Supplementary Materials

AI Anxiety and Cognitive Regulation among Foreign Language Majors

These supplementary materials contain the item wording and scoring map, the complete edge set of the principal network, and the boundary analyses reported in Sections 3.2 and 3.3. Analyses used R 4.5.2 with the package versions stated in the manuscript; the main random seed was 20260911.

S1. Item wording and scoring map

Table S1. Every administered item, its node, and its English rendering.

Item	Node	English rendering
se1	SRC	If I try hard enough, I can always solve the problems I run into.
se2	SRC	Whatever comes up, I can usually find a way to cope.
se3	SRC	Even without AI's help, I am confident I can complete creative and learning tasks on my own.
srl1	SRC	When studying or producing work, I first set myself clear goals and a plan.
srl2	SRC	When I meet something I cannot do, I first try to work it out myself before seeking help.
srl3	SRC	After finishing a piece of work or an assignment, I reflect on what went well and what needs improving.
ail1	AIL	I know how to give AI clear, effective instructions (prompts).
ail2	AIL	I can judge whether AI-generated content is usable or needs revision.
ail3	AIL	I can choose the right AI tool or function for different production needs.
aix1	AIU	AI is developing so fast that it makes me uneasy.
aix2	AIU	I worry that overusing AI will weaken my own ability to produce work.
aix3	SCA	Seeing that others are better at using AI than I am makes me feel pressure.
fomo1	SCA	If I do not keep up with the latest AI tools, I worry I will fall behind my peers.
fomo2	SCA	When I see classmates using AI to work faster or produce more, I worry I am losing out.
fomo3	SCA	I am afraid of missing the shortcuts or opportunities AI could bring to my work.
inst1	INST	Rather than polishing slowly, I prefer approaches that produce an immediate result.
inst2	INST	If something takes a long effort before it pays off, I lose patience easily.
inst3	*not used*	I am willing to give up immediate convenience for a more solid foundation. *Reverse-keyed; excluded from the INST node.*
pu1	PU	Using AI improves my efficiency in producing work and in studying.
pu2	PU	AI helps me do a better job on tasks such as writing texts or designing teaching materials.
pu3	PU	Overall, AI is very helpful for my studies in my major.
trust1	TRUST	I believe AI-generated content is broadly usable.
trust2	TRUST	I am willing to act on AI's suggestions in developing my work.
trust3	*not used*	I habitually scrutinise and rework AI output. *Excluded from the TRUST node: it measures scrutiny, not trust.*
crit1	CRIT	Before adopting AI-generated content, I judge whether it matches my intentions and purpose.
crit2	CRIT	I check AI's output against my own judgement rather than accepting it wholesale.
crit3	CRIT	I am aware of the problems AI generation can have in originality and in detail.
pn1	PN	Most of the classmates around me use AI to support their work and study.
pn2	PN	Using AI is seen as completely normal in my circle of classmates.
pn3	*not used*	If I did not use AI, I would feel somewhat out of step with my peers. *Excluded: it measures personal unease rather than the perceived norm.*
anth1	*not used*	AI tools are available at any time and there is almost no barrier to use. *Excluded: availability, not anthropomorphism.*
anth2	ANTH	Interacting or co-creating with AI feels like collaborating with a real person.
anth3	ANTH	Sometimes I feel a sense of closeness or companionship toward AI.
ver1	*VER, not in main network*	Even when AI translates quickly and well, I regularly schedule reading and writing practice without it to maintain my language ability.
ver2	*VER, not in main network*	Even under a tight deadline, I go through and revise AI's translation before submitting it; I never submit it unchanged.
ver3	*VER, not in main network*	Worry about being replaced by AI pushes me to develop abilities AI cannot replace, such as thinking on my feet in interpreting and intercultural communication.
ver4	VAL	However strong AI becomes, it cannot undermine the value of a foreign-language degree, and I do not worry about it.
ver5	SUB	Now that AI translation exists, there is little need to practice human translation specifically.
ver6	SUB	AI's translation is already no worse than mine; I usually use it directly, and revising it would only spoil it.
dep1	DEP	If I could not use AI, I would feel anxious or uneasy.
dep2	DEP	Without AI, I would feel unsure of myself.
dep3	DEP	Even for work I could do myself, I habitually have AI produce a first version.
dep4	DEP	I find it increasingly hard to complete creative tasks without using AI.
dep5	DEP	I tend to adopt AI's output directly rather than working through it myself.
dep6	DEP	I often cannot be bothered to polish AI's output and just use it as it is.
cef1	HACE	When using AI, I stay in charge throughout and make it serve my own intentions.
cef2	HACE	I know when to use AI and when to rely on my own craft.
cef3	HACE	I am able to identify and improve on what AI gives me rather than accepting it passively.
cef4	HACE	Even when AI's output is poor, I am confident I can spot the problem and produce the work again.
cef5	HACE	Working with AI, I believe I can produce better work than I could alone.
cef6	HACE	I believe I can use AI well while maintaining and improving my real underlying craft.
q20	CHK	In the past month, the proportion of machine or AI translation that I checked sentence by sentence for meaning and tone, and revised by hand, before using was about:

Item	Node	English rendering
q21	REP	In the past month, how often I felt uneasy because of thoughts such as "AI will replace translators and foreign-language graduates":
q22	AFP	In the past month, the number of times I completed foreign-language writing or translation practice entirely without machine translation or AI:

Note. Items were administered in Chinese; the English renderings are the authors' translations and were not used in data collection. "Node" gives the node each item enters in the main network; items marked not used were administered but excluded, for the reason given. VER items 1–3 form the verification-practice scale, which was excluded from the main network because it is near-synonymous with the behavioral items. One caution about item q21: its stem asks about frequency, but the response options are the same five ordered anchors used for the proportion question q20. The anchors are interpretable as frequency ("almost never" to "almost always"), but the wording was not tailored to the stem, and this is one reason REP is treated throughout as a single ordinal indicator with limited precision.

Table S2. Response options and coding.

Item block	Response options (English rendering)	Coding
All 51 agreement items (se, srl, ail, aix, fomo, inst, pu, trust, crit, pn, anth, ver, dep, cef)	1 (strongly disagree) · 2 (disagree) · 3 (somewhat disagree) · 4 (neutral) · 5 (somewhat agree) · 6 (agree) · 7 (strongly agree)	1–7 as shown; no item was reverse-scored in any reported analysis
q20 (CHK)	almost none · less than half · about half · more than half · almost all	1–5 in the order shown; treated as ordered categories, not as exact proportions
q21 (REP)	almost none · less than half · about half · more than half · almost all	1–5 in the order shown
q22 (AFP)	0 · 1–3 · 4–6 · more than 6	1–4 in the order shown; treated as ordered categories, not as exact counts

S2. Complete edge set of the principal network

Table S3. All 136 candidate edges of the principal network, ordered by absolute weight.

Edge	From	To	Weight	2.5th percentile	97.5th percentile	Proportion zero
SRC–AIL	SRC	AIL	.391	.298	.518	0
AIU–SCA	AIU	SCA	.366	.27	.493	0
PU–TRUST	PU	TRUST	.327	.225	.439	0
HACE–CRIT	HACE	CRIT	.287	.199	.395	0
SUB–DEP	SUB	DEP	.264	.155	.392	0
CRIT–PN	CRIT	PN	.25	.154	.354	0
PU–CRIT	PU	CRIT	.233	.134	.331	0
INST–DEP	INST	DEP	.208	.106	.314	0
SCA–REP	SCA	REP	.206	.113	.305	0
TRUST–ANTH	TRUST	ANTH	.192	.09	.276	0
SCA–INST	SCA	INST	.191	.086	.295	0
SRC–HACE	SRC	HACE	.189	.095	.286	0
SCA–DEP	SCA	DEP	.177	.077	.28	.002
HACE–PN	HACE	PN	.172	.08	.269	0
ANTH–DEP	ANTH	DEP	.152	.069	.262	0
SRC–VAL	SRC	VAL	.14	.047	.233	.001

PU–PN	PU	PN	.131	.031	.239	.003
SUB–ANTH	SUB	ANTH	.129	.046	.261	.003
REP–VAL	REP	VAL	-.126	-.271	-.052	.004
AIL–HACE	AIL	HACE	.122	.016	.219	.016
AIL–CRIT	AIL	CRIT	.111	.024	.2	.005
AIL–PU	AIL	PU	.108	.019	.195	.011
TRUST–PN	TRUST	PN	.106	0	.194	.026
ANTH–VAL	ANTH	VAL	.105	.01	.232	.02
SRC–CRIT	SRC	CRIT	.1	.009	.194	.017
AIU–REP	AIU	REP	.084	0	.211	.051
HACE–VAL	HACE	VAL	.083	0	.185	.042
HACE–PU	HACE	PU	.075	0	.173	.097
TRUST–INST	TRUST	INST	.072	0	.184	.06
REP–SUB	REP	SUB	.032	0	.173	.221
SUB–CRIT	SUB	CRIT	-.032	-.143	0	.118
DEP–AFP	DEP	AFP	-.03	-.158	0	.192
AIU–INST	AIU	INST	.029	0	.141	.277
HACE–TRUST	HACE	TRUST	.026	0	.118	.336
AIL–ANTH	AIL	ANTH	.023	0	.112	.353
AIL–VAL	AIL	VAL	.022	0	.12	.312
AIU–PN	AIU	PN	.022	0	.105	.344
SCA–ANTH	SCA	ANTH	.013	0	.112	.406
SCA–PN	SCA	PN	.013	0	.11	.376
HACE–CHK	HACE	CHK	.011	0	.107	.392
TRUST–CRIT	TRUST	CRIT	.003	0	.096	.52
SCA–TRUST	SCA	TRUST	.002	0	.078	.616
SUB–INST	SUB	INST	.001	0	.126	.46
SCA–PU	SCA	PU	0	0	.07	.647
SCA–CHK	SCA	CHK	0	0	0	.975
SCA–CRIT	SCA	CRIT	0	0	0	.986
SCA–HACE	SCA	HACE	0	0	0	.984
SCA–VAL	SCA	VAL	0	-.061	0	.795
SCA–SRC	SCA	SRC	0	0	.008	.966
SCA–SUB	SCA	SUB	0	0	0	.977
SRC–ANTH	SRC	ANTH	0	0	.094	.532
SCA–AFP	SCA	AFP	0	-.04	0	.878
SCA–AIL	SCA	AIL	0	-.056	0	.841
REP–INST	REP	INST	0	0	.062	.824
REP–TRUST	REP	TRUST	0	-.009	0	.968
REP–SRC	REP	SRC	0	0	0	.98
REP–PU	REP	PU	0	0	.081	.708
REP–PN	REP	PN	0	0	.005	.968
REP–HACE	REP	HACE	0	-.04	0	.899
REP–DEP	REP	DEP	0	0	.099	.529
REP–CRIT	REP	CRIT	0	0	0	.987
REP–CHK	REP	CHK	0	0	.128	.591
REP–ANTH	REP	ANTH	0	0	.016	.961
REP–AIL	REP	AIL	0	0	0	.976
SRC–AFP	SRC	AFP	0	0	.062	.782
VAL–DEP	VAL	DEP	0	0	0	.984
SRC–CHK	SRC	CHK	0	0	.039	.874
SUB–VAL	SUB	VAL	0	0	.12	.577
VAL–INST	VAL	INST	0	-.05	0	.875
PU–VAL	PU	VAL	0	0	0	.979
VAL–CRIT	VAL	CRIT	0	0	.038	.895
VAL–CHK	VAL	CHK	0	0	.107	.572

VAL–AFP	VAL	AFP	0	0	.151	.366
TRUST–VAL	TRUST	VAL	0	0	.055	.796
TRUST–DEP	TRUST	DEP	0	0	.095	.59
TRUST–CHK	TRUST	CHK	0	-.061	0	.866
TRUST–AFP	TRUST	AFP	0	-.095	0	.67
SUB–TRUST	SUB	TRUST	0	-.023	0	.956
SRC–DEP	SRC	DEP	0	-.106	0	.327
SUB–PU	SUB	PU	0	-.084	0	.694
SUB–PN	SUB	PN	0	-.072	0	.756
SUB–CHK	SUB	CHK	0	-.108	0	.597
SUB–AFP	SUB	AFP	0	0	.039	.937
SRC–TRUST	SRC	TRUST	0	0	.015	.942
SRC–SUB	SRC	SUB	0	0	.069	.875
SRC–PU	SRC	PU	0	0	.009	.967
SRC–PN	SRC	PN	0	0	.057	.812
SRC–INST	SRC	INST	0	-.067	0	.739
REP–AFP	REP	AFP	0	0	.096	.757
CRIT–AFP	CRIT	AFP	0	0	.024	.951
PU–INST	PU	INST	0	0	.082	.682
AIU–CHK	AIU	CHK	0	0	.035	.924
ANTH–AFP	ANTH	AFP	0	-.029	0	.928
AIU–VAL	AIU	VAL	0	-.055	0	.84
AIU–TRUST	AIU	TRUST	0	0	.009	.962
AIU–SUB	AIU	SUB	0	-.076	0	.821
AIU–SRC	AIU	SRC	0	0	0	.983
AIU–PU	AIU	PU	0	0	0	.984
AIU–HACE	AIU	HACE	0	0	0	.99
AIU–DEP	AIU	DEP	0	0	.039	.9
AIU–CRIT	AIU	CRIT	0	0	.099	.456
AIU–ANTH	AIU	ANTH	0	-.013	0	.962
PU–DEP	PU	DEP	0	0	.028	.94
AIU–AIL	AIU	AIL	0	-.025	0	.95
AIU–AFP	AIU	AFP	0	-.037	0	.911
AIL–TRUST	AIL	TRUST	0	0	.035	.898
AIL–SUB	AIL	SUB	0	0	0	.982
AIL–PN	AIL	PN	0	0	.006	.966
AIL–INST	AIL	INST	0	-.032	0	.919
AIL–DEP	AIL	DEP	0	-.054	0	.821
AIL–CHK	AIL	CHK	0	0	.037	.909
AIL–AFP	AIL	AFP	0	0	.058	.825
ANTH–CHK	ANTH	CHK	0	0	0	.965
ANTH–CRIT	ANTH	CRIT	0	0	0	.979
ANTH–INST	ANTH	INST	0	0	.01	.951
ANTH–PN	ANTH	PN	0	0	.085	.566
PU–CHK	PU	CHK	0	0	.052	.872
PU–ANTH	PU	ANTH	0	0	.076	.655
PU–AFP	PU	AFP	0	0	0	.977
PN–INST	PN	INST	0	0	.011	.966
PN–DEP	PN	DEP	0	0	.03	.937
PN–CHK	PN	CHK	0	0	0	.974
PN–AFP	PN	AFP	0	-.156	0	.309
INST–CHK	INST	CHK	0	-.1	0	.684
INST–AFP	INST	AFP	0	-.034	0	.914
HACE–SUB	HACE	SUB	0	-.025	0	.943
HACE–INST	HACE	INST	0	-.07	0	.71
HACE–DEP	HACE	DEP	0	-.054	0	.801
HACE–	HACE	ANTH	0	0	.063	.74

ANTH						
HACE–AFP	HACE	AFP	0	0	.047	.84
DEP–CHK	DEP	CHK	0	-.119	0	.401
CRIT–INST	CRIT	INST	0	-.018	0	.95
CRIT–DEP	CRIT	DEP	0	-.061	0	.737
CRIT–CHK	CRIT	CHK	0	0	.103	.462
CHK–AFP	CHK	AFP	0	0	.132	.526
VAL–PN	VAL	PN	0	0	0	.991

S3. Boundary analyses for the main associations

These analyses accompany Sections 2.3, 3.2, and 3.3 of the manuscript. All were run in R with seed 20260911 and 1000 nonparametric bootstrap resamples; the principal network (43 edges; SCA–DEP = .177) was reproduced before any new estimate was computed. They describe stability and boundaries within the present sample and do not test replication in independent samples.

Table S4. Self-appraisal–anxiety pairs: zero-order, unregularized partial, and regularized estimates (N = 283).

Pair	Zero-order ϱ [95% CI]	Unregularized partial r [95% CI]	Regularized edge
SRC–AIU	.025 [−.109, .150]	−.034 [−.154, .103]	.000
AIL–AIU	−.005 [−.132, .122]	.004 [−.119, .132]	.000
HACE–AIU	.050 [−.070, .171]	−.012 [−.144, .119]	.000
SRC–SCA	.035 [−.096, .164]	.167 [.031, .294]	.000
AIL–SCA	−.041 [−.166, .089]	−.148 [−.287, −.003]	.000
HACE–SCA	.019 [−.109, .136]	−.003 [−.138, .129]	.000
SRC–REP	−.046 [−.161, .067]	−.012 [−.142, .109]	.000
AIL–REP	−.018 [−.139, .093]	.074 [−.055, .196]	.000
HACE–REP	−.079 [−.192, .036]	−.069 [−.208, .058]	.000
SCA–DEP	.434 [.323, .540]	.226 [.096, .347]	.177
SCA–INST	.444 [.321, .553]	.220 [.091, .348]	.191
SCA–REP	.432 [.325, .523]	.243 [.118, .364]	.206

Note. Zero-order coefficients are Spearman correlations; unregularized partial correlations are computed from the inverse of the 17-node Spearman correlation matrix; regularized edges are the EBICglasso estimates (γ = .50) of the principal network. Intervals are 95% bootstrap percentiles. The last three rows give social-comparison anxiety pairs for comparison. SRC = self-regulatory competence; AIL = AI literacy; HACE

= collaboration efficacy; AIU = AI unease; SCA = social-comparison anxiety; REP = replacement unease; DEP = AI dependence; INST = immediate-reward preference.

Table S5. Facet- and item-level decomposition of social-comparison anxiety (N = 283).

Network	Edge	Regularized partial r [95% CI]	Zero in resamples
Three facets	Upward comparison (fomo2) – AIU	.062 [.000, .164]	12.9%
Three facets	Upward comparison (fomo2) – REP	.049 [.000, .134]	18.8%
Three facets	Upward comparison (fomo2) – INST	.020 [.000, .122]	38.3%
Three facets	Upward comparison (fomo2) – DEP	.000 [.000, .058]	78.1%
Three facets	Upward comparison (fomo2) – PN	.000 [.000, .034]	86.0%
Three facets	Upward comparison (fomo2) – SRC	.000 [.000, .000]	97.7%
Three facets	Upward comparison (fomo2) – AIL	.000 [−.029, .000]	89.5%
Three facets	Upward comparison (fomo2) – HACE	.000 [−.024, .000]	93.6%
Three facets	Upward comparison (fomo2) – SUB	.000 [.000, .000]	97.3%
Three facets	Upward comparison (fomo2) – VAL	.000 [−.035, .000]	88.0%
Three facets	Upward comparison (fomo2) – Fear of falling behind or missing out (fomo1+fomo3)	.522 [.399, .615]	0.0%
Three facets	Upward comparison (fomo2) – Peer competence pressure (aix3)	.296 [.159, .410]	0.0%

Three facets	Fear of falling behind or missing out (fomo1+fomo3) – AIU	.093 [.000, .199]	4.7%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – REP	.154 [.055, .231]	0.0%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – INST	.110 [.000, .201]	3.2%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – DEP	.104 [.009, .186]	1.6%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – PN	.019 [.000, .077]	47.7%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – SRC	.000 [.000, .000]	97.5%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – AIL	.000 [−.010, .000]	95.7%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – HACE	.000 [.000, .000]	98.6%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – SUB	.000 [.000, .000]	98.5%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – VAL	−.015 [−.076, .000]	57.3%
Three facets	Fear of falling behind or missing out (fomo1+fomo3) – Peer competence pressure (aix3)	.205 [.098, .316]	0.0%
Three facets	Peer competence pressure (aix3) – AIU	.259 [.150, .344]	0.0%

Three facets	Peer competence pressure (aix3) – REP	.000 [.000, .087]	64.2%
Three facets	Peer competence pressure (aix3) – INST	.073 [.000, .178]	12.1%
Three facets	Peer competence pressure (aix3) – DEP	.087 [.000, .172]	4.0%
Three facets	Peer competence pressure (aix3) – PN	.005 [.000, .073]	59.4%
Three facets	Peer competence pressure (aix3) – SRC	.000 [.000, .050]	80.4%
Three facets	Peer competence pressure (aix3) – AIL	.000 [−.053, .000]	77.6%
Three facets	Peer competence pressure (aix3) – HACE	.000 [−.034, .000]	89.8%
Three facets	Peer competence pressure (aix3) – SUB	.000 [.000, .004]	96.7%
Three facets	Peer competence pressure (aix3) – VAL	.000 [.000, .000]	97.9%
Four items	fomo1 – AIU	.090 [.000, .180]	3.8%
Four items	fomo1 – REP	.116 [.025, .185]	0.9%
Four items	fomo1 – INST	.070 [.000, .147]	8.8%
Four items	fomo1 – DEP	.065 [.000, .138]	6.8%
Four items	fomo1 – PN	.000 [.000, .000]	99.5%
Four items	fomo1 – SRC	.000 [−.011, .000]	95.9%
Four items	fomo1 – AIL	.000 [−.037, .000]	75.9%
Four items	fomo1 – HACE	.000 [−.012, .000]	95.7%
Four items	fomo1 – SUB	.000 [.000, .005]	96.8%
Four items	fomo1 – VAL	−.017 [−.071, .000]	57.3%
Four items	fomo1 – fomo2	.339 [.224, .451]	0.0%
Four items	fomo1 – fomo3	.378 [.245, .483]	0.0%

Four items	fomo1 – aix3	.197 [.094, .303]	0.0%
Four items	fomo2 – AIU	.043 [.000, .147]	22.4%
Four items	fomo2 – REP	.048 [.000, .133]	20.7%
Four items	fomo2 – INST	.015 [.000, .116]	42.6%
Four items	fomo2 – DEP	.000 [.000, .053]	82.7%
Four items	fomo2 – PN	.000 [.000, .026]	91.2%
Four items	fomo2 – SRC	.000 [.000, .000]	97.9%
Four items	fomo2 – AIL	.000 [−.031, .000]	89.8%
Four items	fomo2 – HACE	.000 [−.027, .000]	91.6%
Four items	fomo2 – SUB	.000 [.000, .000]	97.7%
Four items	fomo2 – VAL	.000 [−.027, .000]	90.5%
Four items	fomo2 – fomo3	.253 [.144, .362]	0.0%
Four items	fomo2 – aix3	.272 [.129, .384]	0.0%
Four items	fomo3 – AIU	.045 [.000, .142]	20.9%
Four items	fomo3 – REP	.043 [.000, .121]	21.1%
Four items	fomo3 – INST	.056 [.000, .142]	15.2%
Four items	fomo3 – DEP	.056 [.000, .138]	11.5%
Four items	fomo3 – PN	.042 [.000, .109]	20.2%
Four items	fomo3 – SRC	.000 [.000, .032]	91.2%
Four items	fomo3 – AIL	.000 [.000, .000]	98.4%
Four items	fomo3 – HACE	.000 [.000, .015]	94.8%
Four items	fomo3 – SUB	.000 [−.029, .000]	93.8%
Four items	fomo3 – VAL	.000 [−.068, .000]	70.2%
Four items	fomo3 – aix3	.052 [.000, .162]	17.7%
Four items	aix3 – AIU	.245 [.132, .333]	0.0%
Four items	aix3 – REP	.000 [.000, .081]	66.6%
Four items	aix3 – INST	.070 [.000, .176]	13.4%

Four items	aix3 – DEP	.079 [.000, .166]	5.8%
Four items	aix3 – PN	.000 [.000, .066]	65.6%
Four items	aix3 – SRC	.000 [.000, .050]	79.7%
Four items	aix3 – AIL	.000 [−.049, .000]	78.0%
Four items	aix3 – HACE	.000 [−.032, .000]	88.0%
Four items	aix3 – SUB	.000 [.000, .006]	96.7%
Four items	aix3 – VAL	.000 [.000, .008]	97.1%

Note. Each network replaces the social-comparison composite with the listed facet or item nodes and is otherwise identical to the principal network (EBICglasso on Spearman correlations, $\gamma = .50$). Intervals are 95% bootstrap quantiles from 1000 resamples. fomo1 = falling behind peers; fomo2 = worrying about losing out when classmates use AI to work faster; fomo3 = missing AI-enabled opportunities; aix3 = pressure from others' superior AI competence. Other abbreviations as in Table S4; PN = peer norms; SUB = substitution belief; VAL = professional value confidence.

Table S6. The social-comparison/dependence association within study-year cohorts and collection waves.

Group	n	Zero-order ϱ	Regularized edge	Unregularized partial r [95% CI]	SCA–INST edge	Self-appraisal–anxiety edges
first-year (July)	108	.258	.000	.089 [−.106, .299]	.000	0
fourth-year (Aug–Sep)	147	.516	.222	.256 [.057, .449]	.265	0
lower (years 1-2)	112	.254	.000	.092 [−.092, .302]	.000	0
upper (years 3-4)	166	.511	.229	.269 [.083, .426]	.281	0

Note. First-year respondents were surveyed in July 2026 and all fourth-year respondents in August or September 2026, so cohort and collection period cannot be separated. Lower = years 1–2; upper = years 3–4. Each network contains the 17 principal nodes and uses the principal settings; intervals are 95% bootstrap percentiles from 1000 resamples. Retention of an edge in one cohort but not the other does not establish a between-cohort difference.

Further materials are available from the first author on reasonable request.