

Academic integrity and artificial intelligence in initial teacher education: a documentary audit of teaching guides in Spanish universities

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Abstract

Purpose – Universities are increasingly adopting institutional policies on academic integrity (AcI) and artificial intelligence (AI), but it remains unclear whether these expectations are translated coherently into the course-level documents that govern students' learning and assessment. This article therefore examines how AcI and AI, including generative AI (GenAI), are articulated in official teaching guides for Spain's Master's Degree in Teacher Training, and whether guidance is embedded coherently across course design.

Design/methodology/approach – A documentary content analysis was conducted on 254 publicly available guides from 68 universities. Explicit AcI and AI references were coded across objectives, competencies, learning outcomes, activities and assessment. Two formative diagnostic indices measured breadth of coverage across these five sections. Mann–Whitney tests compared university and subject types; 25% of the corpus was independently double-coded.

Findings – AcI was mentioned in 53.5% of guides but was concentrated in assessment and competencies; 46.5% contained no valid reference. Explicit AI guidance remained marginal (6.3%) and primarily assessment-centred. Private universities showed slightly broader AcI coverage, public universities slightly broader AI coverage and Final Master's Project guides substantially broader AcI coverage.

Research limitations/implications – The indices measure documentary breadth, not the quality, depth or implementation of guidance, and guides are nested within universities.

Practical implications – Programme leaders should integrate task-specific integrity and AI expectations across outcomes, activities, assessment, disclosure and formative support, with attention to future teachers' professional AI literacy.

Originality/value – The study provides a large-scale, programme-specific audit and a transparent method for benchmarking cross-sectional curricular integration without treating document coverage as a quality score.

Keywords Academic integrity, Artificial intelligence, Generative AI, Teacher education, Assessment, Syllabus

Paper type Research article

Introduction

Within the European Higher Education Area, course documentation is expected to make intended learning, teaching activities and assessment requirements transparent and coherent. In Spain, these expectations are operationalised through official teaching guides or syllabi, which specify course objectives, competencies, learning outcomes, methodologies and

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assessment systems (European Commission, 2020; European Ministers of Education, 1999; Royal Decree 1393/2007, 2007; Royal Decree 822/2021, 2021). Teaching guides are therefore not merely administrative records. They constitute public statements of the curriculum and communicate the conditions under which students are expected to learn, produce evidence and demonstrate achievement (Davidsson and Stigmar, 2021; Habanek, 2005). Their educational significance can be understood through constructive alignment. According to this perspective, intended outcomes, learning activities and assessment should reinforce one another rather than communicate disconnected expectations (Biggs, 1996). This is particularly important in relation to academic integrity and artificial intelligence (AI). A course guide that mentions plagiarism only as a punishable assessment offence communicates integrity primarily as compliance. By contrast, a guide that also incorporates responsible source use, authorship, transparency and critical technology use into learning outcomes and activities presents these practices as capabilities to be learned and demonstrated.

Academic integrity is consequently more than the avoidance of misconduct. It is a value-based educational practice grounded in honesty, trust, fairness, respect, responsibility and courage (International Center for Academic Integrity, 2021). However, these values do not become educationally effective through generic statements alone. Research indicates that syllabus warnings and honour-code clauses have limited influence when expectations are not contextualised, discussed and reinforced through course design (Staats and Hupp, 2012; Tatum and Schwartz, 2017). Clear guidance on plagiarism, collusion, unauthorised assistance, citation and authorship is more effective when accompanied by formative support, task-specific expectations and proportionate assessment procedures (Macdonald and Carroll, 2006; McAfee and Rodriguez, 2024).

The rapid expansion of generative artificial intelligence (GenAI) has made this curricular translation more urgent. In this article, AI is used as an umbrella term for computational systems that perform functions associated with human intelligence, whereas GenAI refers specifically to systems that generate new content, including text, images, audio or code. The distinction matters because institutional policies may refer broadly to AI while course-level guidance regulates particular tools, outputs or uses, such as brainstorming, translation, drafting or language revision.

Universities have increasingly developed policies and recommendations concerning AI use, but their implementation remains uneven (An *et al.*, 2025; Erhardt *et al.*, 2025; Wang *et al.*, 2024). Much of this guidance is formulated at the institutional level and establishes broad principles concerning permission, prohibition, transparency or academic misconduct. Such policies are necessary, but they do not resolve the decisions students and teachers face in specific courses and assessment tasks. Effective course-level guidance must clarify which uses are permitted, restricted or prohibited; what must be declared; how AI-supported work should be verified; and what evidence of the production process may be required. It should also create opportunities to learn how to evaluate outputs, identify bias, protect data and use AI in ways consistent with the intended learning outcomes (Chan, 2023; Gonsalves, 2024; Perkins *et al.*, 2024).

This issue is especially consequential in initial teacher education. Future teachers will not only use AI as university students; they will also be expected to design valid assessments, model responsible knowledge practices and guide pupils' use of digital technologies. Research conceptualises teacher AI literacy as involving conceptual understanding, practical application, critical evaluation and ethical judgement (Ayanwale *et al.*, 2024; Sperling *et al.*, 2024). UNESCO's AI competency framework for teachers similarly integrates a human-centred mindset, AI ethics, technical foundations, AI pedagogy and professional learning (Miao and Cukurova, 2024). Academic integrity and AI literacy should therefore be understood as interconnected elements of professional preparation rather than as separate regulatory concerns (Vallespir-Adillón *et al.*, 2024).

Previous documentary research has shown that ethics and integrity are often represented unevenly in formal curricula. Studies of ethics education and syllabus content have identified objectives, activities and assessment criteria that are fragmented, weakly

operationalised or concentrated in isolated parts of course design (Griffith *et al.*, 2014; Kidd *et al.*, 2020). Research on data ethics likewise argues that privacy, transparency and responsible judgement should be observable in learning activities and assessment rather than confined to generic principles (Atenas *et al.*, 2023). In parallel, studies of institutional AI policies have documented how universities define acceptable use, academic integrity and governance at organisational level (An *et al.*, 2025; Erhardt *et al.*, 2025; Wang *et al.*, 2024). However, existing research does not establish whether institutional commitments to academic integrity and AI are translated coherently across the formal components of course design. Institutional policy studies show what universities recommend at the organisational level, while syllabus studies usually examine the presence of isolated rules, ethical content or learning outcomes. They rarely assess whether expectations are simultaneously represented in objectives, competencies, learning outcomes, learning activities and assessment. Consequently, the literature cannot determine whether integrity and AI are treated as learnable professional capabilities or primarily as compliance requirements attached to assessment.

This unresolved distinction is theoretically significant because constructive alignment concerns the relationship among intended learning, pedagogical activity and assessment, rather than the mere presence of individual statements (Biggs, 1996). A programme may appear to address academic integrity or AI because these terms occur somewhere in its documentation while still failing to provide coherent opportunities for students to understand, practise and demonstrate the corresponding capabilities. The distinction is also practically significant in initial teacher education. Fragmented guidance may produce uncertainty about acceptable conduct, inconsistent implementation across courses and an excessive emphasis on sanctions. It may also leave future teachers insufficiently prepared to design assessment, model responsible authorship and regulate AI use in schools.

The present study addresses this problem through a national documentary audit of teaching guides from Spain's Master's Degree in Teacher Training (MTT). It examines not only whether academic integrity and AI are mentioned, but also where they are located within formal course design and how broadly they are distributed across its principal components. The study asks:

- RQ1. How frequently, where and in what forms are academic integrity and AI referenced across objectives, competencies, learning outcomes, learning activities and assessment?
- RQ2. To what extent are these references distributed across course design, as measured by the AcI-Index and AI-Index?
- RQ3. Do documentary patterns differ by university type – public or private – and subject type – Final Master's Project or other subjects?

The analysis concerns the explicit curriculum communicated through official teaching guides. It does not infer classroom implementation, institutional effectiveness or the quality of individual statements from their mere presence.

Methodology

Sampling

In Spain, the MTT is the mandatory postgraduate qualification that evidences the pedagogical and didactic competences required to teach in Compulsory Secondary Education, Baccalaureate and Vocational Education and Training (VET). The legal framework requires relevant disciplinary qualifications together with postgraduate professional preparation (Spain, 2006, 2007, 2008). The programme therefore provides a strategically important setting in which academic authorship, evidence use, assessment and responsible technology use intersect with future professional practice.

To identify the population, the official list of Spanish universities offering the MTT was consulted (Ministry of Education, Vocational Training and Sports, n.d.). The list contained 68 institutions: 46 public and 22 private. A maximum-comparability sampling design targeted four guides per university: three from the nationally prescribed generic module – “Learning and development of personality”, “Educational processes and contexts” and “Society, family and education”, or close equivalents – and one FMP guide. These subjects were selected because they are common across specialisations and institutions, whereas specialty modules vary substantially in title and content. Limiting each university to the same four curricular positions also prevented universities with more publicly available guides or more specialisations from dominating the corpus. The design therefore prioritised balanced institutional representation and comparability rather than exhaustive collection of every MTT guide. Because some institutions did not publish all four documents, the final sample comprised 254 of the 272 targeted guides (93.4%; Table 1).

Data processing and analysis

A manual documentary content analysis examined the presence and formulation of AcI and AI references across five standard sections: objectives, competencies, learning outcomes, learning activities and assessment. The strategy was deductive, using *a priori* categories informed by syllabus research, academic integrity frameworks and a pilot reading of the corpus (Griffith *et al.*, 2014; Krippendorff, 2013; Neuendorf, 2017; Riffe *et al.*, 2019). The unit of analysis was a sentence or short paragraph containing a substantive statement with implications for students’ academic work, learning activities or assessment.

All guides were read in full in their original PDF or HTML format. Local keyword searches were used only as a retrieval aid to locate potentially relevant terms, including plagiarism, originality, citation, integrity, artificial intelligence, ChatGPT and declaration of use. Every candidate passage was read in context and assigned to the section in which it appeared. Generic references to professional ethics, social responsibility or digital technology were excluded unless they explicitly addressed students’ academic conduct, authorship, source use, assessable work or AI use. AI was coded as the umbrella category; a reference was identified as GenAI when it named a generative tool or the production of generated content.

For AcI, the codebook covered originality and authorship; plagiarism, collusion and impersonation; citation and referencing; prevention and detection procedures; consequences; and training or support. For AI, it covered permission or prohibition, conditional use, transparency requirements, tool citation, process traceability, task-specific limitations and consequences for misuse. Categories were applied according to explicit decision rules. For example, “originality” was included only when linked to student work or assessment, and an incidental reference to digital tools was not coded as AI. The appendix provides illustrative inclusion and exclusion examples.

For each guide, the presence or absence (1/0) of at least one valid AcI statement and at least one valid AI statement was recorded in each of the five sections. The AcI-Index and AI-Index

Table 1. Descriptive characteristics of the sample

Variable	Category	<i>n</i>	%
Teaching guides available	–	254	100.0
	University		
	Public	172	67.7
	Private	82	32.3
Subject	Final Master’s Project (FMP)	59	23.2
	Other	195	76.8

Note(s): If all planned guides had been accessible, the sample would have comprised 272 guides. The final sample of 254 publicly available guides represents 93.4% of the targeted total

are formative diagnostic indicators calculated as the unweighted number of sections containing a valid reference (range 0–5). They do not constitute psychometric scales and do not measure the quality, specificity, accuracy or pedagogical depth of statements. Equal weighting was used because the five sections represent complementary elements of course design, and there was no empirical basis for assigning greater value to one section. The categories were defined *a priori* to distinguish no documentary integration (Null = 0), limited integration (Low = 1–2), partial integration (Medium = 3–4) and comprehensive cross-sectional integration (High = 5). This transparent classification operationalises the breadth of curricular embedding, consistent with constructive alignment, while avoiding claims about implementation or quality.

Reliability was assessed through independent double coding of 64 guides, representing approximately 25% of the corpus. The subsample was stratified by university type and subject type and included Final Master's Project guides. Agreement was calculated using the coders' independent decisions before consensus. For the five section-level academic-integrity codes, Cohen's κ ranged from 0.82 to 0.94 (median = 0.88), indicating strong to very strong agreement (McHugh, 2012). For the AI codes, Cohen's κ was 0.84 for learning activities and 0.91 for assessment. Kappa could not be estimated for objectives, competencies or learning outcomes because both coders classified all cases as containing no AI reference; observed agreement for these variables was 100%. Krippendorff's α was 0.90 for the AcI-Index and 0.86 for the AI-Index. Discrepancies were resolved through re-reading and consensus, and decision memos were retained as an audit trail (Hayes and Krippendorff, 2007; Krippendorff, 2013).

Descriptive statistics were calculated for section-level mentions and index distributions. Mann–Whitney *U* tests explored differences by university type and subject type because the indices were bounded ordinal counts (0–5), strongly concentrated at zero and contained many tied values. Rank-biserial correlations (r_{rb}) are reported as effect sizes, with direction stated in the text. Given the concentration of observations at zero, particularly for the AI-Index, *p*-values were interpreted alongside effect sizes and the raw index distributions. Because several guides were sampled from each university, observations are potentially nested within institutions. The tests are therefore interpreted as exploratory document-level comparisons rather than institution-independent estimates. The sparse AI distribution (only 16 non-null guides) also limits clustered or multilevel inference. The analysis concerns documentary presence and does not establish classroom enactment.

Analyses were organised directly around the research questions. For RQ1, frequencies and percentages were used to describe the prevalence, curricular location and form of AcI and AI references. For RQ2, the complete distributions of the AcI-Index and AI-Index were examined, including categories with zero cases, so that breadth of curricular embedding was not reduced to a single summary statistic. For RQ3, Mann–Whitney comparisons were used as exploratory contrasts of the index distributions by university type and subject type. Interpretation prioritised the direction and magnitude of rank-biserial correlations together with mean ranks and observed distributions rather than statistical significance alone. This was particularly important for the AI-Index because 93.7% of guides scored zero, so statistically detectable rank differences may still have limited substantive magnitude. Reported frequencies, percentages and index-category totals were cross-checked against the full sample ($N = 254$) before interpretation. Coding categories describing the form of references were treated as non-mutually exclusive when a guide contained more than one type of statement.

The study analysed publicly accessible institutional documents and did not involve personal data or human participants. No universities or individuals are identified in the reporting; therefore, informed consent and ethics committee approval were not required.

Results

Table 2 presents the percentage of guides containing at least one valid AcI or AI reference in each section. Overall, 136 of 254 guides (53.5%) mentioned AcI at least once, whereas only 6.3% contained an explicit AI policy, requirement or consequence.

Table 2. Percentage of teaching guides mentioning AcI and AI by section

Section	AcI mention (%)	AI mention (%)
Objectives	2.0	0.0
Competencies	31.9	0.0
Learning outcomes	5.5	0.0
Learning activities	7.9	1.6
Assessment	48.5	5.1

Note(s): AcI = academic integrity; AI = artificial intelligence, including explicit references to generative AI tools or generated content

AcI appeared in several forms. Common formulations required an “original academic work” for assignments or the FMP, specified APA (7th edition) for citation and referencing, or named plagiarism and unauthorised assistance. Broader references to professional ethics or social responsibility were not counted unless they addressed students’ academic work. The distribution was strongly assessment-centred: 48.5% of guides contained an AcI reference in assessment and 31.9% in competencies, compared with 7.9% in activities, 5.5% in learning outcomes and 2.0% in objectives.

Explicit AI guidance remained marginal. Where present, guides typically named a GenAI tool such as ChatGPT or required students to declare which tools were used and for what purpose, including language editing, translation or learning support. AI references appeared in assessment (5.1%) and activities (1.6%) but not in objectives, competencies or learning outcomes. Thus, the corpus regulated isolated uses more often than it specified AI-related learning.

Detection strategies for AcI breaches appeared in 9.9% of guides, usually through plagiarism-detection procedures or software. No guide specified a reliable detection mechanism for identifying undisclosed AI-generated content. Consequences for AcI violations appeared in 37.0% of guides and most often involved failure of the assignment, loss of assessment rights or referral to institutional regulations. Consequences for inappropriate AI use appeared in 1.6%. Only 4.0% included formative practices such as citation instruction, bibliographic management support or originality declarations.

Taken together, these section-level findings answer [RQ1](#) by showing a clear asymmetry in both prevalence and curricular location. AcI was present in just over half of the corpus but was concentrated in assessment and competencies, whereas explicit AI guidance was rare and absent from objectives, competencies and learning outcomes. The descriptive pattern therefore points more strongly to regulation of assessed work than to systematic integration of AcI and AI as intended learning.

[Tables 3 and 4](#) show the full distribution of index categories, including categories with zero cases. For the AcI-Index, 118 guides (46.5%) were Null, 124 (48.8%) Low, 12 (4.7%) Medium

Table 3. Distribution of teaching guides according to the AcI-Index

AcI-Index category	Number of sections	Frequency	%
High	5	0	0.0
Medium	3–4	12	4.7
Low	1–2	124	48.8
Null	0	118	46.5
Total	–	254	100.0

Note(s): The index measures breadth of documentary coverage across objectives, competencies, learning outcomes, learning activities and assessment; it does not measure quality or depth

Table 4. Distribution of teaching guides according to the AI-Index

AI-Index category	Number of sections	Frequency	%
High	5	0	0.0
Medium	3–4	0	0.0
Low	1–2	16	6.3
Null	0	238	93.7
Total	–	254	100.0

Note(s): The index measures breadth of documentary coverage across objectives, competencies, learning outcomes, learning activities and assessment; it does not measure quality or depth

and none High. For the AI-Index, 238 guides (93.7%) were Null, 16 (6.3%) Low and none Medium or High. These findings indicate limited breadth of integration; they should not be interpreted as ratings of statement quality.

For RQ2, the distributional evidence is especially clear: 242 of 254 guides (95.3%) were classified as Null or Low on the AcI-Index, and all 254 guides (100%) were Null or Low on the AI-Index. No guide reached the High category for either index. Thus, even when AcI was present, it was rarely embedded across several components of course design, while AI integration never extended beyond the Low category.

Document-level comparisons yielded three statistically significant differences, but effect sizes ranged from very small to moderate. Private-university guides had higher AcI-Index ranks than public-university guides (mean ranks 141.9 and 120.7, respectively; $U = 5,873$, $p < 0.05$, $r_{rb} = 0.17$), a small difference. Public-university guides had slightly higher AI-Index ranks than private-university guides (mean ranks 130.6 and 121.0; $U = 7,581.5$, $p < 0.05$, $r_{rb} = 0.08$), a very small difference. FMP guides had substantially higher AcI-Index ranks than other subjects (mean ranks 174.1 and 113.4; $U = 3,000.5$, $p < 0.001$, $r_{rb} = 0.48$). The FMP/other comparison for the AI-Index was not statistically significant ($U = 5,788.5$, $p = 0.865$, $r_{rb} = 0.01$), indicating a negligible difference. Given the concentration of AI scores at zero and the nesting of guides within universities, these comparisons warrant cautious interpretation.

For RQ3, the FMP–other-subject contrast for AcI was the largest observed group difference by a substantial margin ($r_{rb} = 0.48$). In contrast, university-type differences were small for AcI ($r_{rb} = 0.17$) and very small for AI ($r_{rb} = 0.08$), while the FMP/other-subject AI difference was negligible ($r_{rb} = 0.01$). Accordingly, the statistically significant public/private AI comparison should be interpreted as a weak distributional difference rather than as evidence of substantively distinct levels of AI curricular integration.

Discussion

The findings reveal a marked gap between the formal importance attributed to academic integrity and its integration across MTT course design. Although academic integrity appears in a substantial proportion of the corpus, most references are confined to assessment and competency sections. This pattern suggests that integrity is more often communicated as a condition governing assessed work or as a broad professional expectation than as a capability developed through objectives, learning activities and outcomes.

Across the three research questions, the evidence is convergent: AcI is more visible than AI at section level, both domains show predominantly limited breadth of integration, and between-group differences are generally modest except for the stronger AcI coverage of FMP guides. This convergence strengthens the interpretation that the central issue is not simply whether guidance exists, but whether it is coherently distributed across the components that connect intended learning, pedagogical activity and assessment.

One plausible explanation lies in the structure and administrative function of teaching-guide templates. Assessment sections generally require lecturers to specify grading conditions, invalidating practices and consequences for misconduct, making them a natural location for statements on plagiarism, originality and unauthorised assistance. Such clauses are also relatively easy to standardise across subjects. By contrast, embedding integrity in learning outcomes and activities requires disciplinary interpretation, pedagogical planning and coordination among teaching staff. Institutions may therefore find it administratively simpler to add a common misconduct clause than to redesign learning processes around responsible authorship, source use and collaboration.

This concentration may also reflect an institutional framing of academic integrity primarily as risk control. From this perspective, the immediate concern is to protect assessment validity, establish grounds for sanctions and demonstrate regulatory compliance. Integrity consequently becomes most visible at the point when student work is judged. Its frequent appearance in competency statements may reflect a different process: competencies are often inherited from programme-verification documents, accreditation requirements or centrally approved templates. Broad commitments to ethics or responsibility may therefore be formally present without being operationalised through corresponding activities and outcomes. From a constructive-alignment perspective, the problem is not simply whether integrity is mentioned, but whether students are given coherent opportunities to understand, practise and demonstrate it.

The scarcity of formative support reinforces this interpretation. Teaching guides commonly document what will be assessed and under what conditions more extensively than the instructional scaffolding through which students acquire the required practices. Integrity may also be presumed to be prior knowledge, particularly among postgraduate students. However, citation, collaboration, authorship and acceptable assistance are context-dependent practices rather than self-evident rules. A curriculum that specifies penalties without explaining how students will learn the expected behaviours risks treating integrity solely as an individual compliance obligation.

Explicit AI guidance is even less developed and remains almost entirely confined to assessment and activities. Its absence from objectives, competencies and learning outcomes suggests that AI, particularly GenAI, is currently treated primarily as a potential source of unauthorised assistance rather than as an object of professional learning. Several institutional mechanisms may contribute to this pattern. Institutional AI policies have developed faster than formal curriculum-renewal and accreditation cycles. Assessment rules can be amended comparatively quickly, whereas changes to validated competencies and learning outcomes may require approval at programme, faculty, university or external quality-assurance levels.

Educators may also remain uncertain about which AI capabilities are sufficiently stable and transferable to be formalised in official outcomes. Rapid technological change may encourage task-specific restrictions rather than durable commitments to AI literacy. In addition, responsibility for AI education may be assumed to lie elsewhere in the programme, for example in educational technology or digital competence subjects. Such diffusion of responsibility can produce a curriculum in which individual courses regulate AI use, but no part of the programme assumes clear responsibility for developing conceptual, ethical and pedagogical competence. This is particularly problematic in teacher education, because future teachers need to evaluate AI outputs, verify evidence, recognise bias, protect data and design appropriate uses in school contexts (Ayanwale *et al.*, 2024; Miao and Cukurova, 2024; Sperling *et al.*, 2024).

The stronger AcI-Index scores found in FMP guides are understandable given the characteristics of the capstone. FMPs are individually attributable, high-stakes products involving supervision, formal submission and often public defence (Romero-Martín *et al.*, 2023). Originality, citation and demonstrable authorship are consequently especially important. However, the absence of a comparable AI advantage suggests that research-writing guidance has not yet been systematically adapted to GenAI. Institutions may still rely

on general policies, supervisory judgement or broad prohibitions rather than formal requirements for declarations, tool citation and process documentation, despite growing calls to redesign assessment around transparent and educationally meaningful uses of GenAI (Xia *et al.*, 2024). Informal discussions between supervisors and students may occur, but these would not be visible in the public guide.

These explanations should be interpreted as theoretically informed hypotheses rather than causal findings. The documentary audit identifies patterns of curricular representation but cannot determine the organisational decisions that produced them. Interviews with programme leaders and teacher educators, analysis of institutional templates and policy tracing across successive guide versions would be needed to establish whether the observed omissions reflect procedural constraints, deliberate curricular choices, uncertainty, decentralised responsibility or practices communicated outside formal documentation.

Theoretical contributions

The study makes three theoretical contributions. First, it connects academic integrity and AI governance through the concept of curricular translation: institutional values and policies become educationally meaningful only when they are represented coherently in course-level outcomes, activities and assessment. Second, it positions the syllabus as an interface between governance and professional learning, rather than treating it solely as a regulatory document. Third, it distinguishes breadth of integration from quality. The Acl-Index and AI-Index are formative coverage indicators that test whether guidance is distributed across complementary curricular sections; they neither imply that more mentions are automatically better nor replace qualitative evaluation of specificity, proportionality and pedagogical value. This distinction clarifies what documentary indices can and cannot support.

Practical implications for teacher education and syllabus governance

Programme leaders and quality-assurance units can use the findings to revise templates around a shared minimum architecture. Each guide should state (1) task-specific definitions of permitted, restricted and prohibited practices; (2) expectations for authorship, collaboration, source use and AI assistance; (3) transparency requirements, including declarations, tool citation and process evidence where proportionate; (4) learning activities that allow students to practise verification, citation and critical AI use; (5) rubric indicators aligned with outcomes; and (6) consequences and review procedures that are clear and proportionate. A single boilerplate warning cannot perform all of these functions.

In teacher education, template reform should be paired with staff development and programme-level coordination. Teacher educators need shared examples for different assessment types and opportunities to discuss when GenAI use supports or undermines intended learning. FMP guidance is a priority area for declarations and process documentation, but AI literacy should also appear in generic modules because future teachers require ethical, critical and pedagogical capabilities before the capstone. Programme mapping could use the two indices as an initial screening tool and then evaluate the quality of clauses, rubrics and learning tasks qualitatively.

Limitations and future research

The study has several limitations. First, publicly available guides may be incomplete, outdated or different from the versions used in classrooms. Second, terminological variation may have caused under-identification despite contextual reading. Third, documentary presence cannot establish whether staff explain, enact or enforce the written guidance. Fourth, the indices intentionally privilege cross-sectional breadth and do not measure quality, depth, consistency, pedagogical appropriateness or alignment with a particular task. Fifth, several guides are

nested within each university, so the Mann–Whitney tests do not fully account for institutional clustering; the sparse AI distribution further restricts robust multilevel analysis. Finally, reliability estimates depend on the coded subsample and must be reported transparently alongside the codebook.

Future research should combine documentary auditing with qualitative assessment of clause quality and with analysis of rubrics, assignment briefs and institutional templates. Interviews with programme coordinators and teacher educators could test the mechanisms behind university-type differences, while student studies could examine perceived clarity, fairness and behavioural effects. Longitudinal audits would show whether institutional AI policies become embedded in course design as policy and technology evolve.

Conclusion

MTT teaching guides in Spain commonly acknowledge academic integrity, but guidance is fragmented and predominantly assessment-centred. Explicit AI guidance is much rarer and is almost absent from the intended curriculum expressed through objectives, competencies and learning outcomes. The findings therefore identify a problem of curricular integration, not simply a shortage of policy statements.

More specifically, the empirical pattern is consistent across the three research questions: 53.5% of guides contained at least one explicit AcI reference, yet 95.3% showed Null or Low AcI breadth; only 6.3% contained explicit AI guidance, and every guide remained Null or Low on the AI-Index. Group differences were generally limited, with the principal exception of the substantially broader AcI coverage of FMP guides. These convergent findings provide the empirical basis for interpreting the observed weakness as a curricular-alignment problem rather than merely an absence of policy language.

A stronger approach would align integrity and AI expectations across outcomes, activities, assessment criteria, transparency requirements and formative support. For initial teacher education, this alignment is also a matter of professional preparation: future teachers need to model responsible authorship and develop the critical, ethical and pedagogical competence to govern AI use in their own practice. The proposed indices offer a transparent diagnostic starting point, provided that breadth is not conflated with quality and that documentary evidence is interpreted cautiously.

Appendix

Illustrative coding examples and decision rules

The formulations below are short, anonymised examples translated into English and lightly standardised for readability. They illustrate coding decisions rather than the quality of the original guidance.

AcI—include | Assessment: “The submitted work must be original and sources must be cited in APA 7.” *Included because the statement links authorship and referencing directly to assessable student work.*

AcI—exclude | Competencies: “Act ethically and responsibly in the teaching profession.” *Excluded when no explicit connection is made to students’ academic work, authorship, source use or assessment.*

AI/GenAI—include | Assessment: “Students must state which AI tools were used and for what purpose.” *Included as an explicit transparency requirement governing AI-assisted work.*

AI—exclude | Activities: “Use digital technologies to support learning.” *Excluded because it does not identify AI or establish a policy, requirement or consequence.*

AI/GenAI—include | Assessment: “Use of ChatGPT is permitted only for language revision and must be declared.” *Included as a task-specific conditional-use rule with disclosure.*

AcI—include | Assessment: “Plagiarism or unauthorised assistance will result in failure of the task.” *Included as an explicit misconduct definition and consequence.*

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