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Modelling Higher Education Outcomes Across Political Regimes

The role of academic freedom and epistemic control for student self-formation, knowledge and competence acquisition, and employability

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ENEMIES OF OPEN SOCIETY

Political regimes 1900-2026 attacking academic freedom

Stalin and Soviet biology (1930s–1950s)	Trofim Lysenko's rejection of Mendelian genetics was elevated to state doctrine with Stalin's personal backing; in 1948 genetics was formally banned as "bourgeois pseudoscience." Nikolai Vavilov, the world's leading plant geneticist, was arrested in 1940 and died of starvation in prison in 1943. This is the classic case of a political leader dictating scientific truth itself, not just who may teach.
Hitler and the German universities (1933–1945)	The Law for the Restoration of the Professional Civil Service (April 1933) removed Jewish and politically suspect academics; roughly a fifth of the professoriate was gone within a few years, including a remarkable share of Germany's physicists and mathematicians. Student-led book burnings followed in May 1933, and rectors like Heidegger at Freiburg actively aligned their institutions with the regime. In occupied Poland, the *Sonderaktion Krakau* (November 1939) deported 183 Kraków academics to Sachsenhausen.
McCarthyism in the United States (1947-1956)	Senator Joseph McCarthy's anti-communist attacks led to the investigation and dismissal of university professors suspected of communist sympathies. Universities faced pressure to fire faculty members based on political beliefs, loyalty oaths were required, and academic debate on sensitive topics was chilled. Many accomplished scholars had their careers destroyed despite often having no substantive evidence of wrongdoing.
Onganía in Argentina (1966)	On 29 July 1966, weeks after the coup of Juan Carlos Onganía, police beat faculty and students out of five University of Buenos Aires faculties — *la Noche de los Bastones Largos*. Some 300 academics resigned and many emigrated, in a scientific brain drain Argentina spent decades recovering from.

ENEMIES OF OPEN SOCIETY

Political regimes 1900-2026 attacking academic freedom

Mao and the Cultural Revolution (1966–1976)	Universities were closed outright, entrance examinations suspended for roughly a decade, and professors publicly humiliated, "sent down" to the countryside, or killed. It is probably the most complete destruction of a national higher-education system by its own government in the period.
Erdoğan in Turkey (2016–)	After the January 2016 "Academics for Peace" petition and the July 2016 coup attempt, more than 400 signatories were prosecuted and thousands of academics dismissed by emergency decree, barred from public employment and often from travel. A decade on, only a handful have been reinstated despite a 2019 Constitutional Court ruling in the signatories' favour.
Orbán in Hungary (2017–2026)	"Lex CEU" (2017) imposed conditions Central European University could not meet, driving it to Vienna by 2019; the Court of Justice of the EU ruled in 2020 that the law breached EU law and WTO commitments. Gender studies programmes were abolished by decree in 2018, the Academy of Sciences' research network was placed under government control in 2019, and universities were transferred to foundations run by government allies.
Trump in the United States (2025–)	Federal research funding was frozen or cancelled at Columbia, Harvard and others pending agreement to conditions covering admissions, hiring, discipline and academic governance; international students' visas were revoked over political speech; and in late 2025 nine universities were offered a funding "compact" in exchange for policy commitments, which most publicly declined. This one is still unfolding and contested in the courts, so treat any summary as provisional.

ENEMIES OF OPEN SOCIETY

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US 1972: Richard Nixon	U.S. President Richard Nixon on December 14, 1972, during a private White House conversation with advisors Henry Kissinger and Alexander Haig: **"Never forget, the press is the enemy, the press is the enemy. The establishment is the enemy, the professors are the enemy, the professors are the enemy. Write that on a blackboard 100 times."** (https://www.cbc.ca/radio/ideas/journalism-in-the-age-of-fake-news-1.4454274)
US 2021: J.D. Vance	J.D Vance at National Conservatism Conference in November 2021: **"**I think Nixon was right … **the professors are the enemy."** (https://www.chronicle.com/article/the-professors-are-the-enemy)
RU 2021: Vladimir Putin	"In April 2021, Putin signed a new 'higher education' law requiring government approval of any collaboration by Russian scholars with foreign colleagues – even inviting them to give lectures – and banning all public educational activities that supposedly oppose Russia's constitution or incite unrest." (https://www.ponarseurasia.org/the-destruction-of-academic-freedom-and-social-science-in-russia/)
Brasil, India, Argentinia	**Bolsonaro**'s budget cuts and rector appointments in Brazil, **Modi**'s government and JNU/Ashoka in India, and **Milei**'s defunding of Argentine public universities from 2024

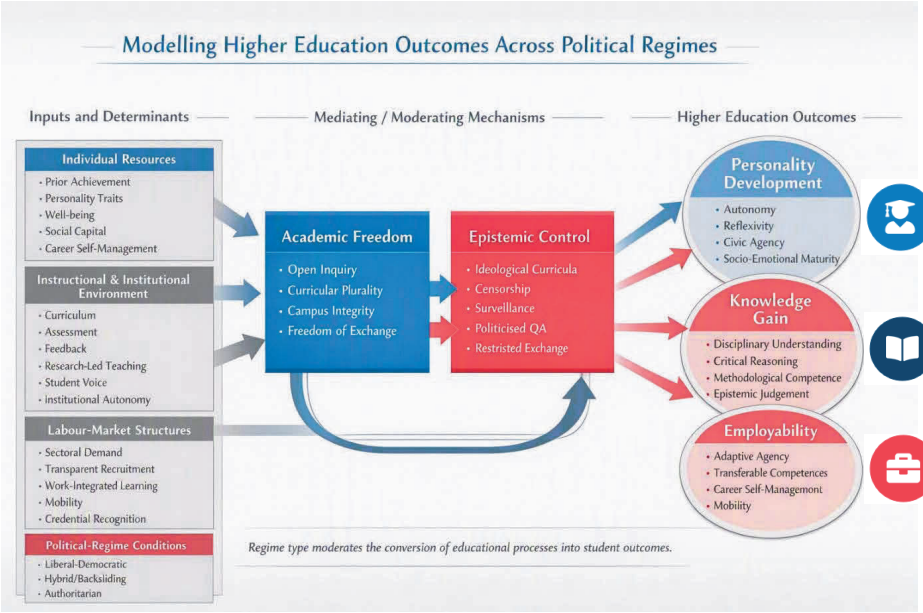
One analytical thread runs through most of these: outright bans and arrests characterise the classic dictatorships, whereas the **post-2010 cases work mainly through funding conditions, accreditation law, and governance capture** — which is why the political-science literature now distinguishes **"autocratic legalism"** from older repression.

(https://www.aaup.org/sites/default/files/Weinstein_Blanchard_JAF14.pdf; Hernández-Huerta, V., & Inclán, M. (2025) Populist attacks on academic freedom: How populist leadership erodes academic freedom in liberal and electoral Democracies. *Perspectives on Politics*. Published online 2025: pp. 1-17. https://doi.org/10.1017/S1537592725102077

CONCEPTUAL MODEL

A multi-level mechanism model:

Academic freedom and epistemic control (in HE) are dynamic, regime-sensitive indicators



50
countries with declining academic freedom
AFI update 2026

9
countries with improvements
AFI update 2026

34
countries with significant decline over ten years
AFI update 2025

Three interrelated/ intersectional outcome domains

Self-formation: Leiber 2016; Marginson 2024a, 2026; Biesta 2020; …

Knowledge and competence gain: Biesta 2020; Evans et al. 2018; Ilie et al. 2025; Wong 2026; …

Employability: Ma & Bennett 2024; Monteiro et al. 2025; …

Figure 1 — Multi-level mechanism model of generic higher education outcomes across political regimes

CONCEPTUAL MODEL AND MECHANISMS

Four levels of intersectional determinants

Individual

Prior achievement, personality traits, well-being, social capital, belonging, career self-management.
(Bhattacharjee & Ramkumar 2025; Mammadov 2022; …)

Instructional & institutional

Curriculum design, assessment and feedback, research-led teaching, student-centred pedagogy, participation, institutional support.
(Evans et al. 2018; Koseda et al. 2025; …)

Labour market

Sectoral demand, regional opportunity structures, hiring practices, credential transparency, mobility conditions.
(Abelha et al. 2020; Monteiro et al. 2025; ..)

Political regime

Academic freedom, institutional autonomy, rule-of-law protection, epistemic control — conditioning all three other levels.
(Börzel & Spannagel 2025; Hao 2025; Levy 2022; Leiber 2026; …)

The political-regime level does not add another input — it sets the terms on which the other three are converted into outcomes.

RESEARCH DESIGN

Research questions and operational hypotheses

RQ1–RQ3: HOW AND TO WHAT EXTENT do academic freedom and epistemic control affect the transformation of higher education processes into (1) autonomy-oriented self-formation, (2) critical and plural knowledge and competence acquisition, (3) adaptive employability?

H1 Autonomy-oriented self-formation

Academic freedom (i.e., freedoms to research and teach, exchange, expression, institutional autonomy, campus integrity, participatory governance, freedom of academic speech and equitable access) ENABLES AND FOSTERS **individual autonomy, reflexivity, self-authorship and civic agency.**

Epistemic control promotes self-censorship, conformity, dependency, politically bounded agency.

H2 Critical and plural knowledge and competence gain

Academic freedom ENABLES AND FOSTERS **curricula, research-led teaching, assessment and evaluation, peer debate and international exchange to expose students to diverse questions, methods and epistemic communities.**

Epistemic control narrows legitimate knowledge claims and privileges political regime-compatible interpretations.

H3 Adaptable employability

Academic freedom ENABLES AND FOSTERS **work-integrated learning, employer engagement, guidance and mobility to generate transferable skills, credible credentials, networks and career agency.**

Epistemic control produces more locally bounded, politically conditioned, less portable career pathways in education, training and labour.

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METHOD AND CORPUS

Narrative scoping literature review

1 Scoping overview search along RQ1-RQ3

Search items: academic freedom, institutional autonomy, freedom of speech, open inquiry, curricular plurality, campus integrity, freedom of exchange, epistemic control, ideological curricula, censorship, surveillance, politicized quality assurance, restricted exchange, personality development, self-formation, student autonomy, reflexivity, civic agency, socio-emotional maturity, knowledge gain, competence acquisition, disciplinary understanding, critical reasoning, methodological competence, epistemic judgement, employability, adaptive agency, career self-management, mobility.

2 Sources

Claude's Scite database (300M+ scholarly sources), Open web, Taylor & Francis Online, Zenodo, ILO, IZA, OpenGrey; cross-checked in eight higher education journals. Scopus and WoS excluded as subscription-based.

3 Inclusion criteria

Published 2000–2026, English language, preference for open access, mostly peer-reviewed with stable identifiers.

4 Transparency on AI use

Searches and drafting partly supported by AI tools (WORD – Copilot; ANTHROPIC Claude – Opus 5); all results reviewed and revised by the author, who bears sole responsibility.

103

relevant references, finalised 15 August 2026

77 journal articles · 12 reports · 6 working papers · 3 datasets · 2 books · 2 chapters · 1 thesis



Figure 3 — Word cloud from titles and abstracts of the identified references (generated by Claude (Opus 5), 31 July 2026)

Possible next step

A configurative, mechanism-oriented systematic literature review structured and implemented according to PRISMA 2020.

MEDIATING AND MODERATING MECHANISMS

Enablers and disenablers of educational transformation

Dimensions of academic freedom

- Freedom to teach, learn and research
- Freedom of academic expression
- Freedom of exchange and dissemination
- Freedom of self-governance
- Institutional autonomy
- Campus integrity and safety
- Participation in academic governance
- Equitable, non-discriminatory access

(Kováts & Rónay, 2023; Leiber, 2026; Spannagel & Kinzelbach, 2023; …)

Channels of epistemic control

- Politically steered curricula
- Ideological filtering of knowledge
- Censorship and self-censorship
- Surveillance of students and staff
- Politicised quality assurance
- Faculty vetting and appointments
- Restrictions on student organisation
- Funding tied to regime priorities

(observable in a growing number of countries: Republic of India, PRC, RU, RSA, USA, …) (**3.5 bill.**)
(Arthur, 2025; Beidollahkhani, 2025; Hanson & Sokhey, 2021; Ignatieff, 2024; Kinzelbach et al., 2026; Lee & Tipoe, 2025; Levy, 2022; Nigussie, 2026; Scholars at Risk, 2025; …)

Consequence:

- **Outputs of educational transformation do not disappear under control**
- **But their openness, independence and portability are narrowed**
- **Typically, there is a gradual curtailment of academic freedom – often not explicitly or directly imposed by highest level state authority, but rather brought about by lower-level authorities or social pressure and corruption and self-censorship.**

FINDINGS OF THE REVIEW

Four partially connected evidence strands

Outcome-oriented HE research

- **Mature but unevenly integrated evidence** on learning and educational gain, personality and well-being, civic engagement, and employability configurations
- **Relationship between education and political values** is more **complex** than simple liberalisation accounts imply

(Bennion & Michelson, 2023; Dickson & Kameshwara, 2025; Garritzmann & Wehl, 2025; Kiess, 2022; Lee & Tipoe, 2025; Oh, 2022; Scott, 2022; Simon, 2022; Solis, 2013; van den Wijngaard *et al.*, 2024)

Authoritarian, hybrid and conflict-affected settings

- **Authoritarian HE can aid regime survival** via elite formation, ideological socialisation, controlled research, and technical capacity building, without safeguarding critical inquiry (Hanson & Sokhey, 2021; Levy, 2022)
- **Political intervention, market pressure, conflict, and repression weaken autonomy, academic freedom, mobility, trust, and scholarly integrity**, though universities and alternative academies also become sites of resistance (Arthur, 2025; Tutkal, 2022; Laakso & Kratou, 2026; Nigussie, 2026)
- Similar pressures appear in Hungary, Turkey, Poland, Iran, and other **restrictive settings**, but their **effects on student outcomes remain under-measured** (Arthur, 2025; Beidollahkhani, 2025; Ignatieff, 2024; Jafarova, 2021; Salmon, 2025; Scholars at Risk, 2025)

Academic freedom & autonomy research

- **Academic freedom varies systematically across regime contexts**, is exposed to decline episodes, and is linked to democratic backsliding, autocratisation, political attacks on university autonomy, societal peace, innovation, and labour-market creativity

(Börzel & Spannagel, 2025; Laakso & Kratou, 2026; Lott, 2024; Lott et al., 2025; Maassen et al., 2023; Sima, 2026)

Comparative political economy & policy

- **Regime effects on education run through geopolitics, institutional design, policy feedback, resources, and competition**, shaping mobility, partnerships, and internationalisation (Moscovitz & Sabzalieva, 2023)
- **Democracies show stronger critical thinking and cognitive skills**, while political and market structures drive unequal access and credential credibility (Rafailova, 2024; Schulze-Cleven et al., 2017)
- **Democracies perform better over time but not uniformly**, and global cooperation coexists with national inequality (Tudor, 2025; Marginson, 2018)
- **Effects of epistemic control appear less in enrolment or employment than in how education is organised and how transferable its outcomes are** (Leite-Velho, 2026; Garritzmann & Wehl, 2025; del Río et al., 2023; Coman & Bonciu, 2015; Apergis, 2018)

The strands rarely intersect directly — which is why the synthesis is configurative (mapping ideas, qualitative) rather than aggregative (hypothesis test, quantitative).

FINDINGS OF THE REVIEW

Two mature literatures that rarely meet

Outcome-oriented HE research

- Learning and educational gain
- Personality development and well-being
- Civic engagement
- Graduate employability

Work on student outcomes measures gains without reference to the freedom conditions under which they were produced.
Treats political conditions as distant background — or omits them entirely.
No retrieved study tests whether restrictions on academic freedom measurably depress critical-reasoning gains, self-formation, or civic agency.

Academic-freedom & regime research

- Autonomy and governance
- Repression and incidents
- Conditions of knowledge production
- Democratic backsliding

Work on academic freedom argues about institutional and staff conditions.
Stops at institutional governance — rarely follows the chain to student outcomes.

Consequence:

- **Claims about mechanisms and enabling conditions of educational transformation can be grounded in convergent evidence**
- **Claims about the extent/magnitude of political-regime effects on student outcomes cannot**

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FINDINGS BY OUTCOME DOMAIN

How the three hypotheses fare

H1 · Autonomy-oriented self-formation

Refined, not refuted

Supported as a qualitative probabilistic conditional claim.

No study tests the freedom-to-self-formation development path across political regimes.

H2 · Critical and plural knowledge & competence gain

Best supported

Liberal democracy is associated more with critical-thinking performance than with subject-specific knowledge — exactly the differential effect the model predicts (Rafailova, 2024; Udah *et al.*, 2026)

Well supported qualitatively: control affects breadth, criticality, independence and ethical quality rather than volume. Untested as a quantitative cross-regime claim (Rafailova, 2024; …).

H3 · Adaptable employability

Respecified

As a claim about employment rates it is not supported and probably false: restrictive systems expand access and produce employed graduates.

Moderately supported as a claim about adaptability, portability, credibility, creativity-intensity and agentic quality — measured at country and occupational level.

CONFIDENCE APPRAISAL

What the evidence can and cannot carry

Strong

Convergent, directly measured

- Higher education outcomes are multidimensional and mutually reinforcing, not separable outputs
- Academic freedom varies systematically across political regimes and is currently declining
- Epistemic control operates through identifiable institutional channels
- Formal institutional autonomy and legal guarantees are insufficient without enacted and perceived academic freedom (Leiber, 2026)

Moderate

On point but indirect or unreplicated

- Academic freedom is associated with innovation output and creativity-intensive occupations (in high-tech, research, and management) — measured at country level (Sima, 2026)
- Liberal democracy relates more to critical thinking than to subject knowledge (Rafailova, 2024; Udah *et al.*, 2026)
- Academic freedom as a higher-order enabling condition and collective capability — conceptually robust, empirically indirect (Nandram, S.S., Geaquinto Rocha, R., & Joshi, G., 2026)

Not established

Untested or contradicted

- The specific transformation pathways linking academic freedom dimensions to each HE outcome domain — the model's principal untested component
- Uniform causal political-regime effects on the three HE outcome domains
- A uniform civic or liberal political orientation produced by HE (not supported)
- Restrictive political regimes reducing enrolment, skills or employment (not supported)

IMPLICATIONS – PRACTICAL AND POLICY RECOMMENDATIONS

Academic freedom as public infrastructure – HEIs as political actors

R1 **Treat academic freedom as core public and quality infrastructure**

- **Governments, quality assurance agencies, and universities** should protect and monitor academic freedom (e.g., freedom to teach, research, learn, communicate, and self-govern, alongside institutional autonomy, secure working conditions, campus integrity, and participation)
- Monitoring should **combine various measures of observation and measurement** (e.g., legal and political reviews, indicators, surveys of those affected, incident reports to capture both formal and actual attacks on academic freedom)

(Kováts & Rónay, 2023; Maassen *et al.*, 2023; Ren & Li, 2013; Leiber, 2026)

R2 **Embed academic freedom safeguards across governance and policy instruments**

- Funding, accreditation, appointments, employment conditions, internationalisation, research security, and institutional reform should be **assessed for indirect as well as direct constraints on academic freedom**
- **Transparent procedures and routine monitoring** are needed because political interference can operate through governance, finance, working conditions, and exclusion from decision-making, not only through censorship

(Council of Europe, 2025a, 2025b; EHEA, 2024; European Parliament, 2026; UNESCO, 1998; Leite-Velho, 2026)

Council of Europe 2025 · European Parliament Academic Freedom Monitor 2025 · EHEA fundamental values 2024 · UNESCO 1998 · Scholars at Risk 2025

IMPLICATIONS – PRACTICAL AND POLICY RECOMMENDATIONS

Academic freedom as public infrastructure – HEIs as political actors

R3 **Align teaching, assessment, and employability with epistemic openness**

- **Universities should integrate self-formation, competence acquisition, civic learning, and employability** while preserving disciplinary plurality, independent judgement, reasoned disagreement, fair assessment, student voice, and safe participation
- **Quality assurance** should use **academic freedom as a reflective condition of educational effectiveness**
- **University-employer partnerships should strengthen transferable capabilities** without narrowing curricula to short-term demand or ideological conformity

(Abelha *et al.*, 2020; Evans *et al.*, 2018; Koseda *et al.*, 2025; Lee & Tipoe, 2025; Ma & Bennett, 2024; Monteiro *et al.*, 2025; Udah *et al.*, 2026)

R4 **Build resilient, open, and risk-sensitive academic systems**

- **Governments, funders, and institutions should establish early-warning and incident-reporting systems, legal and sanctuary support for at-risk scholars, and cross-institutional solidarity networks**
- **International HEI partnerships and knowledge-security procedures** should use proportionate, evidence-based **risk assessment that protects vulnerable participants and research integrity** without undermining mobility, plural exchange, or global collaboration
- **HEIs' employability policy** should prioritise **credible, portable, and adaptable capabilities**

(Marginson, 2018, 2024b; Scholars at Risk, 2025; European Parliament, 2026; OECD, 2025a, 2025b)

Council of Europe 2025 · European Parliament Academic Freedom Monitor 2025 · EHEA fundamental values 2024 · UNESCO 1998 · Scholars at Risk 2025

OUTLOOK

Three gaps and directions for future research

01

Cross-regime multi-level designs

Combine graduate outcome surveys, educational-gain indicators, well-being and personality measures with Academic Freedom Index time series.

02

Quasi-experimental studies

Exploit policy shocks: autonomy restrictions, mobility bans, attacks on campus integrity, politicised quality-assurance reforms.

03

Qualitative mechanism studies

Analyse how campus social architectures — student associations, mentoring, civic programmes, partnerships, protected debate spaces — support or constrain the three outcome domains.

The empirical task is to determine in different political systems how (similar) observable results of higher education are achieved, whose skills they promote, and whether they remain compatible with institutional, labour market, civil society, and geopolitical contexts of a liberal-democratic nature.

Together these define the design the field still lacks: comparative, multi-level and longitudinal

TAKE-AWAY

Conditional transformation, not regime determinism: Political regimes influence HE outcomes rather indirectly. They determine the conditions for success and failure.

Under protected freedom — the same processes are more likely to yield autonomous and socially responsible self-formation, critical and plural knowledge, and adaptable employability.

Under epistemic control — comparable inputs still yield qualifications, technical skills and employment — but their openness, credibility, portability and civic value are narrowed.

For research and policy — academic freedom belongs inside outcome models and quality systems as an enabling condition, not outside them as a distanced, abstract political context.

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