

Intellectual Humility as A Predictor of Students' Epistemic Maturity in Higher Education

Raximova Aziza Davranbekovna
University of Innovation Technologies, Uzbekistan

Received: 08 May 2026; **Accepted:** 02 June 2026; **Published:** 29 June 2026

Abstract: This article examines intellectual humility as a psychological predictor of students' epistemic maturity in higher education. The purpose of the study is to clarify how students' ability to recognize the limits of their knowledge, admit the possibility of error, revise beliefs in response to evidence, and remain open to alternative viewpoints contributes to the development of mature epistemic thinking. The findings show that intellectual humility supports epistemic maturity by reducing intellectual overconfidence, increasing openness to evidence, strengthening tolerance of uncertainty, and encouraging reflective revision of knowledge claims. Epistemic maturity is interpreted as the student's capacity to understand knowledge as complex, evidence-based, contextual, and open to critical examination. Intellectual humility does not imply intellectual weakness or passive agreement with others; rather, it represents a balanced psychological disposition that combines confidence in inquiry with awareness of one's cognitive limitations. The article concludes that higher education can promote epistemic maturity more effectively when learning environments encourage constructive disagreement, evidence-based dialogue, reflective writing, and feedback practices that normalize revision and uncertainty.

Keywords: Intellectual humility, epistemic maturity, students, higher education, epistemic cognition, reflective judgment, open-mindedness, intellectual overconfidence, academic learning, evidence-based reasoning.

Introduction: Higher education is expected to develop not only professional knowledge but also mature ways of thinking about knowledge itself. University students encounter complex theories, competing interpretations, interdisciplinary problems, and uncertain evidence. In such conditions, academic success depends not only on the amount of information students acquire but also on how they understand, evaluate, and revise knowledge claims. This process is closely connected with epistemic maturity, which refers to a student's developed ability to recognize the complexity of knowledge, justify conclusions through evidence, tolerate uncertainty, and take responsibility for intellectual judgments.

One of the psychological qualities that may predict epistemic maturity is intellectual humility. Intellectual humility is generally understood as the recognition that one's beliefs, interpretations, and conclusions may be incomplete or mistaken. It includes awareness of personal cognitive limitations, willingness to consider

alternative perspectives, openness to correction, and the ability to separate the value of a person from the correctness of a particular belief. In the educational context, intellectually humble students are not necessarily less confident or less competent. Rather, they are more likely to treat knowledge as something that must be examined, supported, and revised when stronger evidence appears.

The relevance of intellectual humility in higher education has increased in contemporary academic and digital environments. Students are surrounded by abundant information, persuasive opinions, algorithmically selected content, and rapidly changing scientific claims. At the same time, many academic tasks require students to compare sources, evaluate evidence, engage in discussion, and produce reasoned arguments. Without intellectual humility, students may become overly attached to initial opinions, reject feedback, avoid alternative explanations, or confuse confidence with correctness. Such tendencies limit

epistemic growth and weaken evidence-based thinking.

Epistemic maturity is not achieved simply by moving through years of study. A student may complete several courses and still rely on simplistic assumptions about knowledge. For example, some students may believe that every question has one fixed answer provided by an authority, while others may conclude that all opinions are equally valid because people disagree. Mature epistemic thinking moves beyond both extremes. It recognizes that knowledge may be uncertain and contested, yet not arbitrary. Claims must be judged by evidence, method, logic, context, and disciplinary standards. Intellectual humility is important here because it helps students remain open to learning without abandoning the need for justification.

The purpose of this article is to analyze intellectual humility as a predictor of students' epistemic maturity in higher education. The article seeks to explain why intellectually humble students may be more capable of reflective judgment, source evaluation, openness to disagreement, and revision of beliefs. It also identifies educational conditions that may strengthen the relationship between intellectual humility and epistemic maturity.

This article is based on a theoretical-analytical research design. It does not present original empirical data but synthesizes conceptual and empirical literature from psychology, educational research, and epistemic cognition studies. The methodological approach is interpretive and integrative, aiming to connect research on intellectual humility with theories of epistemic development and reflective judgment in higher education.

The theoretical foundation of the study includes several related research areas. The first area is the psychology of intellectual humility, which examines how individuals recognize the limits of their knowledge, respond to disagreement, and regulate intellectual self-confidence. The second area is personal epistemology and epistemic cognition, which investigates beliefs about the nature, certainty, source, and justification of knowledge. The third area is reflective judgment theory, which explains how individuals develop the capacity to reason about uncertain and ill-structured problems. These areas were selected because they jointly illuminate the psychological mechanisms through which students move from naive acceptance of information toward mature, evidence-sensitive thinking.

The analysis was guided by three central questions. The first question concerns the psychological content of

intellectual humility and how it differs from low self-esteem, uncertainty, or intellectual passivity. The second question concerns the meaning of epistemic maturity in higher education and the indicators through which it can be identified. The third question concerns the predictive relationship between intellectual humility and epistemic maturity, especially in academic tasks that require argumentation, interpretation, disagreement, and revision.

The interpretive synthesis method was used to integrate ideas across these theoretical traditions. Instead of treating intellectual humility as a separate personality trait only, the article considers it as a functional academic disposition that affects students' learning behavior, reasoning, and response to evidence. Epistemic maturity is likewise analyzed not as a fixed stage but as a developing capacity shaped by educational experience, social interaction, and reflective practice.

The theoretical analysis shows that intellectual humility can serve as an important predictor of epistemic maturity because it directly influences how students relate to knowledge, evidence, and disagreement. Students with greater intellectual humility are more likely to recognize that their first interpretation of a problem may be incomplete. This awareness creates psychological space for inquiry. Instead of defending an initial answer merely because it is their own, intellectually humble students are more likely to ask whether their conclusion is supported by sufficient evidence and whether another interpretation may be stronger.

A central mechanism through which intellectual humility predicts epistemic maturity is the reduction of intellectual overconfidence. Overconfidence can prevent students from questioning weak arguments, checking sources, or listening to feedback. When students assume that they already understand a topic sufficiently, they may stop searching for evidence too early. Intellectual humility weakens this premature closure. It reminds the student that knowledge requires verification and that confidence should be proportional to evidence. This does not eliminate confidence; rather, it makes confidence more epistemically responsible.

Another mechanism is openness to revision. Epistemically mature students understand that changing one's mind in response to evidence is not a sign of weakness but a sign of intellectual development. Intellectual humility supports this process because it reduces the ego threat associated with being corrected. If students strongly identify personal worth with being right, feedback may be

experienced as humiliation. In contrast, intellectually humble students can interpret feedback as information that improves understanding. This orientation is especially important in academic writing, research projects, and seminar discussions, where revision is a normal part of learning.

The analysis also indicates that intellectual humility promotes tolerance of uncertainty. Many academic problems do not have immediate or simple answers. Scientific knowledge often develops through debate, probability, interpretation, and methodological limitations. Students with low tolerance for uncertainty may seek quick, absolute answers or avoid complex issues. Intellectual humility helps students remain engaged with uncertainty because it allows them to accept that not knowing is a legitimate starting point for inquiry. This acceptance supports epistemic maturity by encouraging careful investigation rather than defensive simplification.

Intellectual humility also contributes to the development of open-mindedness. In higher education, students encounter perspectives that may challenge their previous assumptions. A student who lacks intellectual humility may reject alternative views before understanding them. An intellectually humble student is more likely to listen, compare, and evaluate. However, this openness does not mean accepting all ideas as equally valid. Mature open-mindedness involves willingness to consider alternatives while still applying standards of evidence and reasoning. Thus, intellectual humility supports balanced thinking: students become receptive to new ideas without abandoning critical judgment.

The relationship between intellectual humility and epistemic maturity is also visible in students' response to disagreement. Academic disagreement can become unproductive when students treat opposing views as personal attacks. Intellectual humility makes disagreement less threatening because it separates the person from the belief. It allows students to ask what can be learned from another position, even when they do not fully agree with it. In this way, disagreement becomes a source of epistemic growth rather than a struggle for superiority. Mature epistemic thinking requires exactly this capacity: the ability to evaluate competing claims without reducing the process to personal conflict.

A further result concerns source evaluation. Intellectually humble students are more likely to recognize that their own knowledge is limited and that credible sources are necessary. This may increase their motivation to consult expert literature, compare evidence, and check the reliability of information. At

the same time, intellectual humility prevents blind dependence on authority, because it also encourages awareness that any source may have limitations. The mature student learns to respect expertise while still evaluating evidence. This balance is one of the core indicators of epistemic maturity in higher education.

The findings also show that intellectual humility is connected with academic self-regulation. Students who recognize the limits of their understanding are more likely to monitor comprehension, seek clarification, and revise learning strategies. They are also more likely to ask questions and admit confusion. These behaviors support deeper learning because they prevent the illusion of understanding. In contrast, students who are unwilling to acknowledge uncertainty may avoid help-seeking or pretend to understand material they have not mastered. Intellectual humility therefore contributes to epistemic maturity by making self-correction psychologically acceptable.

The results suggest that intellectual humility should be viewed as a key educational resource rather than merely a moral virtue. In higher education, it functions as a psychological condition for mature learning. Students cannot develop epistemic maturity if they are unable to question their assumptions, accept correction, or engage respectfully with alternative viewpoints. Intellectual humility helps create the inner conditions for these processes. It supports a form of academic identity in which learning is more important than appearing infallible.

One important implication is that intellectual humility must be distinguished from intellectual insecurity. Some students may doubt themselves because they lack confidence, fear evaluation, or feel academically inadequate. This is not the same as intellectual humility. True intellectual humility includes awareness of fallibility, but it also involves active engagement with learning. It does not lead students to withdraw from judgment; rather, it encourages them to improve judgment through evidence. A student who says "I may be wrong, so I need to examine the evidence more carefully" demonstrates intellectual humility. A student who says "I may be wrong, so I cannot think independently" demonstrates insecurity. Higher education should cultivate the first orientation while reducing the second.

Another implication concerns classroom culture. Intellectual humility is unlikely to develop in environments where mistakes are punished harshly, disagreement is discouraged, or authority is never questioned. Students need opportunities to see that revision, uncertainty, and debate are normal parts of academic work. Teachers can model intellectual

humility by acknowledging limitations, explaining why evidence changes conclusions, and showing how scholarly knowledge develops over time. When teachers present knowledge as a finished product only, students may assume that maturity means knowing the right answer. When teachers present knowledge as justified inquiry, students learn that maturity involves evaluating how and why a conclusion is reached.

Feedback practices are also central. Feedback can either threaten or strengthen intellectual humility. If feedback is delivered as a judgment of the student's worth, it may produce defensiveness. If it is framed as guidance for improving reasoning, it can support epistemic growth. Students should be encouraged to revise arguments, reconsider sources, and explain how their thinking changed. Such practices show that intellectual development is not a linear accumulation of correct answers but a reflective process of refinement.

The discussion also highlights the role of academic dialogue. Seminar discussions, debates, peer review, and collaborative research tasks can support intellectual humility when they are structured around evidence rather than competition. Students should be asked not only to defend their position but also to identify its limitations, recognize the strongest counterargument, and explain what evidence would lead them to revise their view. These activities transform intellectual humility from an abstract value into a practical academic habit.

In digital learning environments, intellectual humility becomes even more necessary. Online information often produces an illusion of knowledge because students can access explanations quickly and fluently. However, fluency is not the same as understanding. Intellectual humility helps students recognize that finding an answer online does not mean mastering a concept. It encourages them to verify, compare, and reflect. This is particularly important when students use artificial intelligence tools, which can produce confident but inaccurate responses. The intellectually humble student treats such outputs as starting points for inquiry rather than final authorities.

The relationship between intellectual humility and epistemic maturity also has implications for assessment. Traditional assessments often reward certainty, speed, and correctness, but epistemic maturity involves the ability to handle complexity, justify uncertainty, and revise conclusions. Assessment tasks should therefore include reflective components. Students may be asked to explain why they trust certain sources, how their view changed after reading opposing arguments, or what limitations exist in their

conclusion. Such assessment practices make epistemic maturity visible and encourage intellectual humility as part of academic performance.

At the institutional level, intellectual humility can strengthen academic integrity. Students who understand the limits of their knowledge and respect the role of evidence are less likely to treat citation as a mere technical rule. They are more likely to see referencing, source evaluation, and acknowledgment of others' ideas as part of responsible scholarship. In this sense, intellectual humility supports not only individual learning but also the ethical culture of the university.

Intellectual humility is a significant predictor of students' epistemic maturity in higher education. It supports the student's ability to recognize the limits of personal knowledge, remain open to alternative perspectives, revise beliefs in response to evidence, tolerate uncertainty, and engage constructively with disagreement. These abilities are central to epistemic maturity, which involves understanding knowledge as complex, evidence-based, contextual, and open to critical examination.

The article shows that intellectual humility should not be confused with low confidence or passive acceptance. It is a balanced psychological disposition that combines awareness of fallibility with active commitment to truth-seeking. Intellectually humble students do not abandon judgment; they improve judgment by making it more reflective, evidence-sensitive, and open to revision. This makes intellectual humility an important foundation for academic learning, research competence, source evaluation, and evidence-based reasoning.

Higher education can strengthen intellectual humility and epistemic maturity through classroom dialogue, reflective writing, constructive feedback, source evaluation tasks, and assessment practices that value justified reasoning rather than mere certainty. Teachers play a crucial role by modeling openness to evidence, respect for disagreement, and willingness to revise conclusions. Under such conditions, intellectual humility becomes not only a personal virtue but also a practical academic mechanism for developing mature, responsible, and evidence-based thinkers.

REFERENCES

1. Perry W. G. Forms of Intellectual and Ethical Development in the College Years: A Scheme. — New York: Holt, Rinehart and Winston, 1970. — 256 p.
2. King P. M., Kitchener K. S. Developing Reflective Judgment: Understanding and Promoting

- Intellectual Growth and Critical Thinking in Adolescents and Adults. — San Francisco: Jossey-Bass, 1994. — 304 p.
3. King P. M., Kitchener K. S. Reflective Judgment: Theory and Research on the Development of Epistemic Assumptions Through Adulthood // Educational Psychologist. — 2004. — Vol. 39, № 1. — P. 5–18. — DOI: 10.1207/s15326985ep3901_2.
4. Hofer B. K., Pintrich P. R. The Development of Epistemological Theories: Beliefs About Knowledge and Knowing and Their Relation to Learning // Review of Educational Research. — 1997. — Vol. 67, № 1. — P. 88–140. — DOI: 10.3102/00346543067001088.
5. Hofer B. K., Pintrich P. R. Personal Epistemology: The Psychology of Beliefs About Knowledge and Knowing. — Mahwah, NJ: Lawrence Erlbaum Associates, 2002. — 430 p.
6. Krumrei-Mancuso E. J., Rouse S. V. The Development and Validation of the Comprehensive Intellectual Humility Scale // Journal of Personality Assessment. — 2016. — Vol. 98, № 2. — P. 209–221. — DOI: 10.1080/00223891.2015.1068174.
7. Leary M. R., Diebels K. J., Davisson E. K., Jongman-Sereno K. P., Isherwood J. C., Raimi K. T., Deffler S. A., Hoyle R. H. Cognitive and Interpersonal Features of Intellectual Humility // Personality and Social Psychology Bulletin. — 2017. — Vol. 43, № 6. — P. 793–813. — DOI: 10.1177/0146167217697695.
8. Porter T., Schumann K. Intellectual Humility and Openness to the Opposing View // Self and Identity. — 2018. — Vol. 17, № 2. — P. 139–162. — DOI: 10.1080/15298868.2017.1361861.
9. Chinn C. A., Buckland L. A., Samarapungavan A. Expanding the Dimensions of Epistemic Cognition: Arguments from Philosophy and Psychology // Educational Psychologist. — 2011. — Vol. 46, № 3. — P. 141–167. — DOI: 10.1080/00461520.2011.587722.
10. Barzilai S., Zohar A. Reconsidering Personal Epistemology as Metacognition: A Multifaceted Approach to the Analysis of Epistemic Thinking // Educational Psychologist. — 2014. — Vol. 49, № 1. — P. 13–35. — DOI: 10.1080/00461520.2013.863265.
11. Sandoval W. A., Greene J. A., Bråten I. Understanding and Promoting Thinking About Knowledge: Origins, Issues, and Future Directions of Research on Epistemic Cognition // Review of Research in Education. — 2016. — Vol. 40, № 1. — P. 457–496. — DOI: 10.3102/0091732X16669319.
12. Greene J. A., Cartiff B. M., Duke R. F. A Meta-Analytic Review of the Relationship Between Epistemic Cognition and Academic Achievement // Journal of Educational Psychology. — 2018. — Vol. 110, № 8. — P. 1084–1111. — DOI: 10.1037/edu0000263.
13. Whitcomb D., Battaly H., Baehr J., Howard-Snyder D. Intellectual Humility: Owning Our Limitations // Philosophy and Phenomenological Research. — 2017. — Vol. 94, № 3. — P. 509–539. — DOI: 10.1111/phpr.12228.
14. Roberts R. C., Wood W. J. Intellectual Virtues: An Essay in Regulative Epistemology. — Oxford: Oxford University Press, 2007. — 336 p.
15. Samuelson P. L., Church I. M., Jarvinen M., Paulus T. B. The Science of Intellectual Humility White Paper. — Fullerton, CA: Thrive Center for Human Development, 2013. — 92 p.