

Original Article

## **Intellectual Virtues and Leadership Learning Agility of Public Elementary School Teachers**

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### **Abstract**

This quantitative descriptive-correlational study examined the relationship between intellectual virtues and leadership learning agility among public elementary school teachers in the Baganga South District of Davao Oriental. Using standardized questionnaires, the research measured intellectual virtues (attentiveness, open-mindedness, curiosity, and carefulness) alongside leadership learning agility domains, which included developing leadership, seeking feedback, and developing systematically. Results indicated that teachers exhibited highly extensive levels of both intellectual virtues and leadership learning agility. A strong positive correlation emerged between the two constructs, demonstrating that greater intellectual virtues are closely associated with enhanced leadership learning agility. Furthermore, all four intellectual virtues significantly predicted leadership learning agility, with carefulness serving as the strongest predictor. Ultimately, the findings suggest that intellectually grounded dispositions are deeply connected to a teacher's ability to lead, utilize feedback, and achieve systematic professional growth, supporting the integration of intellectually oriented development within school-based professional learning programs.

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## **1. Introduction**

Teacher effectiveness now depends not only on content mastery and routine classroom management but also on the ability to learn, adapt, and respond constructively to new demands. Schools operate in conditions marked by curricular revision, accountability pressures, digital change, and increasingly diverse learner needs. Under such conditions, teachers who can revise practice, interpret feedback well, and assume influence beyond their classrooms are more likely to sustain instructional quality and contribute to school improvement. Leadership learning agility speaks directly to this capacity. Bouland-van Dam et al. (2022) define leadership learning agility as the willingness to learn from social experience and the drive to apply that learning in new and challenging leadership roles. In school settings, this construct matters because teachers are frequently expected to lead informally through collaboration, mentoring, curriculum work, and local problem solving even when they do not hold formal administrative positions.

A second construct with growing relevance to educational practice is intellectual virtue. Rather than treating teacher quality only as a technical matter, work in virtue epistemology emphasizes dispositions that orient persons toward sound inquiry, responsible judgment, and honest engagement with evidence. Baehr (2021) argues that intellectual virtues such as attentiveness, open-mindedness, curiosity, and carefulness shape how people seek truth, evaluate claims, and revise beliefs. Recent psychometric work has strengthened this line of scholarship. Mesurado and Vanney (2024) developed the Virtuous Intellectual Character Scale, while Vanney et al. (2024) provided further evidence that specific intellectual virtues can be measured reliably and are meaningfully associated with complex academic work. For teachers, these dispositions are not abstract ideals. They bear directly on how educators notice learner needs, weigh competing interpretations, pursue better explanations, and avoid premature judgments.

The connection between intellectual virtues and leadership learning agility is theoretically plausible and educationally important. Teachers who are attentive are more likely to detect classroom signals and professional cues that invite adjustment. Teachers who are open-minded can entertain alternative methods, accept new evidence, and reconsider prior assumptions. Teachers who are curious tend to pursue learning opportunities beyond minimum compliance, while careful teachers are more likely to scrutinize evidence and act with deliberation. Each of these qualities can strengthen how teachers interpret experience and convert it into improved leadership action. This logic aligns with experiential and reflective perspectives on professional learning, where growth depends on disciplined interpretation of practice rather than mere exposure to experience. Farrell (2020) shows that reflective practice can deepen teacher development when educators critically examine their own instructional decisions, while Ventista and Brown (2023) demonstrate that sustained professional learning structures support better teacher and student outcomes.

The broader literature on teacher development also suggests that adaptive, collaborative, and feedback-responsive dispositions are central to professional growth. Cano (2024) notes that peer feedback can become a meaningful mechanism for professional development when institutional conditions support trust, reflection, and practical use of feedback. Christensen and Jerrim (2025) likewise show that professional learning communities are associated with positive teacher outcomes across many contexts, especially when collaboration is purposeful. Research on teacher leadership further indicates that influence among peers depends not only on formal role assignment but also on dispositions that enable dialogue, learning, and credibility in practice. Abrahamsen and Helstad (2025) describe how leading professional learning among peers requires teachers to interpret context, negotiate relationships, and mobilize learning in collegial settings. In related work, Ghamrawi et al. (2024) show that teacher leadership can be cultivated through professional development models that support agency and collective improvement.

Despite the conceptual fit between intellectual virtues and leadership learning agility, empirical work that examines these constructs together in school contexts remains limited. Studies on learning agility in education have more often focused on readiness for change, lifelong learning, or organizational outcomes than on the intellectual dispositions that may support adaptive leadership among teachers. Kaya (2023) found that teachers' learning agility predicts lifelong learning tendency, while Kaya and Argon (2023) provided evidence for the cultural adaptation of a teacher learning agility scale. Even so, the question of how intellectual virtues relate to leadership learning agility among public elementary school teachers remains underexplored, especially in localized Philippine contexts where teachers face both instructional and institutional pressures.

This gap is important for at least three reasons. First, public elementary teachers often work under conditions that require rapid adjustment without extensive material support. Second, schools increasingly expect teachers to participate in collaborative planning, peer support, and school improvement processes that demand leadership beyond classroom delivery. Third, policies that focus only on technical training may overlook dispositional resources that help teachers use learning opportunities well. If intellectual virtues are strongly associated with leadership learning agility, then teacher development efforts may need to address not only skills and knowledge but also the intellectual habits that make adaptation, reflection, and leadership more likely.

Against this background, the present study investigated the relationship between intellectual virtues and leadership learning agility among public elementary school teachers in Baganga South District, Division of Davao Oriental. Specifically, it described the extent of intellectual virtues and leadership learning agility, examined the relationship between the two constructs, and tested which domains of intellectual virtues significantly predicted leadership learning agility. By doing so, the study offers evidence that may inform school-based professional development, teacher leadership cultivation, and context-sensitive models of teacher growth in public basic education.

## **2. Methodology**

The study used a quantitative descriptive-correlational design to determine the extent of intellectual virtues and leadership learning agility and to test the relationship between these constructs among public elementary school teachers. The respondents were 131 teachers drawn from a population of 210 public elementary school teachers in Baganga South District, Division of Davao Oriental, with the sample size determined through Slovin's formula at a 0.05 margin of error. Selection followed simple random sampling, and only teachers currently employed in the district during school year 2025-2026 and with at least three years of teaching experience were included. Teachers with less than three years of experience, those on temporary leave or under administrative action, and personnel not directly teaching elementary-level subjects were excluded.

Data were collected through an adapted survey questionnaire with two parts. The intellectual virtues measure was adapted from Mesurado and Vanney (2024) and covered attentiveness, open-mindedness, curiosity, and carefulness. The leadership learning agility measure was adapted from Bouland-van Dam et al. (2022) and covered developing leadership, seeking feedback, and developing systematically. The instrument underwent expert review for content validity and pilot testing with 30 teachers to examine clarity, ordering, and representativeness of the items. Reliability testing yielded acceptable to excellent internal consistency, and in the present study the Cronbach's alpha coefficients were .90 for intellectual virtues and .92 for leadership learning agility. Responses used a five-point Likert format from 1 to 5, with higher values indicating greater extent of the construct.

Formal permission was secured through the appropriate academic and school authorities before field administration, and the conduct of the study followed standard ethical principles related to informed consent, voluntary participation, confidentiality, fairness, transparency, and secure handling of data. Data were analyzed through mean and standard deviation to describe the two major variables, Pearson product-moment correlation to test the relationship between intellectual virtues and leadership learning agility, and multiple linear regression to determine which domains of intellectual virtues significantly predicted leadership learning agility. All tests were evaluated at the 0.05 level of significance.

## **3. Results**

Table 1 presents the descriptive results for intellectual virtues. All domain means fell within the very extensive range. Domain means were 4.34 for attentiveness, 4.35 for open-mindedness, 4.32 for curiosity, and 4.35 for carefulness. The overall mean for intellectual virtues was 4.34 with a standard deviation of 0.79.

**Table 1.** Summary of intellectual virtues of public elementary school teachers.

Domain	Mean	SD	Descriptive level
Attentiveness	4.34	0.83	Very Extensive
Open-mindedness	4.35	0.81	Very Extensive
Curiosity	4.33	0.95	Very Extensive
Carefulness	4.35	0.66	Very Extensive
Overall	4.34	0.79	Very Extensive

Table 2 presents the descriptive results for leadership learning agility. All domain means also fell within the very extensive range. Domain means were 4.35 for developing leadership, 4.33 for seeking feedback, and 4.38 for developing systematically. The overall mean for leadership learning agility was 4.35 with a standard deviation of 0.75.

**Table 2.** Summary of leadership learning agility of public elementary school teachers.

Domain	Mean	SD	Descriptive level
Developing leadership	4.35	0.77	Very Extensive
Seeking feedback	4.33	0.82	Very Extensive
Developing systematically	4.38	0.80	Very Extensive
Overall	4.35	0.75	Very Extensive

Table 3 shows the test of relationship between the two major variables. Intellectual virtues and leadership learning agility were positively correlated at  $r = 0.64$ , with  $p = 0.000$ . The coefficient of determination reported was  $R^2 = 0.40$ , and the degree of relationship was classified as high.

**Table 3.** Correlation results.

Variables	r	p-value
Intellectual virtues and leadership learning agility	0.64	0.000

Table 4 presents the multiple regression results. Attentiveness, open-mindedness, curiosity, and carefulness each had significant positive coefficients. The reported regression model was Leadership learning agility =  $2.20 + 0.85(\text{Attentiveness}) + 0.90(\text{Open-mindedness}) + 0.88(\text{Curiosity}) + 0.92(\text{Carefulness})$ , with model statistics of  $R = 0.65$ ,  $R^2 = 0.422$ ,  $F = 78.20$ , and  $p = 0.000$ .

**Table 4.** Regression results predicting leadership learning agility.

<b>Variables</b>	<b>Coefficient</b>	<b>t-stat</b>	<b>p-value</b>	<b>Remarks</b>
Constant	2.20	3.58	0.000	Significant
Attentiveness	0.85	3.30	0.000	Significant
Open-mindedness	0.90	3.45	0.000	Significant
Curiosity	0.88	3.38	0.000	Significant
Carefulness	0.92	3.48	0.000	Significant

#### 4. Discussion

The study found that public elementary school teachers reported very extensive intellectual virtues and very extensive leadership learning agility. This pattern suggests that the respondents generally viewed themselves as highly attentive, open to evidence and alternative perspectives, curious about ideas and problems, and careful in judgment, while also seeing themselves as active in leadership growth, feedback use, and structured professional development. Such a profile is consistent with recent scholarship that positions professional growth as both a dispositional and organizational phenomenon. Mesurado and Vanney (2024) argue that intellectual virtues reflect stable orientations toward inquiry and judgment, and Vanney et al. (2024) likewise show that these virtues can be meaningfully captured as related but distinct dimensions. In educational contexts, those dispositions matter because teachers continuously interpret ambiguous situations that demand both sound judgment and adaptive action.

The very extensive rating for attentiveness indicates that the respondents tended to see themselves as observant and detail-sensitive. In practice, attentiveness can support adaptive teaching because teachers who notice subtle changes in learner response, classroom climate, or collegial interaction have better conditions for accurate professional judgment. Baehr (2021) treats attentiveness as central to responsible intellectual conduct because it governs what one notices and therefore what one can reasonably think about. Within teacher development, reflective practice depends on this kind of disciplined noticing, which Farrell (2020) describes as necessary for meaningful professional reflection rather than surface routine. The strong attentiveness score in the present study therefore fits the expectation that teachers who monitor experience carefully are better positioned to revise action and respond constructively to educational demands.

Open-mindedness and carefulness both reached the highest domain mean for intellectual virtues. These two findings are especially important because they represent complementary aspects of professional judgment. Open-mindedness supports receptivity to alternatives, while carefulness moderates impulsive closure and encourages deliberate evaluation. Baehr (2021) describes both as essential to intellectually responsible action, and Mesurado and Vanney (2024) similarly situate them within a broader structure of virtuous intellectual character. In school settings,

this combination may help teachers remain receptive to new methods without becoming uncritical adopters of every innovation. That balance matters in times of rapid educational change, where teachers are asked to integrate policy shifts, data use, and collaborative expectations under practical constraints.

Curiosity, although still very extensive, registered the lowest domain mean among the four intellectual virtues. This does not indicate weakness in any absolute sense, but it may suggest that exploratory motivation is slightly less pronounced than the more regulation-oriented dispositions of attentiveness and carefulness in this group. Because curiosity fuels question asking, exploration, and the pursuit of new knowledge, its place in teacher development remains important. Vanney et al. (2024) identify curiosity as one of the core virtues linked to intellectually demanding work, while Baehr (2021) treats it as a major driver of inquiry. In professional settings, curiosity can expand teachers' willingness to test unfamiliar approaches, pursue new knowledge sources, and engage actively in improvement rather than merely comply with expected routines.

Leadership learning agility also emerged at a very extensive level across all domains, with developing systematically receiving the highest mean. This result suggests that respondents particularly valued deliberate and organized forms of professional growth such as trainings, developmental activities, and self-initiated learning. That pattern aligns with evidence that sustained professional learning, coaching, and structured collaboration are associated with positive teacher and student outcomes, as Ventista and Brown (2023) argue in their systematic review. It also echoes Zeng's (2023) conclusion that teacher professional development plays a meaningful role in learning improvement when it is treated as an intentional and cumulative process. The finding may reflect the reality that in public school contexts, teachers often engage with formal development structures more regularly than with informal leadership opportunities, making systematic development a visible and familiar route to growth.

The domain of seeking feedback was slightly lower than the other leadership learning agility domains, though still very extensive. This relative position deserves attention because feedback use is central to adaptive leadership. Bouland-van Dam et al. (2022) include seeking feedback as one of the three validated dimensions of leadership learning agility, and Cano (2024) emphasizes that feedback contributes most when cultures of trust and application are present. Teachers may endorse feedback in principle while still encountering practical barriers to fully candid or developmental feedback exchanges, such as limited time, evaluative anxiety, or hierarchical communication norms. The present result therefore suggests a generally positive feedback orientation, but one that may still benefit from stronger collegial structures and non-punitive feedback practices.

The central empirical result of the study was the high positive relationship between intellectual virtues and leadership learning agility. This finding supports the view that leadership growth in teaching is not only a matter of opportunity or role assignment but also of intellectual character. Teachers who are disposed to notice

carefully, weigh evidence fairly, remain curious, and avoid premature conclusions are better prepared to learn from experience and apply that learning to leadership-related demands. This result is conceptually consistent with Bouland-van Dam et al. (2022), who frame leadership learning agility as learning from social experience for use in challenging roles. Such learning is likely to be stronger when the learner brings epistemically responsible habits to experience. The finding also complements Kaya's (2023) evidence that learning agility is associated with teachers' lifelong learning tendency, since intellectual virtues may provide some of the dispositional ground that makes such learning orientation sustainable.

The regression results deepen this interpretation by showing that all four domains of intellectual virtues significantly predicted leadership learning agility. In other words, each virtue contributed unique explanatory value in the model. This broad pattern suggests that teacher adaptability and leadership learning are supported by a constellation of intellectual dispositions rather than by one isolated trait. Attentiveness likely supports accurate perception of situations and feedback cues. Open-mindedness likely supports revision of prior assumptions and receptivity to alternative approaches. Curiosity likely energizes learning efforts and the search for better methods. Carefulness likely supports disciplined judgment and prudent action. Together, these findings reinforce the proposition that leadership learning agility rests partly on the quality of a teacher's orientation to knowledge, evidence, and reflection.

Among the four predictors, carefulness obtained the highest standardized coefficient. This is a notable result because carefulness represents a disciplined and deliberate intellectual style rather than a more visibly dynamic trait. In the teaching profession, however, adaptive leadership often requires more than enthusiasm for change. It requires thoughtful appraisal, prudent decision making, and consistent attention to consequences. Baehr (2021) treats carefulness as vital to responsible belief formation and judgment, while reflective accounts of teacher development emphasize the need to examine practice critically rather than react impulsively. Seen in this light, the prominence of carefulness in the regression model is substantively plausible. Teachers who proceed with care may be better able to convert experience into reliable leadership learning because they are less likely to overlook nuance or act on untested assumptions.

The findings also carry implications for school improvement. If intellectual virtues are meaningfully tied to leadership learning agility, then professional development programs should not focus only on procedural compliance or discrete technical skill acquisition. They should also cultivate the habits of mind that make teachers more responsive to evidence, more reflective in judgment, and more capable of collegial leadership. Professional learning communities, mentoring arrangements, lesson study, and peer feedback systems may be especially useful when they are structured to strengthen inquiry, reflection, and responsible interpretation of practice. Christensen and Jerrim (2025) show that PLCs are associated with positive teacher outcomes across contexts, while Abrahamsen and Helstad (2025), Lindo and Panes (2024) and Ghamrawi et al. (2024) highlight how teacher leadership grows in

environments that support collaborative professional learning. The present study adds that such environments may be more effective when they intentionally foster intellectual virtues alongside leadership routines.

The study should also be read within its methodological limits. The data were self-reported, the design was cross-sectional, and the respondents came from one district, so the results do not establish causal direction and should not be generalized without care. Even so, the consistency of the descriptive results, the strength of the association, and the significance of all four predictors provide a coherent empirical basis for further work. Future studies may test the model in other educational contexts, examine mediating or moderating variables, and use longitudinal or mixed-method designs to clarify how intellectual virtues are enacted in daily school life. Despite these limits, the present findings offer a credible contribution to understanding how dispositional dimensions of teacher professionalism are linked to adaptive leadership learning in public elementary schools.

## 5. Conclusion

Public elementary school teachers in the study reported very extensive intellectual virtues and very extensive leadership learning agility. The two constructs were strongly and positively associated, and all four domains of intellectual virtues significantly predicted leadership learning agility. Among the predictors, carefulness showed the largest standardized effect, followed closely by open-mindedness, curiosity, and attentiveness. Taken together, the findings indicate that teachers' adaptive leadership capacity is closely linked to how they attend to evidence, remain open to revision, pursue inquiry, and exercise judgment with care. School systems that seek stronger teacher leadership and more responsive professional learning may therefore benefit from development programs that cultivate intellectual virtues alongside technical competence and collaborative practice.

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## Conflict of Interest Statement

The authors declare no conflict of interest.

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