Agree
...follow study plans and schedules to maintain learning progress.	3.99	0.84	Agree
...adjust learning strategies when lessons become difficult.	4.01	0.78	Agree
...set and organize goals to achieve learning success.	4.11	0.76	Agree
Weighted Mean	4.09		
SD	0.58		
Verbal Interpretation	High		

Table 10 showed the level of Students' Metacognitive in terms of Self-Regulation. Also displayed the statements, mean, standard deviation and remarks.

The statement as a student, I can maintain concentration to complete tasks effectively had mean of 4.22 suggested a very high level of Students' Metacognitive Skills in terms of Self-Regulation with Standard Deviation of 0.72. Also, in the statement set and organize goals to achieve learning success. and monitor my actions to achieve our learning goals. While a slightly lower mean score of 3.99 with Standard Deviation of 0.84 was obtained in the statement indicated follow study plans and schedules to maintain learning progress.

The level of Students' Metacognitive in terms of Self-Regulation. attained a weighted mean score of 4.09 and a standard deviation of 0.58 and was verbally interpreted as high among the respondents.

In summary, the outcomes revealed that students showed a high level of metacognitive skills in terms of self-regulation. The students were able to maintain concentration to complete tasks effectively, set and organize goals to achieve learning success, monitor their actions to achieve learning goals, and adjust strategies when lessons became difficult. The highest-rated behavior was maintaining concentration to complete tasks effectively ($M = 4.22$) with ($SD = 0.72$), while following study plans and schedules to maintain learning progress obtained a slightly lower, yet still positive rating ($M = 3.99$) with ($SD = 0.84$). In general, the weighted mean ($M = 4.09$) with ($SD = 0.58$) implied that students observed themselves as mostly capable of regulating their learning processes, which supported productive and goal-oriented academic behavior.

Table 11 showed the level of Students' Metacognitive in terms of Self-Reflection. Also displayed the statements, mean, standard deviation and remarks.

Table 11. Level of Students' Metacognitive Skills in terms of Self-Reflection

Statements	Mean	SD	Remarks
As a student, I can...			
...observe learning experiences to improve comprehension.	4.17	0.76	Agree
...reflect on my strengths and weaknesses in learning.	4.03	0.75	Agree
...apply reflections to improve my learning strategies.	4.06	0.78	Agree
...analyze my mistakes to improve future learning performance.	3.98	0.77	Agree
...assess my study habits to identify effective techniques.	4.05	0.74	Agree
Weighted Mean	4.06		
SD	0.56		
Verbal Interpretation	High		

The statement as a student, I can observe learning experiences to improve comprehension had mean of 4.17 suggested a very high level of Students' Metacognitive Skills in terms of Self-Reflection with Standard Deviation of 0.76. Also, in the statement apply reflections to improve my learning strategies. While a slightly lower mean score of 3.98 with Standard Deviation of 0.77 was obtained in the statement indicated analyze my mistakes to improve future learning performance.

The level of Students' Metacognitive in terms of Self-Reflection attained a weighted mean score of 4.06 and a standard deviation of 0.56 and was verbally interpreted as high among the respondents.

In summary, the outcomes revealed that students showed a high level of metacognitive skills in terms of self-reflection. The students were able to observe learning experiences to improve comprehension, reflected on their strengths and weaknesses in learning, applied reflection to improve learning strategies, analyze mistakes to improve future learning performance, and assess study habits to identify effective techniques. The highest-rated behavior was observing learning experiences to improve comprehension ($M = 4.17$) with ($SD = 0.76$), while analyzing mistakes to improve future learning performance a slightly lower, but still positive rating ($M = 3.98$, $SD = 0.77$). In general, the weighted mean ($M = 4.06$) with ($SD = 0.56$) suggested that students observed themselves as suited to reflective learning, which contributed to continuous improvement and more effective academic performance.

Table 12 showed the level of Students' Metacognitive in terms of Self-Monitoring. Also displayed the statements, mean, standard deviation and remarks.

The statement as a student, I can seek help from my teacher when needed had mean of 4.08 suggested a very high level of Students' Metacognitive Skills in terms of Self-Monitoring with Standard Deviation of 0.80. Also, in the statement reflect on understanding of the lessons taught. While a slightly lower mean score of 3.84 with Standard Deviation of 0.81 was obtained in the statement that indicated identify areas in learning that require improvement. The level of Students' Metacognitive in terms of Self-Reflection attained a weighted mean score of 3.94 and a standard deviation of 0.57 and was verbally interpreted as high among the respondents.

Table 12. Level of Students' Metacognitive Skills in terms of Self-Monitoring

Statements	Mean	SD	Remarks
As a student, I can...			
...seek help from my teacher when needed.	4.08	0.80	Agree
...reflect on understanding of the lessons taught.	4.01	0.68	Agree
...monitor and record my academic progress.	3.86	0.84	Agree
...identify areas in learning that require improvement.	3.84	0.81	Agree
...track my academic progress across all subjects consistently.	3.92	0.78	Agree
Weighted Mean	3.94		
SD	0.57		
Verbal Interpretation	High		

In summary, the outcomes revealed that students showed a high level of metacognitive skills in terms of self-monitoring. They were able to seek help from teachers when needed, reflect on their understanding of lessons, track academic progress, and identify areas in learning that require improvement. The highest-rated behavior was seeking help from the teacher ($M = 4.08$) with ($SD = 0.80$), while identifying areas in learning that required improvement received a slightly lower, yet still positive rating ($M = 3.84$) with ($SD = 0.81$). In general, the weighted mean ($M = 3.94$) with ($SD = 0.57$) suggested that students were mostly capable of monitoring their learning effectively, which supports academic growth and self-directed learning.

Table 13. Level of Students' Metacognitive Skills in terms of Task Completion

Statements	Mean	SD	Remarks
As a student, I can...			
...accomplish all academic requirements on time.	3.77	0.82	Agree
...finish schoolwork promptly before the deadline.	3.80	0.76	Agree
...complete assignments even when they are challenging.	3.82	0.74	Agree
...ensure that my projects and homework are completed through sustained effort.	3.83	0.71	Agree
...take responsibility for completing tasks without being reminded.	3.80	0.79	Agree
Weighted Mean	3.84		
SD	0.60		
Verbal Interpretation	High		

Table 13 showed the level of Students' Metacognitive in terms of Task Completion. Also displayed the statements, mean, standard deviation and remarks.

The statement as a student, I can ensure that my projects and homework were completed through sustained effort had mean of 3.83 suggested a very high level of Students' Metacognitive Skills in terms of Self-Monitoring with Standard Deviation of 0.71. Also, in the statement reflect on understanding of the lessons taught complete assignments even when they are challenging. While a slightly lower mean score of 3.77 with Standard Deviation of 0.82 was obtained in the statement that indicated accomplish all academic requirements on time. The level of Students' Metacognitive in terms of Self-Reflection attained a weighted mean score of 3.84 and a standard deviation of 0.60 and was verbally interpreted as high among the respondents.

In summary, the outcomes revealed that students showed a high level of metacognitive skills in terms of task completion.

The students were able to accomplish academic requirements on time, finish schoolwork promptly before the deadline, complete challenging assignments, ensured effort in projects and homework, and take responsibility for completing tasks independently. The highest-rated behavior was ensuring projects and homework were completed through sustained effort ($M = 3.83$) with ($SD = 0.71$), while accomplishing all academic requirements on time received a slightly lower, but still positive rating ($M = 3.77$), ($SD = 0.82$). In general, the weighted mean ($M = 3.84$) with ($SD = 0.60$) suggested that students were generally suited on managing and completing academic tasks effectively, demonstrating responsibility and self-discipline in their learning.

Significant Relationship between the Instructional Factors and Students' Metacognitive Skills

To test the significant relationship between the Instructional Factors and students' metacognitive skills in terms of Self-Control, Self-Regulation, Self-Reflection, Self-Monitoring, and Task Completion they were treated statistically using Real Statistics Data Analysis Tools using the Pearson Product Moment Correlation Coefficient.

Table 14. Significant Relationship between the Instructional Factors and Students' Metacognitive Skills

Instructional Factors		Self-Control	Self-Regulation	Self-Reflection	Self-Monitoring	Task Completion
Teaching Methodologies	Pearson Correlation	.151**	.141**	.167**	.152**	.086**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209
Appropriateness of Reading Materials	Pearson Correlation	.134**	.089**	.137**	.136**	.010**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209
Availability of Reading Materials	Pearson Correlation	.110**	.199**	.173**	.144**	.095**
	Sig. (2-tailed)	.008	.004	.000	.000	.000
	N	209	209	209	209	209
Collaboration and Interaction with Peers	Pearson Correlation	.323**	.278**	.328**	.265**	.199**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209

A significant positive correlation was observed between Instructional Factors in terms of teaching methodologies, appropriateness of reading materials, availability of reading materials, and collaboration and interaction with peers and students' metacognitive skills in terms of Self-Control, Self-Regulation, Self-Reflection, Self-Monitoring, and Task Completion, indicating that students who studied more tended to achieve higher scores ($r(209) p < .001, N=210$). This suggested that increased Instructional Factors was associated with better students' metacognitive skills.

Significant Relationship between the Affective Behavioral Factors and Students' Metacognitive Skills

To test the significant relationship between the Affective Behavioral Factors and students' metacognitive skills in terms of Self-Control, Self-Regulation, Self-Reflection, Self-Monitoring, and Task Completion they were treated statistically using Real Statistics Data Analysis Tools using the Pearson Product Moment Correlation Coefficient.

Table 15. Significant Relationship between the Affective Behavioral Factors and Students' Metacognitive Skills

Affective Factors	Behavioral	Self-Control	Self-Regulation	Self-Reflection	Self-Monitoring	Task Completion
Empathy	Pearson Correlation	.129**	.125**	.120**	.085**	.008**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209
Respect and Fairness	Pearson Correlation	.108**	.210**	.171**	.187**	.052**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209
Encouragement and Support	Pearson Correlation	.240**	.259**	.234**	.220**	.164**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209
Patience and Understanding	Pearson Correlation	.227**	.230**	.212**	.132**	.168**
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	209	209	209	209	209

A significant positive correlation was observed between Affective Behavioral Factors in terms of empathy, respect and fairness, encouragement and support and patience and understanding and students' metacognitive skills in terms of Self-Control, Self-Regulation, Self-Reflection, Self-Monitoring, and Task Completion, indicating that students who studied more tended to achieve higher scores ($r(209) p < .001$, $N=210$). This suggested that increased Affective Behavioral Factors was associated with better students' metacognitive skills.

IV. CONCLUSION AND RECOMMENDATIONS

It is concluded that instructional factors, primarily teaching methodologies, appropriateness of reading materials, availability of reading materials, and collaboration and interaction with peers, show a significant positive relationship with students' metacognitive skills. This indicates that students' metacognitive skills improve when teachers employ effective teaching strategies, provide suitable and accessible learning materials, and promote collaborative peer interaction.

The result further implies that instructional factors play a crucial role in enhancing students' metacognitive skills. Thus, the null hypothesis stating that there is no significant relationship between instructional factors and students' metacognitive skills is rejected.

It is concluded that affective behavioral factors, such as empathy, respect and fairness, encouragement and support, and patience and understanding, show a significant positive influence on students' metacognitive skills. This indicates that students are more likely to improve their metacognitive skills, engagement, and confidence when guided by supportive and emotionally responsive teachers. The result further implies that affective behavioral factors play an important role in enhancing students' learning experiences and self-directed learning. Thus, the null hypothesis stating that there is no significant relationship between affective behavioral factors and students' metacognitive skills is rejected.

Based on the conclusions drawn, the researcher formulated the following recommendations:

The teachers are fostered to maintain administering effective teaching methodologies and delivering clear, well-organized learning activities that uphold students' reflective and self-regulated learning.

Schools administrators may continue to apply policies, programs and interventions that foster metacognitive skills among students. Also, to contribute sufficient, up-to-date, and accessible learning materials in both print and digital formats to further strengthen students' engagement, comprehension, and self-directed learning.

Teachers may replenish a classroom environment distinguished by empathy, fairness, encouragement, and patience, as these positively influence students' motivation, confidence, and metacognitive awareness.

Students may continue to collaborate in different strategies to strengthen their metacognitive skills and learning performances to promote lifelong learning.

Future researchers may investigate supplementary variables related to instructional or affective-behavioral factors, or conduct studies throughout different grade levels, to enriching knowledge and broaden the application of these findings.

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