

Interdisciplinary Performance Task: It's Relationship to the Students Learning Engagement and Creativity

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Abstract—The purpose of this study was to determine the relationship of interdisciplinary performance tasks on student learning engagement and creativity. Specifically, it sought the following questions, the level of interdisciplinary performance tasks, the level of student learning engagement and creativity. Also to find is there a significant relationship between interdisciplinary performance tasks on students learning engagement and creativity. The descriptive correlational research design was used in the study and it involved one hundred fifty-eight students from Maranatha Christian Academy of Santa Cruz, Bay and Calauan Chapter, through simple random sampling. The data were gathered through a distributed validated self-made questionnaire. The statistical methods used were the mean and standard deviation to calculate the level of the interdisciplinary performance task, students learning engagement and creativity. Pearson product correlation was the inferential statistic used to determine the relationship of interdisciplinary performance tasks to the student learning engagement and creativity. The findings shows that the level of interdisciplinary performance tasks was very high across various dimensions except subject integration which is high. Likewise, the level of students learning engagement was very highly engaged across various dimensions except time management which is highly engaged. Along with this is the level of students' creativity was very high across various dimensions except self-regulation which is high creativity. This indicates that the level of interdisciplinary performance tasks is positively correlated on students' learning engagement and creativity. These findings suggest that incorporating interdisciplinary performance tasks into the learning environment can significantly strengthen students' engagement and foster the development of their creativity. Therefore, it is concluded that the null hypotheses have been rejected. The study's conclusions led to the following recommendations. School administrators may continue providing professional development programs, interdisciplinary lesson planning training, assessment design seminars, and student engagement strategies workshops to help teachers create structured and authentic interdisciplinary tasks that align with curriculum standards that encourage students' motivation and active participation. Also, educators may continuously integrate interdisciplinary performance tasks (IDPT) into their instructional practices that promote collaboration to enhance students' learning engagement and creativity.

Keywords— Interdisciplinary performance task, subject integration, learning engagement, creativity, task orientation.

I. INTRODUCTION

Today's education system is more inclined towards developing higher order thinking skills and encouraging active student participation to prepare them for the 21st century. Traditional approaches which keep the subjects isolated tend to limit the students' ability to see connections across subjects

and to apply what they actually know in real situations. To address this gap, the Interdisciplinary Performance Task (IDPT) has emerged as an innovative strategy that integrates concepts, skills, and processes from multiple subject areas into a unified learning experience.

IDPT enables students to integrate concepts and skills from several disciplines in order to accomplish meaningful and real-world tasks, in contrast to typical subject-based activities. This integration makes learning more relevant to real-life situations, which naturally increases students' interest and motivation to participate.

The collaborative nature of interdisciplinary tasks also strengthens engagement. When students work in teams to complete integrated projects, they communicate ideas, negotiate solutions, and support one another's learning. Their involvement in the learning process is further strengthened by this social interaction, which fosters a sense of connection and shared responsibility. The level of students' commitment, interest, and involvement in the process of learning is referred to as student learning engagement. When interdisciplinary performance tasks are given to students, they are more likely to perceive learning as relevant and meaningful, which increases their motivation and active participation in classroom activities.

Moreover, interdisciplinary performance tasks play a significant role in fostering creativity. Creativity involves generating original ideas, making connections across concepts, and producing meaningful and innovative outputs. Since IDPT requires students to integrate knowledge from different disciplines, explore multiple perspectives, and design authentic products or solutions, it provides opportunities for creative thinking and expression. Students are encouraged not only to recall information but also to transform and apply it in unique ways.

Therefore, understanding the relationship between interdisciplinary performance tasks, student learning engagement, and creativity is essential in enhancing instructional practices. By examining how IDPT influences engagement and creativity, educators can design more meaningful learning experiences that equip students to meet the challenging demands of the 21st century.

1.1 Statement of the Problem

Problem/s which were addressed by the research

The purpose of this study was to determine the relationship of interdisciplinary performance task on student learning engagement and creativity.

Specifically, it sought the following questions.

1. What is the level of interdisciplinary performance task in terms of:
 - 1.1 Learning Objectives;
 - 1.2 Subject Integration;
 - 1.3 Technology Integration;
 - 1.4 Scoring Tool;
2. What is the level of students learning engagement in terms of:
 - 2.1 Motivation;
 - 2.2 Goal Setting;
 - 2.3 Active Participation;
 - 2.4 Collaboration;
 - 2.5 Time Management;
3. What is the level of students' creativity in terms of:
 - 3.1 Task Orientation;
 - 3.2 Metacognition;
 - 3.3 Self – Regulation;
 - 3.4 Reflection;
4. Is there a significant relationship between interdisciplinary performance task and students learning engagement?
5. Is there a significant relationship between interdisciplinary performance task and student's creativity?

II. METHODOLOGY

The descriptive correlational research design was used in the study and it involved one hundred fifty-eight students from Maranatha Christian Academy of Santa Cruz, Bay and Calauan Chapter, through simple random sampling. The data were gathered through a distributed validated self-made questionnaire. The statistical methods used were the mean and standard deviation to calculate the level of the interdisciplinary performance task, students learning engagement and creativity. Pearson product correlation was the inferential statistic used to determine the relationship of interdisciplinary performance tasks to the student learning engagement and creativity.

III. RESULTS AND DISCUSSION

This part presents, analyzes, and interprets the data collected to examine the significant relationship between interdisciplinary performance tasks on student learning engagement and creativity.

In this study, the level of interdisciplinary performance tasks refers to real-life tasks where students integrate knowledge from different disciplines to demonstrate their learning. It includes variables such as learning objectives, subject integration, technology integration, and scoring tool. The level of this interdisciplinary performance task was determined by mean and standard deviation.

Table 1 shows the level of interdisciplinary performance tasks in terms of learning objectives. It highlights how students perceive their participation in interdisciplinary performance tasks (IDPT) and how these tasks help them align their efforts with clearly defined learning objectives.

The results reveal that students strongly agree that their participation in IDPT helps them understand instructions, use the objectives as a guide in completing tasks, and recognize

the connection between tasks and lessons from different subjects. Students also perceive that learning objectives enhance their ability to integrate knowledge across disciplines and encourage collaboration and teamwork with classmates. These findings imply that clearly defined learning objectives help students stay focused, organized, and actively involved in interdisciplinary learning activities while strengthening understanding, engagement, and academic performance.

The weighted mean of 4.32 and standard deviation of 0.79 indicates a very high level of interdisciplinary performance tasks in terms of learning objectives. This implies that learning objectives are consistently evident and effectively guide students in performing tasks, which supports better understanding, integration of knowledge, and collaborative learning among students.

Level of Interdisciplinary Performance Task

Table 1. Level of interdisciplinary performance task in terms of Learning Objectives

Statements	Mean	SD	Remarks
My participation in IDPT allows me to align my efforts to specific objectives by...			
...understanding the instructions.	4.44	0.67	Strongly Agree
...finding it as a useful guide in completing the task.	4.27	0.82	Strongly Agree
...believing this are connected to what I have learned in different subjects.	4.29	0.84	Strongly Agree
...thinking that this helps me improve my ability to integrate knowledge across subjects.	4.28	0.79	Strongly Agree
...feeling that this promotes collaboration and teamwork with my classmates.	4.28	0.84	Strongly Agree
Weighted Mean	4.32		
SD	0.79		
Verbal Interpretation	Very High		

The findings emphasize that learning objectives contribute essential function in the successful implementation of interdisciplinary performance tasks. The strong level of student agreement demonstrates that well-structured objectives promote meaningful learning experiences, encourage teamwork, and support knowledge integration across subjects, ultimately strengthening students' academic engagement and performance in various classroom learning environments effectively.

Table 2. Level of interdisciplinary performance task in terms of Subject Integration

Statements	Mean	SD	Remarks
My participation in IDPT help me integrate knowledge from various subjects through...			
...understanding the topic more deeply.	4.19	0.82	Agree
...seeing clearly how different subjects are connected.	4.15	0.92	Agree
...appreciating the usefulness of each subject in real life.	4.20	0.89	Agree
...making this more meaningful and realistic.	4.15	0.84	Agree
...encouraging myself to transfer my learning from one subject to another.	4.12	0.89	Agree
Weighted Mean	4.17		
SD	0.87		
Verbal Interpretation	High		

Table 2 reveals the level of interdisciplinary performance task in terms of subject integration. It highlights how students

perceive their participation in interdisciplinary performance tasks (IDPT) and how these tasks help them clarify the connections of each subject with different learning competencies.

The results reveal that students agree that their participation in IDPT helps them understand their topic deeply, clearly see the connection between each subject, and appreciate the usefulness of it in real life situation. Students also perceived that integration of knowledge from different learning areas makes their performance task more meaningful and realistic, and encouraged them to transmit ideas from one subject to another. These findings imply that knowledge integration from different subject helps the students to understand, connect and transfer ideas between different learning area, and make meaningful and realistic interdisciplinary learning activities.

The weighted mean of 4.17 and standard deviation of 0.87 indicates a high level of interdisciplinary performance tasks in terms of subject integration. This imply that subject integration is evidently and effectively guide students in performing tasks, which supports deep understanding between connection of different learning areas, usefulness in real life, and make meaning and realistic interdisciplinary learning activities.

The findings emphasize that subject integration contribute essential function in the successful implementation of interdisciplinary performance tasks. The level of student's agreement validates that integrated knowledge from various subjects promote deep understanding, connect ideas, and transfer knowledge across subjects, ultimately creating a meaningful and realistic performance task. Furthermore, subject integration encourages students to view concepts from multiple perspectives, enhancing their critical thinking skills. It also helps 1 Students' learning experiences become more relevant and meaningful when they apply what they have learned in the classroom to real-world scenarios.

Table 3 shows the level of interdisciplinary performance task in terms of technology engagement. It highlights how students perceive their participation in interdisciplinary performance tasks (IDPT) and how these tasks help them align their efforts with utilization of technology tools.

Table 3. Level of interdisciplinary performance task in terms of Technology Integration

Statements	Mean	SD	Remarks
My participation in IDPT enables me to utilize technology tools by...			
...allowing to use varied educational gadget like laptops, tablets, apps, online platforms.	4.22	1.02	Strongly Agree
...improving my digital literacy skills like research, presentations, online collaboration.	4.32	0.85	Strongly Agree
...believing that technology is reliable and functional.	4.37	0.82	Strongly Agree
...considering this approach more engaging and interesting.	4.25	0.84	Strongly Agree
...presenting my ideas more effectively.	4.39	0.81	Strongly Agree
Weighted Mean	4.31		
SD	0.87		
Verbal Interpretation	Very High		

The results reveal that students strongly agree that their participation in IDPT enables students to utilize technology tools, gadgets, apps and online platforms, improve their digital literacy skills and believe on its reliability in completing interdisciplinary task. Students also perceive that utilization of technology tools motivates them in completing the task and presents their idea. These findings imply technology integration allow students to complete the task easily, and portray their idea efficiently in interdisciplinary performance task.

The weighted mean of 4.31 and standard deviation of 0.87 indicates a very high level of interdisciplinary performance tasks in terms of technology integration. This imply that utilizations of technology reliably help the students in performing tasks, which motivates students to easily complete the task, and present their ideas on their interdisciplinary task.

The findings emphasize that technology integration contribute essential function in the successful implementation of interdisciplinary performance tasks. The strong level of student agreement proves that technology tools and educational gadgets promote reliable and interesting features that helps the students complete the task and present their idea easily and effectively. The effective use of technology enhances students' creativity and confidence in presenting interdisciplinary outputs. It also supports meaningful collaboration among learners, allowing them to share ideas and construct knowledge more efficiently. Moreover, technology integration enables more interactive and learner-centered experiences that strengthen overall academic performance.

Table 4 shows the level of interdisciplinary performance task in terms of scoring tool. It highlights how students perceive their participation in interdisciplinary performance tasks (IDPT) and how these tasks help them align their efforts with clearly defined scoring tool. This indicates that clear and structured scoring tool guide students in understanding expectations and improving the quality of their performance.

Table 4. Level of interdisciplinary performance task in terms of Scoring Tool

Statements	Mean	SD	Remarks
My participation in IDPT guides my work through clear scoring tool by...			
...understanding each criterion in the r scoring tool and what it meant for the task.	4.32	0.84	Strongly Agree
...guiding me in aligning my task with the learning objectives.	4.28	0.77	Strongly Agree
...helping me to improve the creativity and quality of my work.	4.37	0.85	Strongly Agree
...motivating me to assess my progress before submission/presentation.	4.25	0.82	Strongly Agree
...demonstrating that it is fair.	4.23	0.90	Strongly Agree
Weighted Mean	4.29		
SD	0.84		
Verbal Interpretation	Very High		

The results reveal that students strongly agree that their participation in IDPT helps them understand the criterion and meaning of scoring tool for the task, clearly stated scoring tool, align with learning objectives, use as a guide in completing tasks, and improve the creativity and quality of

their works. Students also perceive that scoring tool motivates them to assess my progress before submission/presentation and makes the demonstration fair in scoring the task they made. These findings imply that clearly defined scoring tool leads students to create, organized, and present their work fair for scoring. This further highlights the importance of transparency in assessment for improving student accountability and performance quality outcomes.

The weighted mean of 4.29 and standard deviation of 0.84 indicates a very high level of interdisciplinary performance tasks in terms of scoring tool. This imply that scoring tool are reliably evident and successfully lead students in performing tasks, which supports better understanding, and fair presentation of interdisciplinary performance task. Clear and well-defined scoring tool provide students with transparent expectations that enhance the quality and consistency of their outputs.

The findings emphasize that IDPT scoring tool contribute crucial role in the successful enactment of interdisciplinary performance tasks. The strong level of student agreement demonstrates that well-structured scoring tool promotes equitable demonstration of interdisciplinary learning activities and ultimately strengthening students' creativity and work quality.

Level of Student Learning Engagement

In this study the level of student learning engagement refers to the student's active involvement, interest, and involvement in the learning process. The following tables present students' level of engagement in terms of motivation, goal-setting, active participation, teamwork, and time management, as measured using mean and standard deviation.

Table 5 shows the level of student learning engagement in terms of motivation. It highlights how IDPT motivate students on their learning engagement. The data that students respond positively when tasks are interdisciplinary and relevant to real-life contexts. This suggests that integrating multiple subjects in performance tasks can significantly enhance both interest and persistence in learning.

grades, found creative solutions in doing task, and feel proud when they successfully completed their part. Students also agree that they feel less overwhelmed because subjects were integrated into one performance task which lessened individual pressure. These findings imply that through IDPT, students can actively engage, insert effort and boost their inspiration in completing the task while fostering motivation and resilience.

The weighted mean of 4.39 and standard deviation of 0.83 indicates a very high level of students learning engagement in terms of motivation. This imply that, through IDPT, student motivation is unfailingly evident and positively encourage students in learning engagement, which helps students engaged and inspired completing their task. The results suggest that interdisciplinary performance tasks create an environment where students feel challenged yet supported. It also shows that students are more likely to take initiative and actively participate when learning activities are meaningful and connected to real-life situations. Overall, this highlights the significant role of IDPT in fostering sustained motivation and a deeper commitment to learning.

The findings emphasize that participation in IDPT contributes vital part in the student learning engagement in terms of motivation. The strong level of student agreement demonstrates that through IDPT, the students were inspired, motivated and proud to perform their learning task. It also shows that interdisciplinary tasks help students set meaningful goals and take ownership of their learning.

Table 6 shows the level of student learning engagement in terms of goal setting. It highlights how IDPT create goal on students learning engagement. The results found that students become more focused and deliberate in planning their tasks when clear goals are established. This also encourages students to keep an eye on their development and take responsibility for their studies, leading to higher commitment and achievement.

Table 6. Level of student learning engagement in terms of Goal Setting

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...understand the goals and its purpose.	4.37	0.82	Strongly Agree
...stay focus and on track while completing the task.	4.32	0.87	Strongly Agree
...apply what I have learned in class.	4.23	0.90	Strongly Agree
...find that the goals guide me in planning and completing my work.	4.28	0.84	Strongly Agree
...see that the goals are realistic and achievable.	4.29	0.81	Strongly Agree
Weighted Mean	4.30		
SD	0.85		
Verbal Interpretation	Very Highly Engaged		

The results reveal that students strongly agree that through IDPT they can understand the goals and purpose of their task, stay focused and on track, and apply what they learned in class. Students also perceive that IDPT guide them in planning and completing their work and see realistic and achievable goals. These findings imply that through IDPT, students can concentrate, participate, and moved completing the task.

Table 5. Level of student learning engagement in terms of Motivation

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...do well because I want to learn new things.	4.40	0.81	Strongly Agree
...put effort because I want to get good grades.	4.58	0.70	Strongly Agree
...find creative solutions when doing it.	4.43	0.77	Strongly Agree
feel less overwhelmed because subjects were ...integrated into one performance task which lessened individual pressure.	3.94	0.95	Agree
...feel proud when I successfully complete a part of the task.	4.58	0.73	Strongly Agree
Weighted Mean	4.39		
SD	0.83		
Verbal Interpretation	Very Highly Engaged		

The results reveal that students strongly agree that through IDPT, they can do well on their task because they want to learn new things, put an effort because they want to get good

The weighted mean of 4.39 and standard deviation of 0.83 indicates a very high level of students learning engagement in terms of goal setting. This imply that, through IDPT, students' goal setting is dependably evident and absolutely encourage students in learning engagement, which supports students understand, focused, engaged and inspired completing their task with consistent motivation and sustained academic performance.

The findings emphasize that participation in IDPT contribute vital part in the student's learning engagement in terms of goal setting. The strong level of student agreement demonstrates that through IDPT, the students understand, focused, on tract and eventually see realistic and achievable goals.

Table 7 shows the level of student learning engagement in terms of active participation. It highlights how IDPT develops active participation on students learning engagement.

The results reveal that students strongly agree that through IDPT they can become more confident in their abilities, initiate to perform the assigned role, exert best effort in task accomplishment and contribute suggestions that helps to improve their task output. Students also agree that IDPT keep them more engaged because it relates to their interests and experiences. These findings imply that through IDPT, students become more confident, determined, and actively contribute ideas in improving their performance in learning activities. This also suggests that IDPT fosters a sense of ownership and responsibility in students' learning process. Furthermore, it strengthens their ability to express ideas effectively in group settings.

The weighted mean of 4.27 and standard deviation of 0.88 indicates a very high level of students learning engagement in terms of active participation. This imply that, through IDPT, students' active participation are consistently evident and undeniably prompt students learning engagement, which persuades students commitment and actively participate in task completion in different integrated learning activities.

Table 7. Level of student learning engagement in terms of Active Participation

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...become more confident in my abilities.	4.27	0.85	Strongly Agree
...keep myself more engaged because it relates to my interests and experiences.	4.11	0.92	Agree
...take the initiative in performing my assigned role.	4.32	0.85	Strongly Agree
...give my best effort in accomplishing it.	4.41	0.84	Strongly Agree
...contribute suggestions that helps to improve it.	4.23	0.90	Strongly Agree
Weighted Mean	4.27		
SD	0.88		
Verbal Interpretation	Very Highly Engaged		

The findings emphasize that IDPT give important part in the students learning engagement in terms of active participation. The strong level of student agreement proves that through IDPT, the students performed, initiate ideas and ultimately strengthen active participation to complete learning task.

Table 8 shows the level of student learning engagement in terms of collaboration. It highlights how IDPT creates interactive participation among students learning engagement. The findings suggest that students actively collaborate, share ideas, and contribute to group discussions during tasks. This interactive environment not only strengthens communication abilities but also fosters a feeling of belonging and collective accountability in learning.

Table 8. Level of student learning engagement in terms of Collaboration

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...actively exchange ideas with my groupmates.	4.14	0.97	Agree
...respect and value the contributions of my classmates.	4.43	0.77	Strongly Agree
...share roles and responsibilities to accomplish the task.	4.37	0.84	Strongly Agree
...ask questions or seek clarification from my teacher when I need help.	4.43	0.72	Strongly Agree
...encourage more interaction in our group discussions.	4.31	0.87	Strongly Agree
Weighted Mean	4.34		
SD	0.84		
Verbal Interpretation	Very High Engaged		

The results reveal that students strongly agree that through IDPT they can respect and value the contributions of other, share roles and responsibilities, ask questions or seek clarification from their teacher when they need help, and encourage more within group discussions and. Students also agree that through IDPT they can actively exchange ideas with my groupmates. These findings imply that with the use of IDPT, students can communicate, become more open, and respectful to the ideas of others while performing authentic and meaningful learning activities.

The weighted mean of 4.34 and standard deviation of 0.84 indicates a very high level of students learning engagement in terms of interactive participation. This imply that, through IDPT, students' interactive participations are consistently evident and undeniably enhance students learning engagement, which influences students to communicate, share role and responsibilities, respect other's idea, and interactively participate in task accomplishment. These results suggest that collaborative tasks help students develop teamwork and problem-solving skills. Moreover, such active participation fosters a supportive learning environment where students are motivated to contribute meaningfully and learn from one another.

The findings emphasize that IDPT contribute significant part in the students learning engagement in terms of interactive participation. The strong level of student agreement proves that through IDPT, the students developed communication, respectfully value the idea of other and ultimately strengthen interactive participation to complete learning task.

Table 9 shows the level of student learning engagement in terms time management. It highlights how IDPT helps students manage their time on their learning engagement. This suggests that students become more organized and efficient in planning and completing their tasks within set deadlines.

Table 9. Level of student learning engagement in terms of Time Management

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...create a clear plan or schedule before starting it.	4.15	0.97	Agree
...divide my work into smaller tasks to manage my time effectively.	4.15	0.90	Agree
...use my allotted time wisely during group meetings.	3.99	0.94	Agree
...balance my time in doing it and in my other school activities and responsibilities.	4.03	1.10	Agree
...accomplish my work on or before the deadline.	4.19	1.01	Agree
Weighted Mean	4.10		
SD	0.99		
Verbal Interpretation	Highly Engaged		

The results reveal that students agree that through IDPT they can create a clear plan or schedule before starting the task, divide their work into smaller tasks to manage the time effectively, and allot time wisely during group meetings. Students also perceive that IDPT can balance their time for doing it together with other school activities, and accomplish it before the deadline. These results reveal that with the use of IDPT, students became more responsible doing different learning activities, and manage their time correctly.

The weighted mean of 4.10 and standard deviation of 0.99 indicates a highly engaged level of students learning engagement in terms of time management. This imply that, through IDPT, time management of the students are evident on their learning engagement, which influences students to be responsible, systematized, and manage their time wisely. It also implies that learners are capable to prioritize tasks effectively and meet deadlines consistently. Consequently, strong time management skills contribute to more productive learning experiences and successful completion of interdisciplinary tasks.

The findings emphasize that IDPT contribute substantial part in the students learning engagement in terms of time management. The level of student agreement verifies that through IDPT, the students responsible do their task and strengthen their time management.

Level of Students Creativity

In this study the level of creativity refers to students' capacity to come up with creative ideas, think in new ways, and produce meaningful or innovative outputs. The following tables present the level of students' creativity in terms of task orientation, metacognition, self-regulation, and reflection, as measured through mean and standard deviation. This provides a basis for understanding how students apply creative thinking skills in learning tasks.

Table 10 shows the level of student creativity in terms task orientation. It highlights how IDPT develops student's creativity as a task-oriented individual. This indicates that students are able to focus on goals, plan effectively, and approach tasks with innovative solutions.

The results expose that students strongly agree that through IDPT they can actively exchange ideas with their groupmates, understand the purpose of the activity, and identify the required specific outcomes or outputs. Students

also perceive that they assure their group follow a clear sequence of steps, and every group member knows their assigned responsibilities. The results shows that students know the expected outcome, and do their task to complete it. These indicate that IDPT promotes collaboration and accountability among students. It also helps students develop communication and problem-solving skills while working with their peers. Furthermore, clear responsibilities and organized procedures contribute to the successful completion of group tasks.

Table 10. Level of student creativity in terms of Task Orientation

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...actively exchange ideas with my groupmates.	4.42	0.85	Strongly Agree
...understand the purpose of the activity.	4.32	0.79	Strongly Agree
...identify the specific outcomes or outputs required.	4.29	0.86	Strongly Agree
...make sure that our group follow a clear sequence of steps in completing it.	4.32	0.85	Strongly Agree
...make sure that every group member knows their assigned responsibilities.	4.34	0.84	Strongly Agree
Weighted Mean	4.34		
SD	0.84		
Verbal Interpretation	Very High Creativity		

The weighted mean of 4.34 and standard deviation of 0.84 indicates a very high level of students' creativity in terms of task orientation. This imply that, through IDPT, task orientation of the students is extremely evident and consistently grasped on their creativity, which promote students' product assumption, organized phases and complete the task creatively

The findings emphasize that IDPT contribute significant function in the student's creativity in terms of task orientation. The strong level of student agreement validates that through IDPT, the students foreseen, create and ultimately strengthen the creativity of their outputs as a tasked oriented individual.

Table 11 shows the level of student creativity in terms metacognition. It highlights how IDPT improves students' creativity referring to the higher-order awareness, analysis, having control over one's own cognitive processes. It involves planning, monitoring understanding, evaluating performance, and adjusting actions to improve learning and problem-solving.

Table 11. Level of student creativity in terms of Metacognition

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...think about what I already know before starting it.	4.22	0.86	Strongly Agree
...check my progress to ensure I am meeting the standards.	4.32	0.85	Strongly Agree
...identify my strengths and weaknesses.	4.22	0.93	Strongly Agree
...adjust my approach when my initial doesn't work on it.	4.22	0.83	Strongly Agree
...use what I learned to improve my performance in future projects.	4.45	0.79	Strongly Agree
Weighted Mean	4.29		
SD	0.86		
Verbal Interpretation	Very High Creativity		

The results reveals that students strongly agree that through IDPT they can identify what they already knew, check their progress to ensure the task standards was met, and recognize their strengths and weaknesses. Students also perceive that they adjust their approach when the initial didn't work, and use what they learned to improve their performance in future projects. These findings indicate that with the use of IDPT, students are enables to analyze their performance, and regulate their knowledge prior to success of their future interdisciplinary project.

The weighted mean of 4.29 and standard deviation of 0.86 specifies a very high level of students' creativity in terms of metacognition. This imply that, through IDPT, metacognition of the student is exceptionally evident and reliably influence their creativity, which promote student's self and performance analysis, and adjust strategies prior to knowledge acquired to complete the task even in the future.

The findings emphasize that IDPT contribute important role in the student's creativity in terms of metacognition. The strong level of student agreement confirms that through IDPT, the students assessed, strategized and ultimately strengthen their metacognition as reference for upcoming projects.

Table 12. Level of student creativity in terms of Self - Regulation

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...set personal goals to guide me in accomplishing it.	4.26	0.95	Strongly Agree
...manage my emotions when I feel stressed.	3.94	1.12	Agree
...take breaks when needed so I can stay productive.	4.10	1.06	Agree
...adjust my plans or strategies when I encounter problems.	4.20	0.99	Agree
...avoid procrastinating and try to complete it ahead of time.	4.05	1.12	Agree
Weighted Mean	4.11		
SD	1.06		
Verbal Interpretation	High Creativity		

Table 12 shows the level of student creativity in terms of self-regulation. It highlights how IDPT develop students' creativity referring to ability to monitor and manage energy states, emotions, thoughts, and behaviors in ways that are socially acceptable and conducive to achieving long-term goals.

The results reveal how students strongly agree that through IDPT, they can set personal goals to guide them in task accomplishment. Students also agree that they can managed their emotions when they feel stressed, take breaks when needed so they can stay productive, adjust their plans or strategies when they encounter problems, and avoid procrastinating and try to complete the task ahead of time. These findings indicate that with the use of IDPT, students are enables to keep an eye on and control their energy levels, feelings, ideas, and actions in a way that is both socially acceptable and beneficial for achieving their long-term goals.

The weighted mean of 4.11 and standard deviation of 1.06 indicates high level of students' creativity in terms of self-regulation. This imply that, through IDPT, self-regulation of the students is evident that influence their creativity, which

help students improve and manage their feelings, thoughts, and actions to reach long-term goals

The findings emphasize that IDPT contribute vital role in the student's creativity in terms of self-regulation. The level of student agreement confirms that through IDPT, the students managed and organize their emotion, thought and actions.

Table 13 shows the level of student creativity in terms of reflection. It highlights how IDPT expand students' creativity referring to active, honest, and critical analysis of past actions, behaviors, and outcomes to identify strengths, weaknesses, and lessons for improvement.

Table 13. Level of student creativity in terms of Reflection

Statements	Mean	SD	Remarks
Through IDPT, As a student I can...			
...take time to think about what I have learned.	4.30	0.86	Strongly Agree
...consider how my skills and knowledge have grown.	4.33	0.76	Strongly Agree
...think about what I could improve on it.	4.39	0.81	Strongly Agree
...reflect on the challenges I encountered.	4.30	0.91	Strongly Agree
...identify the strategies that helps me succeed.	4.44	0.93	Strongly Agree
Weighted Mean	4.35		
SD	0.86		
Verbal Interpretation	Very High Creativity		

The results reveals that students strongly agree that through IDPT, they can take time to think about what they have learned, consider how their skills and knowledge have grown, and think about what they could improve. Students also perceive that they can reflect on the difficulties they encountered, and identify the technique that helps them succeed. According to these results, with the use of IDPT, students are enables to critically analyze actions, behaviors, and outcomes to identify strengths, weaknesses, and lessons for improvement.

The weighted mean of 4.35 and standard deviation of 0.86 indicates a very high level of students' creativity in terms of reflection. This implies that, through IDPT, students clearly reflect on their actions and outcomes, allowing them to critically identify strengths, weaknesses, and lessons for personal growth and improved performance.

The findings emphasize that IDPT contribute important part in the student's creativity in terms of reflection. The strong level of student agreement confirms that through IDPT, the students dynamically, fairly, and critically evaluate their actions, emotions, and ultimately reflect on their strengths and weaknesses, for their performance and self-development.

Table 14 presents the significant relationship between interdisciplinary performance tasks and student learning engagement. It examines how different components of interdisciplinary performance tasks and various dimensions of student learning engagement, including motivation, goal setting, active participation, interactive participation, and time management.

The results indicate that interdisciplinary performance tasks demonstrate a moderate to strong positive relationship with all dimensions of student learning engagement $p < 0.001$.

This indicate that well-structured interdisciplinary tasks are associated with increased student motivation, clearer goal setting, enhanced participation in learning activities, improved collaboration with peers, and better management of learning time. The findings imply that integrating multiple disciplines, and providing well-defined scoring tool support more meaningful and engaging learning experiences for students.

The findings confirm that interdisciplinary performance tasks play an important part in promoting student learning engagement. The consistent positive relationships across all components and engagement indicators emphasize that interdisciplinary approaches encourage holistic learning by fostering active involvement, self-directed learning, and collaborative interaction among students. This emphasizes the relevance of implementing interdisciplinary strategies to enhance student engagement and improve overall learning outcomes.

Table 14. Significant relationship between interdisciplinary performance task and student learning engagement

Interdisciplinary performance task		Learning engagement				
		M	GS	AP	IP	TM
Learning Objectives	Pearson Correlation	.516**	.572**	.474**	.473**	.502**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158	158
Subject Integration	Pearson Correlation	.524**	.561**	.479**	.435**	.521**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158	158
Technology Integration	Pearson Correlation	.476**	.436**	.485**	.491**	.464**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158	158
Scoring Tool	Pearson Correlation	.605**	.613**	.579**	.576**	.496**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158	158

Note: *p<.05, **p<.01, ***p<.001

This is aligned with the research of Hsia and Hwang (2020) found that when students were guided to engage before, during, and after learning tasks, they demonstrated significantly higher levels of learning engagement, task awareness, and confidence in managing cognitive and physical demands. Interdisciplinary performance tasks (IDPT) further enhance this process by requiring students to integrate knowledge and skills from multiple subjects, promoting deeper engagement and active participation. By working on real-world, cross-disciplinary problems, students develop stronger motivation, collaboration, and critical thinking, which directly supports sustained learning engagement in diverse educational learning environments.

The table 15 presents the significant relationship between interdisciplinary performance tasks and creativity. It examines how components of interdisciplinary relate to creativity

indicators such as task orientation, metacognition, self-regulation, and reflection among students.

The results reveal that interdisciplinary performance tasks have a positive and statistically significant relationship with all dimensions of creativity, ranging from moderate to strong associations $p<0.001$. This indicates that clearly defined learning objectives help students remain focused and purposeful in completing creative tasks. Subject integration encourages students to connect ideas across disciplines, fostering flexible and innovative thinking. Technology integration supports students in exploring diverse approaches to problem-solving and enhances their capability to monitor their own learning practices. Meanwhile, the use of scoring tool provides structured guidance that supports students in evaluating their performance, regulating their learning strategies, and reflecting on their outputs. These findings imply that interdisciplinary performance tasks contribute to the development of higher-order thinking skills necessary for creative learning.

The results emphasize that interdisciplinary performance tasks play a crucial role in enhancing students' creativity. The consistent positive relationships across all task components and creativity indicators demonstrate that interdisciplinary approaches promote purposeful engagement, reflective thinking, and self-directed learning. This highlights the importance of designing interdisciplinary tasks that integrate clear objectives, multiple subject perspectives, appropriate technological support, and well-defined assessment tools to strengthen students' creative capacities.

Table 15. Significant relationship between interdisciplinary performance task and creativity

Interdisciplinary performance task		Creativity			
		TO	M	SR	R
Learning Objectives	Pearson Correlation	.501**	.377**	.463**	.432**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158
Subject Integration	Pearson Correlation	.583**	.443**	.433**	.433**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158
Technology Integration	Pearson Correlation	.441**	.527**	.396**	.462**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158
Scoring Tool	Pearson Correlation	.621**	.536**	.430**	.535**
	Sig. (2-tailed)	<0.001	<0.001	<0.001	<0.001
	N	158	158	158	158

Note: *p<.05, **p<.01, ***p<.001

IV. CONCLUSION AND RECOMMENDATIONS

Based on the collected data, the conclusion reveals the connection between the level of interdisciplinary performance task such as learning objectives, subject integration, technology integration and scoring tool, also to determine the student's learning engagement in terms of motivation, goal setting, active participation, collaboration and time management indicates a moderate to strong positive

correlations. The relationship between the level of interdisciplinary performance task such as learning objectives, subject integration, technology integration and scoring tool and the student's creativity in terms of task orientation, metacognition, self-regulation and reflection also indicates a moderate to strong positive correlations. It means that interdisciplinary performance task is positively associated with students' learning engagement and creativity across various dimensions. These findings suggest that incorporating interdisciplinary performance tasks into the learning environment can significantly strengthen students' engagement and foster the development of their creativity.

Therefore, it is concluded that the null hypotheses: "There is no significant relationship between interdisciplinary performance task on student learning engagement and creativity" has been rejected.

The study's conclusions led to the following recommendations:

School administrators may continue providing professional development programs such as interdisciplinary lesson planning trainings, assessment design seminars, and student engagement strategies workshops to help teachers create structured and authentic interdisciplinary tasks that align with

curriculum standards that encourage students' motivation and active participation.

Educators may continuously integrate interdisciplinary performance tasks (IDPT) into their instructional practices that promotes collaboration to enhance students' learning engagement and creativity.

Educators may encourage the students to develop effective time management and self-regulation skills by planning tasks and setting goals to improve learning and engagement in interdisciplinary projects.

Future researchers may use this study to further examine the effects of interdisciplinary performance tasks by exploring students' experiences, perceptions, and challenges in interdisciplinary learning to in relation to sustained learning engagement and creative development.

REFERENCE

- [1]. Hsia, L.-H., & Hwang, G.-J. (2020). From reflective thinking to learning engagement awareness: A reflective thinking promoting approach to improve students' learning engagement, self-efficacy and performance in flipped learning. *British Journal of Educational Technology*, 51(6), 2468–2486. <https://doi.org/10.1111/bjet.12911>