

August 19, 2026

Critical Thinking and Information Literacy Report

2025-2026 Institutional Learning Outcomes Assessment

The 2025-2026 assessment examined how well BYU-Hawaii students demonstrate Critical Thinking and Information Literacy in authentic upper-division research writing. The study was designed to provide institution-level evidence for accreditation and improvement, not to evaluate individual students, courses, faculty members, or academic programs.

The assessment included 60 de-identified research papers selected through a stratified sampling process from 134 usable papers representing eight disciplines. Each paper was independently evaluated by two faculty raters using four-level analytic rubrics: Beginning, Developing, Proficient, and Advanced. Proficient represents the expected level of performance.

The rubrics used in this study are locally developed and broadly aligned with, and informed by, the AAC&U VALUE Rubrics, while being adapted to BYU-Hawaii's institutional learning outcomes and the assessment of upper-division research papers.

Assessment process

Ten faculty members from multiple disciplines served as raters. Each rater evaluated 12 papers, producing 120 rating records, or two ratings for each paper. Before scoring, raters reviewed practice materials and participated in a norming activity intended to support a shared interpretation of the rubrics. Exact agreement varied by criterion, but raters were generally within one performance level of one another; agreement within one level ranged from 76.7% to 96.7%.

Results at a glance

The table reports the full distribution of ratings while preserving the categorical meaning of the rubrics. The final column combines Proficient and Advanced to show the proportion of ratings that met or exceeded the expected level. Percentages may not total exactly 100 because of rounding.

Outcome	Criterion	Beginning	Developing	Proficient	Advanced	P + A
Critical Thinking	Purpose / Thesis	0.0%	30.0%	53.3%	16.7%	70.0%
Critical Thinking	Analysis & Reasoning	5.0%	37.5%	40.0%	17.5%	57.5%
Critical Thinking	Use of Evidence	5.8%	36.7%	40.0%	17.5%	57.5%
Critical Thinking	Complexity / Alternative Perspectives	18.3%	39.2%	32.5%	10.0%	42.5%
Critical Thinking	Conclusions & Implications	3.3%	40.8%	43.3%	12.5%	55.8%
Information Literacy	Source Selection	5.0%	34.2%	46.7%	14.2%	60.8%
Information Literacy	Source Evaluation	4.2%	39.2%	43.3%	13.3%	56.7%
Information Literacy	Integration of Sources	6.7%	32.5%	44.2%	16.7%	60.8%
Information Literacy	Synthesis Across Sources	9.2%	45.8%	34.2%	10.8%	45.0%
Information Literacy	Ethical Use of Information	6.7%	30.0%	40.0%	23.3%	63.3%

Overall, the results show a stronger foundation in establishing a research purpose, selecting and using sources, and following expectations for information use. The clearest areas for growth are the synthesis of multiple sources and the consideration of complexity or alternative perspectives.

Findings

The chart below summarizes the proportion of ratings at the Proficient or Advanced levels for each criterion. It provides a useful comparison across the two outcomes, while the table on the preceding page shows the underlying four-level distributions.

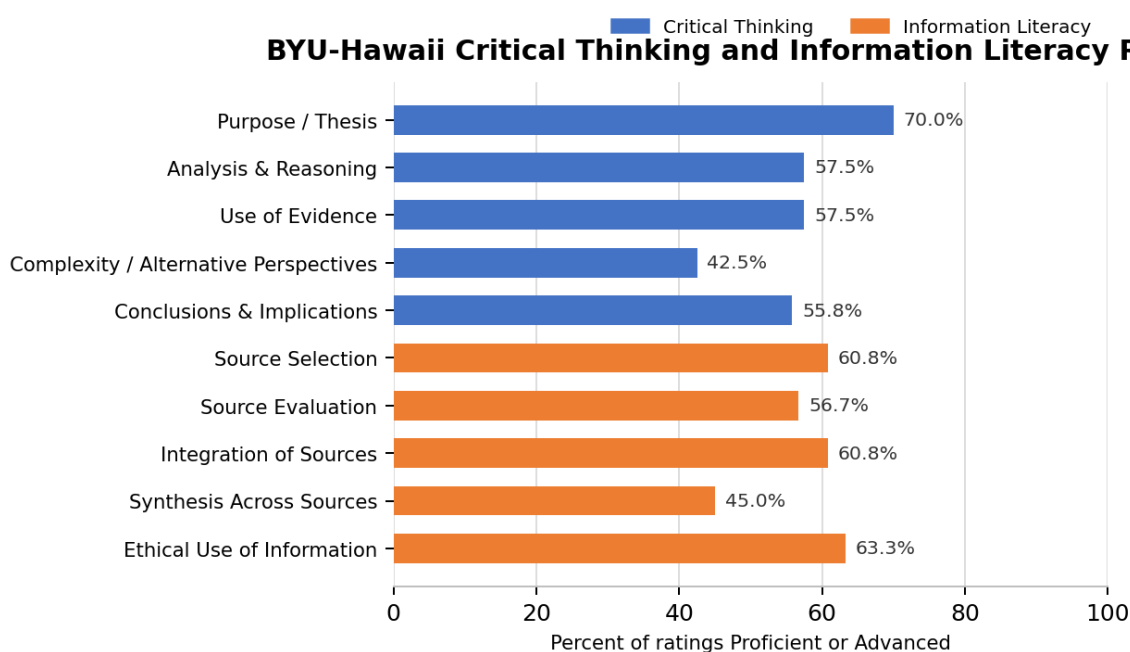


Figure 1. Proficient or Advanced ratings by Critical Thinking and Information Literacy criterion.

Critical Thinking

Critical Thinking results indicate that students are generally able to establish a purpose and thesis, but they are less consistent when extending an argument through analysis, qualification, and attention to competing perspectives. Purpose / Thesis was the strongest Critical Thinking criterion: 70.0% of ratings were Proficient or Advanced, including 16.7% at the Advanced level, and no rating was Beginning.

The other four criteria were more evenly distributed across Developing and Proficient. Analysis & Reasoning and Use of Evidence each reached 57.5% Proficient or Advanced, while Conclusions & Implications reached 55.8%. Engagement with Complexity / Alternative Perspectives was the clearest challenge at 42.5% Proficient or Advanced. At the paper level, both raters judged only 10 of 60 papers, or 16.7%, Proficient or Advanced on this criterion.

Information Literacy

Information Literacy results show that students are more consistently able to select, evaluate, integrate, and use information according to established conventions than to synthesize several sources into a connected understanding. Ethical Use of Information was the strongest criterion at 63.3% Proficient or Advanced, followed by Source Selection and Integration of Sources at 60.8% each. Source Evaluation reached 56.7%.

Synthesis Across Sources was the clearest Information Literacy challenge: only 45.0% of ratings were Proficient or Advanced, while 55.0% were Beginning or Developing. Neither rater judged 23 of the 60 papers, or 38.3%, Proficient or Advanced on this criterion. This pattern points to a distinction between using sources appropriately and using several sources together to construct a new, qualified, and defensible understanding.

Discussion

The assessment provides direct evidence that students in the sample can produce research writing that has a recognizable purpose, uses information in generally appropriate ways, and follows important academic conventions. The results are therefore best understood as evidence of a meaningful foundation rather than as evidence of failure in either institutional learning outcome. At the same time, the categorical distributions identify a consistent developmental pattern: performance is stronger when students work with an individual claim or source than when they must coordinate several claims, sources, and perspectives into a more complex line of reasoning.

From establishing an argument to complicating an argument

The Critical Thinking results show that establishing an argument is generally more developed than complicating that argument. A clear thesis gives a paper direction, but it does not by itself demonstrate the deeper reasoning represented by the rubric. Developing work may state a position and assemble relevant evidence while giving limited attention to why the evidence matters, how strong it is, what assumptions it rests on, or how the argument might change under a different interpretation. This helps explain why Purpose / Thesis is relatively strong while Engagement with Complexity / Alternative Perspectives is the weakest Critical Thinking criterion.

The pattern in Analysis & Reasoning, Use of Evidence, and Conclusions & Implications suggests that many students are approaching the expected level but have not yet made the reasoning connecting these elements fully visible. In stronger work, evidence is not merely present; it is interpreted. Claims are proportionate to the evidence, relationships among sources are stated explicitly, limitations are acknowledged, and conclusions distinguish what the research supports from what it cannot establish. These distinctions are important because a paper can contain accurate information and still remain primarily descriptive rather than analytical.

From using sources to synthesizing sources

The Information Literacy results show a related but distinct pattern. Students appear to have a workable foundation in selecting sources, integrating quotations or evidence, and using information ethically. These strengths matter: they indicate that students can participate in academic inquiry and can generally present information in recognizable scholarly forms. However, Synthesis Across Sources is not simply a more elaborate form of citation. It requires students to compare sources, identify agreement and tension, judge the significance of differences, and use the combined evidence to develop an interpretation that no single source provides by itself.

The comparatively lower result for Synthesis Across Sources suggests that students may still be organizing research papers source by source. In such writing, each source is summarized or cited, but the relationships among sources remain implicit. Source Evaluation also remains an important part of this transition: students need to explain not only what a source says but why it is credible, relevant, limited, or useful for the particular claim being made. The qualitative comments and targeted review of student work support this interpretation. Stronger papers more often compare and connect sources, provide context for evidence, and use qualification to show what the evidence does and does not support.

A shared instructional opportunity

The convergence of the two outcomes is the most useful institutional-level finding. Critical Thinking is weakest where students must engage complexity and alternative perspectives; Information Literacy is weakest where students must synthesize across sources. These criteria remain conceptually distinct, and the assessment does not establish that one outcome causes the other. Nevertheless, they point toward a shared instructional opportunity: helping students move from presenting information competently to comparing, evaluating, integrating, and reasoning across information and perspectives.

Implications for instruction and future assessment

Make synthesis visible. Assignments and class activities can ask students to place sources in conversation with one another by identifying points of agreement, disagreement, extension, and limitation. A synthesis matrix, source comparison, or short paragraph requiring two or more sources to support one qualified claim can make this work more explicit.

Teach complexity as part of argument development. Students can be asked to identify a counterargument, alternative interpretation, limitation, or condition under which their claim might change. The goal is not to weaken an argument unnecessarily, but to help students understand that a defensible argument is often more precise because it accounts for complexity.

Connect information use to reasoning. Feedback can distinguish between including a citation and explaining the role that evidence plays in the argument. Students should receive repeated opportunities to answer questions such as: What does this source contribute? How does it relate to another source? What can reasonably be concluded from the evidence?

Use later assessment to examine improvement. The two weakest criteria, Synthesis Across Sources and Engagement with Complexity / Alternative Perspectives, are appropriate targets for coordinated instructional attention and later reassessment. Future norming should include additional examples and clearer discussion of borderline cases, especially for criteria requiring greater professional judgment.

Exploratory observation about possible AI use

The scoring instrument included a separate exploratory question about whether a paper appeared to contain AI-generated content. Across the 120 ratings, 48 (40.0%) included some level of AI concern, and 39 of the 60 papers (65.0%) had at least one rater indicate some possibility of AI use. The most common observations involved inconsistent tone or voice, overly polished or generic transitions, repetitive or formulaic language, formatting features, and overly general analysis.

These observations should not be interpreted as a measure of actual AI use or as evidence that a particular paper was generated by AI. The item did not establish authorship, compare papers with drafts, or validate the indicators against known AI-generated texts. Rater differences also occurred. For these reasons, the AI item was not used to adjust the Critical Thinking or Information Literacy ratings. Future assessment could examine process evidence, such as drafts, source annotations, revision histories, or brief oral explanations, while maintaining a clear distinction between responsible AI use and evidence of student learning.

Limitations

The findings are based on a stratified institutional sample of 60 upper-division research papers from eight represented disciplines, not a census of all student work. The number of candidate papers varied by discipline, and the assessment cannot be used to compare disciplines or explain why students performed at a particular level. The results describe rating distributions rather than causal relationships. They also reflect faculty judgment using analytic rubrics; rater differences are therefore part of the evidence. Finally, the narrative comments and targeted review were used for interpretive triangulation, not as a formal qualitative study with independently coded prevalence estimates.

Conclusion

The 2025-2026 assessment provides direct institution-level evidence of how students demonstrate Critical Thinking and Information Literacy in upper-division research writing. Students in the sample generally can establish a research purpose, work with sources, and use information responsibly. The more substantial challenge emerges when they are expected to synthesize information across sources, engage competing perspectives, and navigate the complexity of an issue.

These results provide a practical foundation for improvement. BYU-Hawaii can build on existing strengths while making synthesis, comparison, evaluation, and complexity more explicit in assignments, instruction, and feedback. Later assessment can determine whether students are moving from competent information use toward more nuanced, evidence-based reasoning.

Appendix A. BYUH Critical Thinking Rubric

The rubric used in the 2025-2026 assessment is reproduced below for reference. The four performance levels are Beginning, Developing, Proficient (Meets Expectation), and Advanced.

Criterion	4 – Advanced	3 – Proficient (Meets Expectation)	2 – Developing	1 – Beginning
Purpose / Thesis	Clear, focused, and insightful thesis or purpose that drives the paper	Clear and appropriate thesis or purpose	Thesis or purpose is vague, overly broad, or inconsistently maintained	No clear thesis or purpose
Analysis & Reasoning	Sophisticated analysis; clearly explains how and why evidence supports claims	Adequate analysis with logical connections between ideas	Limited analysis; relies mainly on description or summary	Little or no analysis
Use of Evidence	Evidence is well-chosen, relevant, and effectively integrated	Evidence is relevant and supports claims	Evidence is weak, insufficient, or unevenly connected	Evidence is missing, inappropriate, or misused
Engagement with Complexity / Alternative Perspectives	Thoughtfully engages alternative perspectives or complexity	Acknowledges alternative perspectives or limitations	Mentions alternative perspectives superficially or inaccurately	No recognition of alternative perspectives or complexity
Conclusions & Implications	Conclusions are well-supported and explore broader implications	Conclusions logically follow from the argument	Conclusions are weak, repetitive, or partially unsupported	Conclusions are missing or disconnected

Understanding the Critical Thinking Rubric

The Critical Thinking rubric evaluates how effectively students develop, support, and refine an argument within their research writing. Strong critical thinking goes beyond presenting information. It requires students to make clear claims, analyze evidence, consider multiple perspectives, and draw meaningful conclusions. This rubric emphasizes the quality of reasoning and the depth of thought demonstrated throughout the paper.

Purpose / Thesis

This criterion focuses on whether the research paper presents a clear and focused central argument. A strong thesis does more than state a topic. It establishes a specific claim or perspective that guides the entire paper. Advanced writing demonstrates a purposeful and insightful thesis that shapes the direction of the argument, while less developed writing may lack clarity or consistency in its central focus.

Analysis & Reasoning

Critical thinking is most visible in how students explain their ideas. This criterion evaluates the depth and clarity of the student's reasoning, particularly how well they show the connection between evidence and claims. Strong papers move beyond summary by analyzing how and why evidence supports the argument, demonstrating logical thinking and a clear line of reasoning throughout.

Use of Evidence

This criterion addresses how effectively evidence is selected and used to support the argument. Strong research writing includes relevant, well-chosen evidence that directly supports key claims. Additionally, the evidence should be thoughtfully integrated into the discussion, reinforcing the student's ideas rather than standing alone without explanation.

Engagement with Complexity / Alternative Perspectives

Effective critical thinking involves recognizing that most issues are not one-dimensional. This criterion evaluates how well the student acknowledges and engages with alternative viewpoints, counterarguments, or complexities within the topic. Advanced papers thoughtfully consider differing perspectives and use them to deepen the analysis, rather than ignoring or oversimplifying them.

Conclusions & Implications

This criterion focuses on how well the paper brings ideas together and reflects on their significance. Strong conclusions do more than restate the thesis. They logically follow from the argument and highlight broader implications or insights. Effective research writing leaves the reader with a clear understanding of why the argument matters and how it connects to larger ideas or contexts.

Appendix B. BYUH Information Literacy Rubric

The rubric used in the 2025-2026 assessment is reproduced below for reference. The four performance levels are Beginning, Developing, Proficient (Meets Expectation), and Advanced.

Criterion	4 – Advanced	3 – Proficient (Meets Expectation)	2 – Developing	1 – Beginning
Source Selection	Uses a strong range of high-quality, appropriate sources	Uses generally appropriate and relevant sources	Relies on limited, marginal, or inconsistent sources	Uses inappropriate, unreliable, or insufficient sources
Source Evaluation	Clearly demonstrates discernment regarding credibility and context	Sources generally reflect appropriate authority and credibility	Limited evidence of evaluating source quality	No evidence of source evaluation
Integration of Sources	Sources are smoothly integrated; student voice clearly dominates	Sources are integrated appropriately with a clear student voice	Over-reliance on quotation or awkward integration	Paper is source-driven or patchworked
Synthesis Across Sources	Effectively synthesizes sources through comparison or contrast	Demonstrates some synthesis across sources	Sources are used individually with minimal connection	No synthesis across sources
Ethical Use of Information	Accurate and consistent citation throughout	Minor citation errors; sources clearly attributed	Frequent citation errors or unclear attribution	Major citation problems or evidence of plagiarism

Understanding the Information Literacy Rubric

The Information Literacy rubric evaluates how effectively students locate, evaluate, and use sources in their research writing. Strong research is not just about finding information - it involves making thoughtful choices about which sources to use, critically examining their credibility, and incorporating them in a way that supports original thinking. In this study, the rating process assessed qualities visible in the submitted papers; it did not separately measure students' search or retrieval process.

Source Selection

This criterion focuses on the quality and relevance of the sources chosen for the research topic. Effective research begins with selecting sources that are credible, appropriate, and varied enough to provide a well-rounded perspective. Advanced papers demonstrate intentionality in source selection by drawing from a range of high-quality materials that strengthen the overall argument rather than simply meeting a minimum requirement.

Source Evaluation

Beyond selecting sources, students must show that they understand the credibility and context of the information they are using. This includes considering factors such as the author's expertise, the publication's reliability, and the purpose or potential bias of the source. Strong research writing reflects thoughtful judgment, showing that the student can distinguish between more and less authoritative sources and use them accordingly.

Integration of Sources

This criterion addresses how well sources are incorporated into the student's writing. Rather than simply inserting quotes, effective writers blend source material into their own ideas, using it to support and develop their arguments. The student's voice should remain central, with sources enhancing - not overpowering - the discussion. Smooth integration demonstrates both understanding of the material and control over the writing.

Synthesis Across Sources

Synthesis involves making connections between multiple sources to build deeper insight. Instead of treating each source separately, strong research writing compares, contrasts, and links ideas across texts. This allows students to highlight patterns, disagreements, or complementary perspectives, ultimately contributing to a more cohesive and analytical argument.

Ethical Use of Information

Responsible research writing requires proper acknowledgment of sources. This includes accurate citation and clear attribution of ideas, whether through quotation, paraphrasing, or summary. Ethical use of information not only avoids plagiarism but also strengthens the credibility of the work by showing transparency and academic integrity.