



THE ROLE OF GOAL ORIENTATION AND LEARNING RESOURCES IN ENHANCING LEARNING ENGAGEMENT OF JUNIOR HIGH SCHOOL STUDENTS: A STRUCTURAL EQUATION MODELLING APPROACH

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ABSTRACT

This study examined the relationships among goal orientation, learning resources, and learning engagement among junior high school students in Cluster 14 public secondary schools in Davao City. It specifically investigated the mediating role of learning resources in the relationship between goal orientation and learning engagement. A quantitative, nonexperimental descriptive-correlational design with mediation path analysis was employed. The respondents were 146 Grade 7 to Grade 10 students selected through stratified random sampling. Data were collected using adapted and modified questionnaires reviewed by three experts and pilot-tested, with reported Cronbach's alpha coefficients exceeding .700. Means, Pearson correlations, and mediation analysis were used to analyze the responses. Goal orientation ($M = 3.29$), learning engagement ($M = 3.37$), and learning resources ($M = 3.27$) were rated moderately extensive. Goal orientation was significantly associated with learning engagement ($r = .628, p < .001$) and learning resources ($r = .767, p < .001$). Learning resources also had a significant positive relationship with engagement ($r = .251, p = .002$). The mediation model reported a positive direct effect of goal orientation on engagement and a negative indirect effect through learning resources, indicating inconsistent mediation. The findings suggest examining students' motivational profiles alongside resource accessibility and instructional use. The nonexperimental design limits the interpretation to statistical relationships rather than causal effects.

KEYWORDS: Goal Orientation, Learning Engagement, Learning Resources, Junior High School Students, Mediation Analysis

INTRODUCTION

Learning engagement is a central concern in education because it encompasses students' involvement and investment in learning activities. Fredricks et al. (2004) conceptualized school engagement as a multidimensional construct involving behavioral, emotional, and cognitive dimensions. Their review emphasized that engagement responds to contextual conditions and should be examined beyond visible participation alone. In the present study, learning engagement was operationalized through active participation, time on task, effort and persistence, and self-regulated learning. These dimensions provide a basis for examining how students participate in academic activities and manage their learning responsibilities.

Goal orientation provides a motivational perspective for understanding students' engagement. Different orientations represent different reasons for undertaking academic tasks, including developing competence, demonstrating performance, avoiding unfavorable evaluation, and minimizing effort. Wu and Fu's (2024) meta-analysis found different relationships between achievement-goal dimensions and academic achievement, with approach goals showing positive associations and avoidance goals showing negative associations. It also identified student engagement as a significant mediator in the middle-school subgroup. These findings support examining goal orientations separately rather than assuming that all academic goals have equivalent educational implications.

Learning resources provide another relevant context for students' engagement. However, the presence of books, digital materials, and instructional tools does not independently establish how effectively students use them. Bond's (2020) systematic review examined engagement within K–12 flipped learning environments, situating technology-supported learning within a broader educational context. This literature offers a basis for considering resources together with instructional arrangements rather than treating availability as a sufficient explanation for engagement. Similarly, Panadero (2017) emphasized that self-regulated learning involves cognitive, motivational, behavioral, and emotional processes, suggesting that students also need strategies for managing their interaction with learning materials.

The present study examined these relationships among junior high school students in Cluster 14 public secondary schools in Davao City. It described goal orientation, learning engagement, and learning resources; determined their pairwise relationships; and assessed whether learning resources statistically mediated the relationship between goal orientation and engagement. Examining both direct and indirect pathways allowed the study to identify whether the resource-related pathway reinforced or opposed the direct association. MacKinnon et al. (2000) explained that opposite signs for direct and indirect effects characterize inconsistent mediation or suppression. This distinction is necessary for interpreting the reported model accurately.

Specifically, the study sought to determine the extent of goal orientation overall and across mastery, performance approach, performance avoidance, and work-avoidant orientations; describe learning engagement overall and across its four dimensions; assess



perceived learning-resource availability; establish the relationships among the variables; and examine the indirect association between goal orientation and engagement through learning resources. The findings were intended to inform school-level decisions concerning motivational support, independent learning, and instructional resources.

Methodology

The study employed a quantitative, nonexperimental descriptive-correlational design with mediation path analysis. Goal orientation served as the predictor, learning engagement as the outcome, and learning resources as the proposed mediator. The design enabled the researcher to describe the measured variables and examine their associations without manipulating students' educational conditions. The path analysis distinguished the direct association between goal orientation and engagement from the indirect association involving learning resources. Because the study was nonexperimental, these estimates were interpreted as statistical relationships rather than demonstrated causal effects.

The respondents were 146 Grade 7 to Grade 10 students selected from an approximately 230-student population identified in the manuscript. Stratified random sampling was used to represent student subgroups, with respondents selected proportionately from the identified strata. Eligible respondents were officially enrolled junior high school students in Cluster 14 public secondary schools in Davao City during data collection. Participation was voluntary. The manuscript described obtaining parental or guardian consent and student assent for respondents younger than 18 years.

An adapted and modified questionnaire measured the three study variables. Goal orientation comprised mastery, performance approach, performance avoidance, and work-avoidant orientations. Learning engagement comprised active participation, time on task, effort and persistence, and self-regulated learning. Learning resources covered perceived access to educational tools, supplementary materials, multimedia, books, hands-on tools, and internet resources. Three experts reviewed the questionnaire, and pilot testing was conducted in a nearby school. The manuscript reported Cronbach's alpha coefficients exceeding .700, although exact coefficients for the individual scales were not provided in the reviewed methods section.

Data gathering involved obtaining institutional and school permissions, administering the questionnaires, and retrieving completed responses. The manuscript described informed participation, confidentiality, coded records, and secure data storage. Students were informed that participation would not affect their academic standing and that they could decline or withdraw. The final manuscript should include the documented ethics approval details and the specific safeguards implemented during data collection.

Responses were organized in Microsoft Excel before analysis. Means summarized the variables and their indicators, while Pearson product-moment correlations assessed their pairwise relationships. Mediation path analysis estimated the direct, indirect, and total effects, and the Sobel test assessed the indirect effect. Statistical significance was evaluated at the .05 level. Values originally displayed as $p = .000$ are reported as $p < .001$.

RESULTS AND DISCUSSION

Extent of Goal Orientation

Goal orientation obtained an overall mean of 3.29, interpreted as moderately extensive. Performance avoidance received the highest mean ($M = 3.42$), followed by performance approach ($M = 3.33$), work avoidance ($M = 3.23$), and mastery orientation ($M = 3.18$). The results indicate comparatively stronger endorsement of avoiding unfavorable evaluation than of developing competence through mastery-oriented behaviors. However, these descriptive scores do not establish the causes of students' motivational patterns.

Table 1
Goal Orientation of Junior High School Students

Indicator	Mean	Descriptive equivalent
Mastery goal orientation	3.18	Moderately extensive
Performance approach orientation	3.33	Moderately extensive
Performance avoidance orientation	3.42	Extensive
Work-avoidant orientation	3.23	Moderately extensive
Overall	3.29	Moderately extensive

The prominence of performance avoidance warrants attention because achievement goals have different educational associations. Wu and Fu (2024) found that performance-avoidance goals were negatively associated with academic achievement, whereas mastery-approach and performance-approach goals were positively associated with achievement. Although their outcome differs from the present study's engagement measure, their findings support distinguishing avoidance from approach-oriented motivation. Consequently, the overall mean should not be interpreted as a uniform measure of desirable motivation. Teachers may use these findings to consider activities emphasizing understanding, personal progress, and constructive responses to mistakes, while evaluating whether such practices address students' concerns about unfavorable evaluation.

Extent of Learning Engagement

Learning engagement obtained an overall mean of 3.37, classified as moderately extensive. Active participation received the highest mean ($M = 3.43$), closely followed by effort and persistence ($M = 3.42$). Time on task ($M = 3.39$) and self-regulated learning ($M =$



3.25) were moderately extensive. This pattern suggests comparatively stronger reported participation and effort than independent management of learning.

Table 2
Learning Engagement of Junior High School Students

Indicator	Mean	Descriptive equivalent
Active participation	3.43	Extensive
Time on task	3.39	Moderately extensive
Effort and persistence	3.42	Extensive
Self-regulated learning	3.25	Moderately extensive
Overall	3.37	Moderately extensive

The differences across indicators are consistent with the broader view that engagement comprises distinguishable dimensions. Fredricks et al. (2004) emphasized that students' behavior, feelings, and cognitive investment should be considered together when examining engagement. Their framework helps explain why visible classroom participation should not be treated as equivalent to all forms of learning involvement. In the present study, participation was comparatively stronger than self-regulated learning, indicating that students' willingness to join activities may coexist with less consistent independent learning behaviors. Teachers could therefore assess both classroom participation and students' capacity to manage academic tasks independently.

The lower self-regulated learning mean identifies a potential focus for instructional support. Panadero's (2017) review described self-regulated learning as involving interconnected processes such as planning, monitoring, strategic action, and reflection, alongside motivation and emotion. This perspective suggests that independent learning requires more than encouraging students to work harder. Students may benefit from explicit demonstrations of goal setting, progress monitoring, strategy selection, and self-evaluation. These are literature-informed recommendations; the present study did not test the effectiveness of such interventions.

Extent of Learning Resources

Learning resources obtained an overall mean of 3.27, interpreted as moderately extensive or sometimes available under the manuscript's availability descriptors. Interactive and multimedia resources had the lowest item mean ($M = 3.08$), whereas opportunities to use experimental or hands-on tools had the highest ($M = 3.62$). The latter falls within the extensive range under the stated interpretation intervals, despite being labeled moderately extensive in the original table. Overall, the findings indicate variation in students' perceived access to different resources.

Table 3
Selected Findings on Learning Resources

Resource measure	Mean	Interpretation
Interactive and multimedia resources	3.08	Moderately extensive
Experimental or hands-on learning tools	3.62	Extensive
Overall learning resources	3.27	Moderately extensive

Bond's (2020) systematic review of K–12 flipped learning provides relevant context for interpreting resource-related findings. The review examined engagement within learning environments combining technology-supported preparation and classroom activities, rather than treating materials as isolated inputs. This contextual approach supports reviewing how resources are connected to tasks, teacher guidance, and opportunities for participation. Applied to the present findings, schools could examine both resource accessibility and their integration into classroom instruction. However, evidence from flipped learning should not be treated as direct confirmation of the effects of resource availability in Cluster 14 schools.

Relationships Among the Variables

Goal orientation had a significant positive relationship with learning engagement ($r = .628$, $p < .001$). Under the manuscript's interpretation guide, this relationship was moderate. Students reporting higher overall goal-orientation scores also tended to report higher engagement. Nevertheless, the combined goal-orientation score includes dimensions with different motivational meanings, so the correlation cannot establish that each orientation is positively associated with engagement.

Table 4
Relationships Among Goal Orientation, Learning Engagement, and Learning Resources

Relationship	Pearson's r	p-value	Interpretation
Goal orientation and learning engagement	.628	< .001	Significant positive, moderate
Goal orientation and learning resources	.767	< .001	Significant positive, strong
Learning resources and learning engagement	.251	.002	Significant positive, weak

Wu and Fu (2024) identified engagement as a significant intermediary between achievement goals and academic achievement in their middle-school subgroup. Their findings provide broader support for investigating motivational goals together with students' involvement in learning. However, their model differs from the present model, which positions engagement as the outcome and resources as the mediator. Thus, their study supports the relevance of the motivational–engagement connection without validating the specific pathway tested here. Further analyses separating the four goal-orientation dimensions would clarify which orientations account for the observed relationship.

Goal orientation also had a significant strong positive relationship with learning resources ($r = .767$, $p < .001$). This indicates that higher overall goal-orientation scores were associated with higher perceived resource availability or access. The result does not



establish whether motivation influenced resource access, resource conditions influenced motivation, or another factor contributed to both. Panadero's (2017) account of self-regulated learning provides a conceptual reason to investigate learners' goals and strategic interaction with learning conditions together. Nevertheless, resource-seeking behavior was not directly established by this correlation and should not be presented as an observed mechanism.

Learning resources had a significant weak positive relationship with engagement ($r = .251$, $p = .002$). Greater perceived resource availability was associated with slightly higher engagement, but the relationship was smaller than the other correlations. Bond's (2020) contextual examination of technology-supported engagement and Fredricks et al.'s (2004) multidimensional framework support considering instructional conditions alongside resources. The present result therefore provides a basis for examining how students use materials and how teachers organize resource-supported activities. It does not identify which additional factors explain the relatively weak relationship.

Mediation Analysis

The mediation analysis reported a positive path from goal orientation to learning resources (estimate = 1.065, $p < .001$). When goal orientation was included in the engagement equation, learning resources had a negative conditional association with engagement (estimate = -0.497 , $p < .001$). Goal orientation retained a significant positive direct association with engagement (estimate = 1.301, $p < .001$). The estimates are reported without standardized labels because the supplied table does not clearly identify their coefficient type.

Table 5
Reported Mediation Estimates

Path or effect	Estimate	Standard error	z-value	p-value
Goal orientation → Learning resources	1.065	.074	14.461	< .001
Learning resources → Learning engagement, controlling for goal orientation	-.497	.079	-6.322	< .001
Direct effect	1.301	.109	11.916	< .001
Indirect effect through learning resources	-.530	.091	-5.793	< .001
Total effect	.771	.079	9.763	< .001

The negative indirect effect (estimate = -0.530) opposed the positive direct effect, yielding a positive total effect of .771. MacKinnon et al. (2000) described this opposite-sign pattern as inconsistent mediation or suppression. Their explanation provides direct methodological support for interpreting the reported results. Learning resources therefore did not statistically carry a reinforcing positive pathway in this model. Instead, the negative indirect estimate offset part of the positive direct association.

The positive resource–engagement correlation and negative conditional path address different relationships. The correlation describes the association without adjusting for goal orientation, whereas the path describes the association after adjustment. MacKinnon et al. (2000) explained that introducing a third variable can change the magnitude and interpretation of the predictor–outcome relationship. Accordingly, the sign reversal should prompt examination of the measures and model specification. It does not demonstrate that resources cause disengagement, and explanations involving distraction or cognitive overload remain untested. The manuscript additionally reported a significant Sobel test ($z = -5.7644$, $p < .001$). This supports the indirect effect's statistical significance under the test's assumptions. However, significance alone does not establish a causal mechanism in a nonexperimental study. The negative ratio index should also not be interpreted as a conventional proportion mediated because the direct and indirect effects oppose each other. The final analysis would benefit from reporting confidence intervals for the indirect effect and clarifying the estimator, coefficient type, and treatment of school-level clustering.

Model Fit

The model fit indices were $\chi^2 = 0.000$, RMSEA = 0.000, CFI = 1.000, and TLI = 1.000. These values should be interpreted alongside the model's degrees of freedom. Muthén (2009) explained that overall fit cannot be tested for a model with zero degrees of freedom. If the study estimated a fully specified three-variable observed-score mediation model, the perfect indices would reflect its just-identified structure rather than independently confirm theoretical validity. The final manuscript should therefore report degrees of freedom before drawing conclusions about model fit.

CONCLUSION

The surveyed students reported moderately extensive goal orientation, learning engagement, and learning resources. Performance avoidance was the most strongly endorsed goal-orientation dimension, while active participation and effort and persistence were comparatively stronger engagement indicators. Self-regulated learning obtained the lowest engagement mean, suggesting an area for instructional attention.

All pairwise relationships were positive and statistically significant. However, the mediation model reported a positive direct effect and a negative indirect effect through learning resources, indicating inconsistent mediation. These results support examining motivational dimensions and resource-related experiences together. They do not establish that resources reduce engagement or that the reported perfect fit independently validates the model.



Recommendation

Teachers may strengthen opportunities for mastery-oriented learning by emphasizing understanding, individual progress, constructive feedback, and revision. They may also explicitly teach goal setting, study planning, progress monitoring, and self-evaluation to address the comparatively lower self-regulated learning rating. School heads could review students' access to instructional materials and examine how those materials are integrated into classroom activities.

Future researchers should analyze goal-orientation dimensions separately and distinguish resource availability from actual use and instructional quality. Replication and longitudinal studies could investigate whether the inconsistent mediation pattern persists across settings and over time. Before submission, the manuscript should reconcile descriptive labels, correct the mediator abbreviation, and report exact reliability coefficients, model degrees of freedom, coefficient type, estimator, and indirect-effect confidence intervals.

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