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Deepfake Awareness and Judgements about Digital Evidence in Bangladesh

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Deepfake Awareness and Judgements about Digital Evidence in Bangladesh

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Abstract

Deepfake awareness, caution about authenticity and perceived need for professional training concern different aspects of digital evidence. This cross-sectional study uses 385 adult responses from Bangladesh to examine how these judgements coexist and whether reported awareness is associated with endorsement of stronger skills for legal professionals. We report item distributions, joint endorsement, paired contrasts and exploratory adjusted regressions. Caution about treating digital media as authentic without verification was endorsed by 298 respondents (77.4%), compared with 246 (63.9%) who endorsed stronger professional skills. The paired difference was 13.5 percentage points (95% CI 7.3 to 19.7; Holm-adjusted $p < 0.001$). Technical authentication when manipulation was suspected was endorsed by 242 (62.9%). Of the 216 who reported understanding that AI can generate realistic fabricated media, 143 also endorsed stronger professional skills. Adjusted associations of awareness, caution and perceived loss of trust in unauthenticated evidence with the skills rating were small and imprecise; no focal term met the multiplicity-adjusted threshold. The results distinguish a general expectation of verification from endorsement of specific professional responses. They support assessing provenance, authentication and evidentiary reasoning as separate tasks when designing training. Survey responses do not measure actual detection accuracy, trust in a specific record, or legal admissibility. The mixed sample, which includes 253 law students, does not establish national prevalence or the views of practising lawyers as a distinct population.

Keywords: deepfakes; digital evidence; authenticity; provenance; legal education; Bangladesh.

1. Introduction

A recording can make an account of an event appear direct. A viewer may assume that a recognisable face or voice identifies a person and that the sequence shown corresponds to what happened. Those assumptions can fail even when no generative tool was involved: a genuine recording can be cropped, attributed to the wrong date or distributed with a misleading description. Generative techniques add further ways to fabricate or modify material. The relevant question is not simply whether a file looks convincing, but which factual proposition it is offered to support and what evidence is available for that proposition.[1]

The same clip can serve several purposes. A journalist may use it as a lead, an investigator may use it to identify another source, and a party may seek to rely on it as evidence of conduct. Each use has different consequences. Material that justifies an inquiry need not justify a public accusation or a legal finding. The practical challenge is to match the level of scrutiny to the claim and the consequence of error. That challenge is obscured when discussions of deepfakes are framed as a choice between trusting all digital evidence and rejecting it entirely.

Awareness of the possibility of fabrication is not the ability to detect it. A person may know that fabricated media are possible but lack a suitable original or reference file, reliable context, or an opportunity to consult a specialist. Another person may be cautious without understanding a particular manipulation technique. A professional training programme should identify these distinctions rather than treating general awareness as a substitute for evidence handling, verification and interpretation.

The Group 6 questionnaire separates reported understanding, authenticity caution, perceived effects on trust in unauthenticated evidence, support for considering technical authentication, and support for stronger skills for legal professionals. These statements address different levels of judgement. For example, someone can agree that caution is generally warranted yet remain uncertain about what professional skills are required. The study measures endorsement of such propositions, rather than assigning respondents a common trust or detection score.

Bangladesh's Evidence Act 1872 contains provisions on proving the contents of digital records. The statutory inquiry is distinct from the technical inquiry into whether an item was fabricated, altered or taken out of context. An analysis of public attitudes cannot decide how a particular record would be treated by a court. The present article draws on this

[1] National Institute of Standards and Technology, *Reducing Risks Posed by Synthetic Content: An Overview of Technical Approaches to Digital Content Transparency* (NIST AI 100-4, 2024); Office of the United Nations High Commissioner for Human Rights and Human Rights Center, University of California, Berkeley, *Berkeley Protocol on Digital Open Source Investigations* (United Nations 2022).

distinction while using the questionnaire to examine what respondents say about caution, authentication and professional skill.[2]

We ask how often each of the five statements is endorsed; how each endorsement compares within respondents with endorsement of stronger skills; and whether reported awareness, caution and concern about trust in unauthenticated evidence covary with the skills rating. We also show the overlap between awareness and the skills judgement. The shared Q6 questionnaire supports other Group 6 papers on cybercrime precautions and AI-assisted evidence analysis. Those papers and the present analysis use the same records and should not be regarded as independent samples.

2. Literature Review and Theoretical Foundation

The framework distinguishes capabilities of manipulation, quality of the evidence used to authenticate a record and the appropriate level of reliance on the result. It provides a reason to analyse the five questionnaire statements separately. The concepts guide interpretation; the survey does not test a causal model of detection or evidentiary decision-making.

2.1 Awareness and detection

Deepfakes are commonly discussed as realistic media generated or modified using AI. The practical category includes different transformations with different traces. A fabricated voice, an altered face and a recontextualised original recording cannot be evaluated through a single visual rule. Detection can depend on compression, editing, recording quality and the methods used to generate the material. A detector's output can provide a reason to investigate, but it does not necessarily identify who made an alteration or whether the claim attached to the file is accurate. Provenance and the circumstances of acquisition remain relevant even if a detector produces a confident score.[3]

The awareness item asks whether respondents understand that AI can generate realistic fabricated media. It does not ask them to distinguish authentic and fabricated examples. An assessment of competence would require defined cases with credible reference information and a way to measure correct detection, false alarms and confidence. General awareness can be useful if it prompts a check; it can be counterproductive if it encourages people to dismiss authentic material whenever its content is inconvenient. The task is to evaluate reasons for confidence or caution in each case.

[2] Evidence Act 1872 (Bangladesh), ss 65A–65B.

[3] NIST, *Reducing Risks* (n 1).

2.2 Provenance and authentication

Provenance concerns where material came from and how it reached the person evaluating it. It may involve a record of acquisition, the source account, relevant timestamps and any transformation between the source and the version reviewed. A hash can help verify whether two files match at the byte level, but does not show that the content of the original file is true. Similarly, an authenticated account may still publish a false claim. The evidence for file integrity, the source's identity and the truth of a claim must therefore be considered separately.[4]

Technical authentication can include examination of metadata, comparison with another recording, assessment of suspected edits or use of a detection tool. Its usefulness depends on the question and the materials available. If the only file is a low-quality copy, a specialist may be able to rule out some possibilities while leaving others unresolved. A transparent report should identify what was examined, which methods were used and which inferences remain uncertain. That account can help another reviewer reproduce the inquiry or explain why a different method is needed. The survey's authentication item asks whether technical authentication should be considered when manipulation is suspected; it does not prescribe a method or imply that testing is always available.

2.3 Appropriate reliance and legal relevance

Appropriate reliance involves matching reliance to evidence of reliability and the consequences of being wrong. Caution is not the same as disbelief. A cautious decision maker can preserve a file and seek corroboration while postponing a conclusion. A person who distrusts unauthenticated evidence may still give substantial weight to independent corroboration. These distinctions explain why self-reported caution and the proposition that deepfakes reduce trust in unauthenticated evidence need not receive the same ratings.[5]

Sections 65A and 65B of the Evidence Act address the proof of the contents of digital records in Bangladesh. The legal treatment of a record depends on the applicable provisions and facts. Establishing that a statutory route for proof is available does not, by itself, establish that a depicted event occurred as claimed. Conversely, technical evidence about manipulation does not decide the procedural status of the record. The analytical distinction is between the route by which a record is proved, its authenticity and the weight of the inference drawn from it. The article does not determine the admissibility of any particular item.[6]

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[4] OHCHR and Human Rights Center, *Berkeley Protocol* (n 1); NIST, *Reducing Risks* (n 1).

[5] John D Lee and Katrina A See, 'Trust in Automation: Designing for Appropriate Reliance' (2004) 46 Human Factors 50.

[6] Evidence Act 1872, ss 65A–65B.

2.4 Professional skill as a separate judgement

Professional competence can involve preserving an item, identifying a factual dispute, asking a specialist an answerable question and interpreting an inconclusive finding. It also involves recognising when a legal decision turns on issues beyond the technical properties of a file. The skills item measures agreement that legal professionals need stronger skills in evaluating AI-generated or manipulated media. It is neither a performance rating of professionals nor a statement about the need for a particular credential.

We examine three possible correlates of this judgement. Awareness could track stronger endorsement if respondents who recognise fabrication capability also value professional training. Caution could track it if a reluctance to rely without verification makes the value of review more apparent. Concern about reduced trust could also track it if respondents see professional skill as a response to uncertainty. The relationships could be weak because each statement concerns a different role and because respondents may support stronger skills for reasons independent of personal awareness. The cross-sectional design permits comparison of associations, not a test that one judgement produces another.

3. Methodology

The study uses an item-level analysis of a cross-sectional questionnaire. The reporting distinguishes the observed sample and recorded attitudes from representativeness and demonstrated skill. Within-person contrasts preserve the relationship between answers made by the same respondent.[7]

3.1 Source and screening

The Group 6 workbook contains a Data sheet, README and codebook. All 385 records indicate affirmative consent, adult eligibility and general AI awareness. The analysis checked valid 1-5 values for the 20 agreement fields, completeness of the analysed variables and duplicate response and profile patterns after excluding contextual text. No blank numerical or profile fields or duplicate patterns were found. All records were retained, and “None” was treated as a valid AI-tool response.

The authors supplied the numerical records as empirical survey data and identified the synthetic description of the contextual field as a labelling error. The contextual field was excluded and not quoted. The available documentation does not establish a verified sampling frame, exact recruitment dates, mode of distribution or an invitation denominator. Consequently, the article reports the achieved sample and does not estimate a response rate or national survey margin of error.

[7] Erik von Elm and others, ‘The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement’ (2007) 4 PLoS Medicine e296.

3.2 Observed measures

Table 1 describes the focal items. DET1 is awareness of fabrication capability, DET2 is caution about authenticity, and DET3 is perceived reduction of trust in unauthenticated evidence. DET4 records support for considering technical authentication and DET5 is endorsement of stronger professional skills. DET5 is the original-rating outcome in regression. DET4 is included in the descriptive and paired comparisons but is not a predictor.

Table 1. Roles of the observed measures

Measure	Item	Interpretation
Awareness	DET1	Self-reported understanding of fabrication capability
Caution	DET2	Reported caution before treating media as authentic
Trust concern	DET3	Perceived reduction in trust in unauthenticated evidence
Authentication	DET4	Support for considering technical authentication
Skills need	DET5	Perceived need for stronger professional skills
Adjustment	AIL1-3 and profile	General AI orientation and categorical background terms

DET5 is the outcome. DET4 is descriptive.

All five ratings retain their original direction. General AI orientation is the equal-weight mean of AIL1-3 and describes recognition of inaccuracy, reported verification and recognition of bias. It is an adjustment variable, not a validated test. Appendix A gives the exact wording. Alpha and item rank correlations are descriptive diagnostics; low consistency does not establish how many dimensions the items measure. Their wording is the primary reason for not estimating a common latent score.[8]

3.3 Paired and adjusted analyses

We define endorsement as agreement or strong agreement and retain all five categories in the descriptive table. Non-endorsement includes neutral responses and does not mean opposition. The joint table compares DET1 and DET5 and reports percentages using the full sample. Four paired contrasts compare DET1-4 with DET5. The difference is the comparator-only count minus the skills-only count, divided by 385. Exact McNemar tests use discordant pairs. Pointwise percentile intervals use 10,000 whole-record bootstrap resamples with replacement (seed 20261104). Holm adjustment covers the four contrasts.[9]

[8] Klaas Sijtsma, 'On the Use, the Misuse, and the Very Limited Usefulness of Cronbach's Alpha' (2009) 74 Psychometrika 107.

[9] Quinn McNemar, 'Note on the Sampling Error of the Difference between Correlated Proportions or Percentages' (1947) 12 Psychometrika 153; Sture Holm, 'A Simple Sequentially Rejective Multiple Test Procedure' (1979) 6 Scandinavian Journal of Statistics 65.

Exploratory linear regression uses the original DET5 rating. DET1-3 enter together. The adjusted model adds general AI orientation and categorical terms for current status, location, formal AI training and AI-use frequency. Unstandardised coefficients use HC3 standard errors and pointwise normal-approximation intervals. Holm adjustment applies to the three focal tests within each model. We repeat the adjusted model using binary endorsement as a linear probability outcome and restrict the original-rating model to law students. The binary model changes the estimand and the subset overlaps the full sample. Neither is independent validation.[10]

3.4 Ethics and data protection

Ethical approval for this study was obtained from the Center for Academic & Professional Career Development and Research (CAPCDR), an external institutional body, under approval reference CAPCDR: SMUCT/LLB/SS-0020260912-10. External ethical review was sought because Shanto-Mariam University of Creative Technology does not have an institutional ethics committee responsible for reviewing this type of research.

4. Results

The results report sample composition and item distributions, followed by joint endorsement, paired differences and exploratory models. The main analyses use all 385 records.

4.1 Sample profile

Table 2 presents age, status, location and training. The largest age group was 21-23 (151, 39.2%). The workbook recorded 253 law students, 67 law graduates, 32 advocates or legal professionals and 33 other relevant respondents. Dhaka accounted for 150 records and district towns for 87. No formal AI training was reported by 224 respondents, short orientation by 113 and course or certified training by 48.

Table 2. Respondent profile

Characteristic	Category	n (%)
Age	21-23	151 (39.2%)
Age	24-26	85 (22.1%)
Age	18-20	68 (17.7%)
Age	31+	48 (12.5%)
Age	27-30	33 (8.6%)
Status	Law student	253 (65.7%)

[10] James G MacKinnon and Halbert White, 'Some Heteroskedasticity-Consistent Covariance Matrix Estimators with Improved Finite Sample Properties' (1985) 29 Journal of Econometrics 305; Holm (n 9).

Characteristic	Category	n (%)
Status	Law graduate	67 (17.4%)
Status	Other relevant respondent	33 (8.6%)
Status	Advocate or legal professional	32 (8.3%)
Location	Dhaka	150 (39.0%)
Location	District town	87 (22.6%)
Location	Other city corporation	79 (20.5%)
Location	Upazila-rural area	59 (15.3%)
Location	Other	10 (2.6%)
Training	No	224 (58.2%)
Training	Yes, short orientation	113 (29.4%)
Training	Yes, course or certified training	48 (12.5%)

The sample is concentrated in legal education and practice and is not a cohort of practising lawyers. The questionnaire does not verify professional experience in evidence review or use of a detection tool.

4.2 Item distributions

Table 3 shows the original ratings. Awareness was endorsed by 216 respondents (56.1%); 134 chose neutrality and 35 chose disagreement or strong disagreement. Authenticity caution was endorsed by 298 (77.4%), the highest rate. Trust concern and professional skills were each endorsed by 246 (63.9%), and technical authentication by 242 (62.9%).

Table 3. Distribution of deepfake and evidence judgements

Item	1	2	3	4	5	Endorsed
DET1	2	33	134	167	49	216 (56.1%)
DET2	1	8	78	166	132	298 (77.4%)
DET3	1	14	124	169	77	246 (63.9%)
DET4	0	17	126	189	53	242 (62.9%)
DET5	0	20	119	183	63	246 (63.9%)

Endorsement combines categories 4 and 5.

Equal marginal counts for trust concern and skills do not imply the same answers. The five DET statements had a coefficient alpha of 0.204. Pairwise Spearman correlations ranged from-0.045 to 0.116. The modest covariation and distinct wording support separate reporting rather than a combined evidentiary trust score.

4.3 Joint endorsement and paired differences

Table 4 shows that 143 respondents (37.1%) endorsed awareness and stronger skills together. Seventy-three endorsed awareness alone, 103 endorsed skills alone and 66 endorsed neither. Among awareness endorsers, 66.2% endorsed stronger skills; among the

remainder the figure was 60.9%. These are descriptive percentages and do not show that awareness increases support.

Table 4. Joint endorsement of deepfake awareness and professional skills endorsement

Awareness	Skills need not endorsed	Skills need endorsed	Total
Not endorsed	66 (17.1%)	103 (26.8%)	169 (43.9%)
Endorsed	73 (19.0%)	143 (37.1%)	216 (56.1%)
Total	139 (36.1%)	246 (63.9%)	385 (100.0%)

Percentages are of all 385 records.

Table 5 compares the four ratings with skills endorsement. Caution exceeded it by 13.5 percentage points (95% CI 7.3 to 19.7; Holm-adjusted $p < 0.001$), based on 106 comparator-only versus 54 skills-only responses. Awareness was 7.8 points lower; its pointwise interval was-14.5 to-1.0 points, but its adjusted p value was 0.086.

Table 5. Paired contrasts with professional skills endorsement

Contrast	Comparator only	Skills need only	Gap (pp)	95% CI (pp)	Holm p
DET1- DET5	73	103	-7.8	-14.5 to -1.0	0.086
DET2- DET5	106	54	13.5	7.3 to 19.7	<0.001
DET3- DET5	84	84	0.0	-6.5 to 6.5	1.000
DET4- DET5	79	83	-1.0	-7.5 to 5.5	1.000

Pointwise percentile intervals and Holm-adjusted exact McNemar tests.

The trust-concern difference was zero, but 84 respondents endorsed only one statement in each direction. Technical authentication was 1.0 point below skills, with an interval spanning zero. Neither contrast met the adjusted threshold. Fifty-eight respondents (15.1%) endorsed all five statements. That combination describes a response pattern, not a competence standard.

4.4 Exploratory models

Table 6 reports the estimates. The adjusted coefficients for awareness, caution and trust concern were 0.043 (95% CI-0.065 to 0.151), 0.029 (−0.076 to 0.133) and 0.015 (−0.094 to 0.124), respectively. None met the adjusted threshold. The model explained 4.8% of observed variance, compared with 0.8% for the focal terms alone.

Table 6. Associations with the professional skills endorsement response

Model (n)	Term	Estimate	95% CI	Holm p	R^2
Unadjusted (385)	Awareness	0.052	-0.049 to 0.154	0.940	0.008
Unadjusted (385)	Caution	0.050	-0.051 to 0.150	0.940	0.008

Model (n)	Term	Estimate	95% CI	Holm p	R^2
Unadjusted (385)	Trust concern	0.038	-0.066 to 0.142	0.940	0.008
Adjusted (385)	Awareness	0.043	-0.065 to 0.151	1.000	0.048
Adjusted (385)	Caution	0.029	-0.076 to 0.133	1.000	0.048
Adjusted (385)	Trust concern	0.015	-0.094 to 0.124	1.000	0.048
Binary endorsement (385)	Awareness	-0.000	-0.063 to 0.062	1.000	0.038
Binary endorsement (385)	Caution	-0.012	-0.077 to 0.052	1.000	0.038
Binary endorsement (385)	Trust concern	0.022	-0.039 to 0.084	1.000	0.038
Law students (253)	Awareness	0.129	0.000 to 0.258	0.148	0.099
Law students (253)	Caution	0.078	-0.050 to 0.205	0.462	0.099
Law students (253)	Trust concern	-0.016	-0.140 to 0.109	0.807	0.099

HC3 intervals are pointwise. Binary endorsement coefficients are probability differences; other coefficients are on the 1-5 scale.

No focal term met the adjusted threshold in either sensitivity analysis. In law students, the awareness coefficient was 0.129 and its pointwise interval was approximately 0.000 to 0.258; the adjusted p value was 0.148. The results provide no clear evidence of robust associations in these specifications. They do not establish equivalence or show that an intervention that builds skills would have no effect.

5. Discussion

The study found clearer evidence for a difference in endorsement between general caution and professional skills than for associations between those ratings. More than three quarters endorsed caution before treating digital media as authentic; fewer than two thirds endorsed the need for stronger professional skills. The paired result supports asking those questions separately. It does not establish that people prefer caution over training when faced with a choice, or that the current level of professional skill is sufficient.

5.1 Caution and the meaning of a verification response

The general caution statement can apply to everyday viewing as well as to legal work. The professional skills statement asks respondents to judge what a particular group needs. A respondent can readily report that they would be cautious but may lack information about how legal professionals are currently trained. This difference in what the statements require may contribute to the gap. The questionnaire does not identify whether respondents considered authentication resources scarce, interpreted the training need narrowly or had already encountered an edited recording.

Caution can support better decisions if it leads to a check that can resolve a question. It can also produce delays or blanket scepticism if the person has no practical way to evaluate the material. For example, when a clip is alleged to show an event at a certain place, checking

whether the scene, date and source agree with other evidence may be more informative than starting with a generic detector. In another case, an examination of the original recording may be necessary. Appropriate reliance depends on the question and the evidence available to answer it.[11]

5.2 Awareness and professional capacity

More than half reported awareness of fabrication capability, but that acknowledgement was only weakly related to the professional skills rating after adjustment. The survey does not show whether respondents could recognise fabrication in a real task. It also does not show whether people who do not endorse the awareness item would benefit less from training. The subgroup estimate for awareness was positive, with a pointwise interval close to zero at its lower end and no adjusted support. The evidence is too imprecise to claim a stable subgroup pattern.

A training evaluation should therefore use tasks that make it possible to identify where a failure occurs. A participant might correctly spot that a claim lacks provenance but be unable to preserve the file. Another might preserve it correctly but draw too strong an inference from a detector. A third might obtain corroborating material while failing to document how it was obtained. These are different skills that can be taught and evaluated separately. Self-reported awareness can supplement such assessment, but cannot substitute for it.

5.3 Technical authentication and legal decisions

Technical authentication was endorsed by about 63% of respondents. This does not mean that the remainder reject authentication. Most non-endorsers selected neutrality. Nor does endorsement show that respondents favour compulsory expert examination in all cases. The item asks whether authentication should be considered when manipulation is suspected. The applicable method would depend on whether an original exists, what modification is alleged and how much turns on the issue.[12]

The statutory question about proving the contents of digital records remains separate. A professional may need to identify both the legal route and the technical issue, then explain why each is relevant. For instance, preservation of a record can help demonstrate that the version examined did not change after acquisition. It cannot establish that the depicted event occurred. A forensic conclusion that an edit is likely may be relevant to authenticity, but the legal assessment still depends on the record, surrounding evidence and applicable

[11] Lee and See (n 5); OHCHR and Human Rights Center, *Berkeley Protocol* (n 1).

[12] NIST, *Reducing Risks* (n 1).

procedure. Keeping these questions distinct helps prevent both overclaiming and unnecessary rejection of material.[13]

6. Theoretical and Practical Implications

The main implication is to distinguish general awareness from decision-specific competence. An intervention that increases familiarity with the term deepfake may be useful, but it should not be evaluated as though familiarity establishes appropriate reliance. A legal education programme can assess the steps through which a person goes from suspicion to a defensible conclusion.

6.1 Legal education and professional training

A case exercise could provide a short recording, a claim about its source and several conflicting accounts. Learners could identify the proposition at issue, preserve the version received, list sources of corroboration and specify what a specialist should examine. Assessment can distinguish justified uncertainty from failure to reach the instructor's preferred conclusion. A second exercise could give learners a genuine recording with misleading context to test whether they focus only on artificial generation. A third could ask them to interpret an inconclusive technical report and explain which claims remain supportable.

Training can also make documentation requirements concrete. Learners can practice noting when and how they obtained a file, preserving the received version and documenting any conversion or extraction they perform. If they consult an automated tool, they can record its version, inputs and output and explain why the output is relevant. These practices help another person scrutinise the reasoning, whether or not the initial reviewer reached a definitive conclusion.[14]

6.2 Institutional practice

An institution can define who receives a disputed record, when it should be referred for expert review and who can make decisions about reliance. Early triage can consider the consequence of the claim, availability of corroboration and risk of losing the original. A standard form can record what is known and what is uncertain without classifying every unverified recording as fabricated. Such a workflow should preserve room for judgement; the appropriate response to a doubtful lead differs from the response when a legal decision substantially depends on the recording.

[13] Evidence Act 1872, ss 65A–65B; OHCHR and Human Rights Center, *Berkeley Protocol* (n 1).

[14] OHCHR and Human Rights Center, *Berkeley Protocol* (n 1); NIST, *Reducing Risks* (n 1).

Researchers can test these practices by measuring whether reviewers preserve the right material, ask useful questions and change their conclusions when new evidence warrants it. They can also report false alarms and missed manipulations separately. Better performance may involve refusing to decide when the evidence is insufficient. A single score for confidence or trust would not capture that distinction.

7. Conclusion Limitations and Future Research

Among 385 adult respondents, caution about authenticity without verification was endorsed more widely than the proposition that legal professionals need stronger skills. Awareness, caution and concern about unauthenticated evidence did not robustly distinguish the skills rating in exploratory adjusted models. The results support separate measurement of what people understand about fabricated media, what they say about reliance and what they expect from professional practice.

The sample is concentrated in legal study and does not represent practising lawyers or the Bangladeshi public. The study does not document a probability sampling frame, recruitment mode or fieldwork dates. The statements are self-reported and have different objects and levels of specificity. No participant classified recordings or made a consequential decision about admissibility. The cross-sectional models cannot establish causal direction, and the companion Group 6 studies do not provide independent samples.

Future research could recruit students, lawyers and evidence specialists separately, then give them cases that vary manipulation, provenance and corroboration. A pre-post evaluation of a defined training programme could measure performance on new cases and distinguish accurate detection from appropriate uncertainty. A qualitative component could examine how practitioners ask for technical review and translate its findings into legal arguments. These designs would test whether the distinctions observed in the survey also matter when people handle evidence.

Declarations

Ethical approval and oversight

Ethical approval for this study was obtained from the Center for Academic & Professional Career Development and Research (CAPCDR), an external institutional body, under approval reference CAPCDR: SMUCT/LLB/SS-0020260912-10. External ethical review was sought because Shanto-Mariam University of Creative Technology does not have an institutional ethics committee responsible for reviewing this type of research.

Informed consent

All 385 analysed records contain affirmative consent and adult eligibility responses.

Data availability

Requests for de-identified numerical data and analytical specifications may be directed to the corresponding author, subject to confidentiality and applicable institutional requirements.

Funding and competing interests

No funding or competing interest was disclosed in the available study materials.

Author contributions

Md. Asraful Islam is the lead student author and prepared the original study text. Prof. Dr Kazi Abdul Mannan is the supervising co-author and corresponding author. The authors are responsible for review and approval of the final manuscript.

Generative AI disclosure

Generative AI assisted drafting, editing and preparation of analytical code. Numerical estimates were computed programmatically from the supplied workbook. The authors are responsible for verifying the analysis, interpretation and reporting.

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Appendix A Questionnaire wording

Table A1 gives the five deepfake and evidence statements and the three items used for the general AI orientation adjustment.

Table A1. Exact questionnaire wording

Code	Questionnaire statement
AIL1	I understand that generative AI can produce plausible but inaccurate information.
AIL2	I verify important AI-generated information before relying on it.
AIL3	I understand that AI outputs may reflect bias or incomplete data.
DET1	I understand that AI can generate realistic but fabricated audio, images or video.
DET2	I am cautious about treating digital media as authentic without verification.
DET3	Deepfake risks can reduce trust in unauthenticated digital evidence.
DET4	Technical authentication should be considered when manipulated media is suspected.
DET5	Legal professionals need stronger skills for evaluating AI-generated or manipulated media.

Source: Group 6 Codebook. Ratings range from 1 strongly disagree to 5 strongly agree.

DET5 is the outcome and does not enter any predictor.

Table of Legislation

Evidence Act 1872 (Bangladesh), ss 65A-65B