



Higher Education Under Fire: Historical Continuity, Legal Gaps, and a Proposed Framework for Global Academic Response

La educación superior bajo fuego: continuidad histórica, vacíos legales y una propuesta de marco para una respuesta académica global

 Ali Gorji*, Epilepsy Research Center, Department of Neurosurgery, Münster University (Germany).
Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran (Iran). Neuroscience
Research Center, Mashhad University of Medical Sciences, Mashhad (Iran) (gorjial@uni-muenster.de)
(<https://orcid.org/0000-0002-4557-3270>)

* Indicates the corresponding author

ABSTRACT

Universities have historically been central to intellectual independence, scientific progress, and cultural continuity. Yet, they have repeatedly been targeted during armed conflicts, destroying infrastructure, causing loss of life, and long-term disruption of knowledge production and scientific memory. This paper provides a historical overview of attacks on higher education institutions from antiquity to contemporary conflicts, demonstrating a persistent and escalating pattern of vulnerability across regions and time periods. It critically examines the evolution of international legal frameworks, revealing persistent deficiencies in implementation, enforcement, and accountability. It further exposes structural constraints, including weak enforcement mechanisms, geopolitical asymmetries, and inconsistent international responses. Ultimately, the role of academic institutions in protecting knowledge systems is discussed, and a framework is proposed for strengthened global academic coordination, including structured response protocols, shared documentation systems, and collaborative support mechanisms to enhance the protection and resilience of higher education institutions during armed conflict.

RESUMEN

Históricamente, las universidades han desempeñado un papel fundamental en la independencia intelectual, el progreso científico y la continuidad cultural. Sin embargo, han sido objeto de ataques recurrentes durante conflictos armados, lo que ha provocado la destrucción de infraestructuras, la pérdida de vidas humanas y la interrupción a largo plazo de la producción de conocimiento y de la memoria científica. Este artículo ofrece una perspectiva histórica de los ataques contra instituciones de educación superior, desde la antigüedad hasta los conflictos contemporáneos, demostrando un patrón persistente y creciente de vulnerabilidad en diversas regiones y épocas. Se examina críticamente la evolución de los marcos jurídicos internacionales, revelando deficiencias persistentes en su implementación, aplicación y rendición de cuentas. Asimismo, se exponen las limitaciones estructurales, tales como la debilidad de los mecanismos de aplicación, las asimetrías geopolíticas y la falta de coherencia en las respuestas internacionales. Por último, se analiza el papel de las instituciones académicas en la protección de los sistemas de conocimiento y se propone un marco para fortalecer la coordinación académica mundial, que incluya protocolos de respuesta estructurados, sistemas de documentación compartidos y mecanismos de apoyo colaborativo para mejorar la protección y la resiliencia de las instituciones de educación superior durante los conflictos armados.

KEYWORDS | PALABRAS CLAVE

Academic Resilience, Institutional Safeguarding, Knowledge Continuity, Higher Education Security.
Resiliencia académica, Salvaguardia institucional, Continuidad del conocimiento, Seguridad en la educación superior.

1. Introduction

Universities function as core institutions within global knowledge systems, supporting intellectual production, innovation, and cultural continuity. However, throughout history, they have been repeatedly exposed to destruction during armed conflicts, resulting in long-term disruption of educational and scientific systems. From ancient centers, such as Persepolis and the Library of Alexandria, to contemporary universities in various countries, higher education institutions have demonstrated persistent vulnerability in conflict settings (GCPEA, 2022; UNESCO, 2024b). These cases indicate that attacks on universities are not isolated events but part of a recurring global pattern affecting epistemic continuity. International Humanitarian Law, including the Geneva Conventions (1949), protects civilian infrastructure, including educational institutions (ICRC, 1949). However, enforcement remains inconsistent due to weak accountability mechanisms, asymmetric warfare, and geopolitical selectivity (Sassòli, 2019). As a result, legal protections often fail to translate into operational safety. In parallel, institutional responses remain fragmented. While UNESCO and GCPEA provide monitoring and advocacy, there is no structured global academic coordination system capable of ensuring continuity during crises (UNESCO, 2025b).

This study integrates three theoretical perspectives: (i) International Humanitarian Law provides the normative basis for protecting educational institutions but suffers from weak enforcement mechanisms (Sassòli, 2019; Schmitt, 2022); (ii) Institutional resilience theory explains how universities adapt under crisis but highlights dependence on external support systems (Boin & van Eeten, 2013; Evenseth et al., 2022; Lengnick-Hall et al., 2011); and (iii) Knowledge systems theory is an interdisciplinary approach that explains how knowledge is created, organized, shared, and applied through interconnected networks of people, institutions, technologies, and processes, framing universities as interconnected nodes in global epistemic infrastructure where disruption can lead to systemic knowledge loss, and emphasizing how these systems interact, adapt, and are shaped by structures, resources, and flows of information across society (Cash et al., 2003; Nowotny et al., 2001). Together, these frameworks reveal a central gap: protection exists normatively, resilience exists institutionally, but coordination at the global system level is missing.

Higher education institutions continue to face systematic vulnerability during armed conflict despite formal international legal protections. Building on historical patterns of attacks on universities, an understanding of limitations in international legal frameworks, and weaknesses in academic coordination, this study develops a single analytical approach. It proposes a Global Academic Coordination Framework (GACF) to address fragmented academic responses, to improve global coordination, and strengthen institutional resilience and protection.

2. Methodology

This study adopts a qualitative narrative review and conceptual synthesis approach to examine the vulnerability of higher education in conflict settings. Data sources include peer-reviewed academic literature, reports from UNESCO and the Global Coalition to Protect Education from Attack (GCPEA), and relevant international legal and policy documents. A thematic synthesis method was applied to identify and integrate recurring patterns across sources, particularly focusing on institutional vulnerability, gaps in the enforcement of legal protections, and deficiencies in coordination mechanisms.

3. Results

Throughout history, academic institutions have often become targets, sometimes deliberately, during military conflicts. From ancient libraries to modern campuses, military attacks have not only destroyed buildings and taken lives but also disrupted knowledge production, erased scientific and cultural memory, and weakened scientific communities. The significant increase in such attacks in recent years is a troubling development with substantial implications for academic and humanitarian security. Situating these events within a broader historical trajectory is essential for understanding the stakes of contemporary attacks on universities.

3.1. A Historical Overview of Attacks on Knowledge Institutions in Armed Conflict

Military attacks on centers of knowledge date back to ancient times. When Alexander invaded the Persian Empire in the fourth century BCE, he destroyed major political and cultural centers, including Persepolis. In the Achaemenid Empire, sites such as Persepolis functioned as key administrative and archival

hubs, preserving extensive records of taxation, governance, and imperial administration on clay tablets. In the Achaemenid Empire, the Magi preserved religious and ritual knowledge through priestly tradition, while administrative knowledge was recorded in imperial archives such as those at Persepolis (Briant, 2002; Henkelman, 2013; Kuhrt, 2007).

The burning of Persepolis led to the loss of royal archives, administrative records, and significant elements of knowledge, including the religious works of early Zoroastrianism written on goat-skin parchment, accumulated over centuries of Achaemenid rule (Mark, 2019). Another widely cited example of knowledge destruction in war is damage linked to the Library of Alexandria. While the extent and timing of its destruction remain debated, one key episode occurred during Julius Caesar's siege of Alexandria in 48 BCE, when fires linked to military operations spread into parts of the city.

Some sources associate this event with the loss of manuscripts in philosophy, mathematics, astronomy, and medicine (El-Abbadi, 1994, 2026). A more direct and devastating example occurred in 1258, when Mongol forces captured Baghdad. The city was then one of the most significant intellectual hubs of the medieval era, home to various major libraries, scholars, and scientific institutions. During the invasion, Baghdad's House of Wisdom (Bayt al-Hikmah) and other major libraries were destroyed, many scholars were killed, and large numbers of manuscripts were lost (Lane, 2003; Raven, 2004).

In early modern Europe, warfare continued to disrupt universities. The Thirty Years' War devastated large parts of Central Europe, damaging universities, displacing scholars, and interrupting academic life. Institutions such as Heidelberg University and Leuven University experienced closures, a decrease in enrolment, or the relocation of faculty. War-driven migration of scholars reshaped academic networks but also fragmented intellectual communities. These disruptions demonstrated how prolonged military conflict could alter the trajectory of education and scientific development across entire regions (Hotson, 2018; Ross, 2014).

The twentieth century witnessed increasingly systematic wartime attacks on academic institutions. During World War II, universities across Europe were damaged or destroyed, and millions of books were lost due to bombing campaigns, fires, looting, and military occupation (Hamblin, 1999). Air raids caused particularly extensive damage to academic infrastructure across Europe—especially in Germany and the United Kingdom—resulting in partial or complete destruction of many major universities and libraries (Hamblin, 1999; Universität Leipzig, 2009). In parallel, academic staff at major universities were dismissed, persecuted, and in many cases arrested or forced into exile between 1933 and 1945 as part of broader efforts to suppress independent intellectual life (Grüttner, 2022). Libraries, laboratories, and archives were also destroyed in cities such as Warsaw, Berlin, and Dresden (Hamblin, 1999; van der Hoeven & van Albada, 1996). Collectively, these actions were not merely incidental consequences of war but often reflected broader strategies aimed at undermining national identity, cultural continuity, and intellectual autonomy (Greene, 2023).

In East Asia, universities were similarly affected by military conflicts; during the Vietnam War (1955–1975), extensive bombing campaigns and urban warfare damaged educational institutions, severely disrupted higher education systems, and caused extensive damage to scholarly archives (Le & Nguyen, 2018; McCook, 2025). In Western Asia, universities have frequently been affected by armed conflict; during the Lebanese Civil War (1975–1990), higher education institutions such as the American University of Beirut experienced repeated disruptions, with campuses divided by frontlines, intermittent closures, damage from shelling, and the displacement of students and faculty, leading to long-term weakening of academic continuity and research capacity (Advice Edu, 2026; Khalaf, 1987). The Oriental Institute and the National and University Library of Bosnia and Herzegovina in Sarajevo were early targets in the Bosnian War; in 1992, incendiary attacks destroyed these institutions and much of their holdings, including thousands of Ottoman manuscripts, extensive archival records, and monographs, resulting in the loss of a major part of Bosnia's written heritage (Hamblin, 1999; Riedlmayer, 1996).

In the early twenty-first century, universities and libraries have repeatedly been affected by armed conflict, with major disruptions observed in Iraq and Syria. Following the 2003 Iraq War, universities experienced looting, destruction of laboratories, and violence against academics, alongside extensive damage to the country's library and archival infrastructure, particularly in Baghdad, where the National Library and National Archives were looted and burned, resulting in major losses of printed collections, rare books, and historical documents despite partial evacuations (Al Radi, 2003; Khoury, 2003).

During ISIS control and the wider conflict in Iraq between 2014 and 2017, destruction expanded beyond Mosul to other regions, with universities in affected areas experiencing closures, damage, and displacement of staff and students, alongside further losses of books and archives as cultural institutions were targeted or repurposed. At the University of Mosul, large-scale destruction of books and manuscripts occurred, with collections looted, damaged, and in some cases deliberately destroyed as part of broader attacks on educational and cultural heritage, including the burning of books deemed ideologically unacceptable, resulting in significant losses of academic and historical materials (Isakhan & Meskell, 2019; UNESCO, 2025a).

Furthermore, the Syrian Civil War has had a severe impact on several universities, including Damascus University and the University of Aleppo, as well as libraries and research centers. Higher education institutions have suffered from the destruction of facilities, displacement of academics and students, and the near collapse of research activity. Reports indicate that campuses have been damaged or militarized, while ongoing insecurity and violence have disrupted teaching and forced many academics into exile, significantly weakening Syria's higher education system (Al Saadi et al., 2018; Bdaiwi et al., 2020; McLaughlin et al., 2019). Amidst the conflict in Sudan, 58.6% of medical schools in affected areas, predominantly private institutions, over half located in Khartoum, were attacked, with most experiencing multiple forms of assault, including looting and conversion into military bases, yet only about 60% managed to resume education through online learning and institutional collaboration (Mahgoub et al., 2024).

A 2017 study documented extensive disruption to Yemen's higher education sector, reporting that around a dozen university buildings were destroyed and about 25 were severely damaged amid the conflict. The study also highlighted broader systemic impacts, including damage and looting of universities, laboratories, and libraries, frequent power and internet outages, non-payment of staff salaries, and widespread insecurity that drove many experienced academics to leave the country. As a result, several institutions became largely unusable, including the College of Arts in Taiz, the Community College of Dhamar, Arhab College near Sana'a, and Hodeidah University (Alawadhi, 2024; GCPEA, 2018).

A November 2025 assessment by UNESCO and its partners reported that the conflict in the Gaza Strip severely disrupted higher education, with 95% of campuses affected. Of the 38 campuses assessed, 22 were destroyed, and 14 sustained varying degrees of damage, leaving most facilities non-operational and interrupting education for approximately 88,000 university students (UNESCO, 2025b). Consequently, hundreds of medical students have experienced major interruptions to their clinical training due to the ongoing violence (Blanchet et al., 2024; Shahawy & Diamond, 2016).

Since February 2022, the conflict in Ukraine has caused extensive damage to the scientific and higher education system, with 1,449 buildings across 177 public research institutions reported as damaged or destroyed, although a full assessment remains incomplete due to restricted access in occupied territories. The war has also significantly disrupted the academic workforce, with around 12% of scientists and university staff displaced abroad or within the country, approximately 30% working remotely, and 1,518 researchers joining combat duties. Rebuilding public research infrastructure is estimated to require about US\$1.26 billion, including US\$980.5 million for universities, which account for roughly half of the country's public research capacity (UNESCO, 2024a, b).

Reports on recent conflict-related incidents in Iran indicate that multiple universities and research institutions have experienced disruption or damage, affecting laboratories, classrooms, and research infrastructure. Institutions frequently mentioned in public reporting include the University of Tehran, Sharif University of Technology, Amir Kabir University of Technology, and medical and research centres such as the Shahid Beheshti University of Medical Sciences and the Pasteur Institute of Iran. These disruptions have contributed to interruptions in teaching and research activities, alongside broader concerns about the safety of academic personnel. Some reports indicate that academic personnel and researchers have been among the casualties in the attacks, adding a further human and intellectual loss to the damage sustained by higher education institutions (Committee on Academic Freedom, 2026; Sawahel & MacGregor, 2026).

These examples reflect a long and recurring historical pattern in which centers of learning have been vulnerable during armed conflict. As such conflicts continue to affect academic institutions worldwide, recognizing this pattern may encourage a more coordinated and effective response from the global scientific community. Noticeable increase in such incidents has been observed in recent years, with higher education institutions more frequently exposed to direct or indirect impacts of armed conflict. Globally, military use

of universities and schools more than doubled in 2020–2021 compared with 2018–2019, exceeding 570 incidents, with Myanmar accounting for nearly 40% of cases. Around one-fifth of attacks on education involved explosive weapons, causing significant damage to infrastructure and hundreds of casualties among students and educators (GCPEA, 2022).

3.2. International Legal Frameworks and Persistent Gaps in Implementation

After World War II, significant international efforts were made to protect educational and cultural institutions from the impacts of armed conflict. This period marked a turning point in international humanitarian law, most notably through the adoption of the 1949 Geneva Conventions, which established protections for civilians and civilian objects (ICRC, 1949), later strengthened by the 1977 (ICRC, 1977). Alongside these legal frameworks, the United Nations and its agencies emphasized the protection of education and scientific advancement as part of broader human rights and development agendas, including through the UNESCO conventions on the protection of cultural heritage. In addition, the United Nations Security Council has reinforced these norms through resolutions such as 2286 of 2016, which condemns attacks on medical facilities and personnel, and 2601 of 2021, which calls for stronger protection of education in armed conflict (United Nations Security Council, 2016, 2021).

Despite these efforts, the continued escalation of violations against universities in recent years across multiple conflicts exposes enduring gaps in the practical enforcement of these protections, pointing to the need for strengthened accountability, improved compliance with international humanitarian law, and more effective preventive mechanisms to better safeguard knowledge institutions during armed conflict (Médecins Sans Frontières, 2026).

The insufficiency of the existing comprehensive body of international humanitarian law to protect educational and scientific institutions during armed conflict stems from a range of structural and practical constraints. (i) A central weakness is that these measures rely heavily on state adherence and lack robust enforcement mechanisms, allowing violations to persist with impunity, particularly in contemporary conflicts. (ii) Monitoring and documentation of attacks are often delayed or incomplete due to insecurity, restricted access, and political constraints, thereby undermining accountability. (iii) Even when violations are clearly established, international judicial processes and other enforcement measures are slow and inconsistent, limiting their capacity to deter future breaches. (iv) The changing nature of modern wars, including asymmetric conflicts and non-state actors, makes it harder to assign responsibility and weakens traditional enforcement systems. (v) These challenges are further worsened by geopolitical inequalities and double standards in applying international norms, where responses to violations against universities vary depending on the strategic interests of powerful states. International bodies may also face vetoes, selective enforcement, or political pressure, which can limit consistent action and weaken the enforcement of legal norms.

For example, attacks on educational infrastructure in Ukraine have been extensively documented with established international monitoring mechanisms, while in contexts such as the Gaza Strip, Myanmar, or Iran, similar violations have been reported but receive less consistent international follow-up and visibility due to political, operational, and contextual factors. As a result, despite normative legal protections, repeated violations against schools, universities, and research institutions continue to occur with limited prevention or consequence (Gorji, 2026).

3.3. Strengthening Legal Protection and Academic Coordination Through the GACF

The strengthening of international legal frameworks for the protection of education systems during armed conflict remains essential. A complementary and potentially effective practical measure for protecting higher education in conflict settings is the establishment of GACF to strengthen coordination among universities. Through global partnerships and interconnected networks, universities can move beyond isolated responses and adopt unified strategies that enhance their visibility, resilience, and influence. In practice, this could include coordinated early-warning and reporting systems for attacks on academic institutions, as well as mechanisms to directly support scholars in conflict-affected areas.

Furthermore, universities acting collectively through global associations can standardize the documentation of violations against academic institutions, enhancing the consistency and credibility of evidence submitted to international monitoring bodies. A further step could be the establishment of a formal global university

network dedicated specifically to protecting higher education in conflict zones, providing a structured platform for coordinated decision-making, pooled resources, and unified advocacy. In parallel, such a coordinated network could also establish shared digital and physical repositories to safeguard scientific resources through digitization, distributed storage systems, and off-site preservation centers, ensuring that critical academic knowledge is not lost during periods of instability or destruction. During prolonged armed conflicts, universities worldwide can support scholars in affected regions through a combination of emergency academic placements and relocation pathways, remote teaching and research engagement with access to essential academic resources, and financial and material assistance (Table 1).

Table 1 presents the proposed Global Academic Coordination Framework (GACF), a university-led international system to be established to enable pre-established, structured response protocols for rapid collective action against attacks on higher education during emerging or ongoing armed conflicts, integrating governance structures, formal agreements, digital coordination and verification platforms, early-warning mechanisms, emergency relocation and funding schemes, coordinated advocacy, and digital continuity infrastructure to ensure rapid, unified, and sustained protection and response for higher education institutions.

Table 1: Proposed Global Academic Coordination Framework.			
Element	Practical Design	Implementation	Outcome
Governance and decision-making body	Standing international steering committee of universities	Rapid decisions on response level and resource allocation	Ensures structured and non-ad hoc crisis management
Formal agreements	Universities sign agreements (Memoranda of Understanding and treaties) at the regional or global level, defining shared crisis-response commitments	Automatically activate agreed responsibilities when conflict is declared or verified	Ensures institutional and formal preparedness before crises
Coordination platforms	Creation of digital hubs for secure, shared online platforms enabling coordinated crisis response among universities	Real-time sharing of verified updates, alerts, and institutional needs	Fast communication and coordination across institutions
Shared verification and documentation system	Standardized templates and centralized data repositories	Rapid collection and validation of evidence on attacks on higher education institutions	Strengthens accountability and supports legal reporting and early warning mechanisms
Warning systems	Integration with global monitoring entities (UNESCO, GCPEA, NGOs) and academic reporting networks	An immediate alert system for detecting attacks on higher education institutions	Allows rapid proactive rather than delayed reactive responses
Rapid academic relocation schemes	Pre-arranged agreements for emergency fellowships, visiting positions, and visa fast-tracking	Scholars are relocated or supported within days/weeks of escalation	Protects researchers and maintains academic continuity
Emergency funding pools	Joint financial mechanisms supported by multiple universities, national research councils, and donors	Automatic release of funds for displaced scholars, labs, or institutions	Provides immediate material stability during disruption
Coordinated advocacy triggers	Pre-agreed criteria for issuing joint statements or diplomatic engagement	Universities release unified responses or engage UN bodies immediately after threshold events	Increases political pressure and visibility
Digital continuity infrastructure	Shared cloud systems, remote teaching platforms, and backup archives	Enables teaching, exams, and research to continue remotely	Prevents disruption of education continuity

Beyond operational measures, coordinated academic networks can play a stronger role in policy engagement and joint action. The response of the global scientific community is often fragmented and inconsistent, as academic solidarity typically emerges in acute crises but lacks sustained institutionalisation over time. When universities act in a unified manner within pre-established coordinated frameworks, they are better positioned to exert pressure on governments and international organizations to uphold and enforce existing protections under international humanitarian law. Pre-established, structured response protocols for rapid collective action during emerging or ongoing conflicts should be developed through formal agreements, coordination platforms, and shared governance structures among universities globally, enabling universities and academic networks to coordinate actions quickly and effectively. This may

include coordinated public statements, engagement with United Nations mechanisms, collaboration with organizations such as UNESCO, and support for NGOs such as the Global Coalition to Protect Education from Attack. Through such efforts, universities can help shape policy, improve accountability, and reinforce the principle that education should be protected in all conflict settings.

4. Discussion

Findings confirm that attacks on higher education are structurally persistent across historical and modern contexts (GCPEA, 2022). While legal frameworks exist, enforcement remains weak due to geopolitical asymmetries and limited accountability mechanisms (Barnett, 2011; Sassòli, 2019). Universities have historically been central to post-conflict reconstruction, and their protection during armed conflict is therefore essential not only for preserving education but also for ensuring long-term societal recovery and sustainable development.

The history of wars shows that when universities fall silent, societies lose more than buildings; they lose generations of knowledge, innovation, and hope. Protecting universities during conflict is therefore not only an educational priority but a global responsibility. The response of the global academic community to the ongoing suffering of higher education institutions in recent decades has often been fragmented and limited (Carbone, 2026; Marginson, 2025; Shih et al., 2024), despite the broader ethical principle that indifference to the suffering of others ultimately undermines collective security and shared resilience.

The proposed GACF addresses this by introducing a pre-structured coordination model, aligning with emerging research on anticipatory governance and institutional resilience (Knight, 2020; Marginson, 2025). Its development is further strengthened by integrating International Humanitarian Law, institutional resilience theory, and knowledge systems theory, which together provide a unified analytical foundation: International Humanitarian Law establishes normative protections and legal obligations (Sassòli, 2019), institutional resilience theory explains adaptive capacity and recovery mechanisms (Boin & van Eeten, 2013; Evenseth et al., 2022; Lengnick-Hall et al., 2011), and knowledge systems theory frames universities as interconnected nodes within global epistemic infrastructure whose disruption produces systemic knowledge loss (Cash et al., 2003). It reframes universities as active participants in global knowledge protection systems rather than passive victims. However, the framework remains conceptual and requires empirical validation across different geopolitical contexts.

Taken together, higher education institutions remain vulnerable in armed conflict despite international legal protections. By integrating International Humanitarian Law, institutional resilience theory, and knowledge systems theory, this study develops a unified framework for understanding and addressing these challenges. The proposed Global Academic Coordination Framework provides a structured model for improving resilience, coordination, and continuity of higher education systems in conflict settings. A verse by the Persian poet Saadi, displayed inside the United Nations headquarters, reads: Human beings are parts of one body, in creation of one essence and soul; if one member is afflicted with pain, other members uneasy will remain,” symbolizing global solidarity and shared responsibility.

4.1. Competing Interests

The authors declare no competing interests.

References

- Advice Edu. (2026, March 14). *Students at the American University of Beirut During the Lebanese Civil War (1975–1990)*. <https://adviceedu.com/2026/03/14/students-at-the-american-university-of-beirut-during-the-lebanese-civil-war-1975-1990>
- Al Radi, S. (2003). The Destruction of the Iraq National Museum. *Museum International*, 55(3-4), 103–107. <https://doi.org/10.1111/j.1350-0775.2003.00445.x>
- Al Saadi, T., Abbas, F., Turk, T., Alkhatib, M., Hanafi, I., & Alahdab, F. (2018). Medical research in war-torn Syria: medical students' perspective. *The Lancet*, 391(10139), 2497–2498. [https://doi.org/10.1016/S0140-6736\(18\)31207-8](https://doi.org/10.1016/S0140-6736(18)31207-8)
- Alawadhi, H. (2024). The effects of war on the quality of higher education in Yemen: Scholars' perspectives. *International Journal of Educational Development*, 108, 103058. <https://doi.org/10.1016/j.ijedudev.2024.103058>
- Barnett, H. (2011). *Constitutional & Administrative Law* (9th ed.). Routledge. <https://doi.org/10.4324/9780203809198>
- Bdaiwi, Y., Rayes, D., Sabouni, A., Murad, L., Fouad, F., Zakaria, W., Hariri, M., et al. (2020). Challenges of providing healthcare worker education and training in protracted conflict: a focus on non-government controlled areas in north west Syria. *Conflict and Health*, 14(1), 42. <https://doi.org/10.1186/s13031-020-00287-9>
- Blanchet, K., Najem, M., Shadid, L., Fehmi, R. A., Al Hammouri, F., Saed, G., Saleh, K. J., et al. (2024). Rebuilding the health

- sector in Gaza: alternative humanitarian voices. *Conflict and Health*, 18(1), 42. <https://doi.org/10.1186/s13031-024-00599-0>
- Boin, A., & van Eeten, M. J. G. (2013). The Resilient Organization. *Public Management Review*, 15(3), 429–445. <https://doi.org/10.1080/14719037.2013.769856>
- Briant, P. (2002). *From Cyrus to Alexander: A History of the Persian Empire*. Eisenbrauns. <https://www.eisenbrauns.org/books/titles/978-1-57506-031-6.html>
- Carbone, F. (2026). Academics on the frontline. To what extent does global solidarity pervade the academic world? The case of ACADEMICS4GAZA. *Higher Education*, 91(2), 587–608. <https://doi.org/10.1007/s10734-025-01431-1>
- Cash, D. W., Clark, W. C., Alcock, F., Dickson, N. M., Eckley, N., Guston, D. H., Jäger, J., et al. (2003). Knowledge Systems for Sustainable Development. *Proceedings of the National Academy of Sciences*, 100(14), 8086–8091. <https://doi.org/10.1073/pnas.1231332100>
- Committee on Academic Freedom. (2026, April 14). Academic Freedom | Statement on the Targeting of Universities and Research Institutions in Iran. *British Society for Middle Eastern Studies (BRISMES)*. <https://www.brismes.ac.uk/news/academic-freedom-statement-on-the-targeting-of-universities-and-research-institutions-in-iran>
- El-Abbadi, M. (1994). *The Life and fate of the ancient Library of Alexandria*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000084928>
- El-Abbadi, M. (2026). Library of Alexandria. In *Encyclopaedia Britannica*. <https://www.britannica.com/topic/Library-of-Alexandria>
- Evenseth, L. L., Sydnese, M., & Gausdal, A. H. (2022). Building Organizational Resilience Through Organizational Learning: A Systematic Review. *Frontiers in Communication*, 7, 837386. <https://doi.org/10.3389/fcomm.2022.837386>
- GCPEA. (2018, May 11). *Education Under Attack 2018 - Yemen*. <https://www.refworld.org/reference/annualreport/gcpea/2018/122323>
- GCPEA. (2022). *Education Under Attack 2022*. New York: Global Coalition to Protect Education from Attack. https://protectingeducation.org/wp-content/uploads/eua_2022_execsum_eng.pdf
- Gorji A. (2026). Attacks on medical facilities during war demand global response. *BMJ*, 393, e058278. <https://doi.org/10.1136/bmj-2026-058278>
- Greene, J. (2023). *Cultural cleansing*. Ipswich (MA): EBSCO Information Services. <https://www.ebsco.com/research-starters/ethnic-and-cultural-studies/cultural-cleansing>
- Grüttner, M. (2022). The Expulsion of Academic Teaching Staff from German Universities, 1933–45. *Journal of Contemporary History*, 57(3), 513–533. <https://doi.org/10.1177/00220094211063074>
- Hamblin, P. (1999). *Alexandria's Ashes: War and the Loss of Libraries* [Master's Thesis, University of North Carolina]. <https://ils.unc.edu/MSPapers/2552.pdf>
- Henkelman, W. F. M. (2013). Administrative Realities: The Persepolis Archives and the Archaeology of the Achaemenid Heartland. In D. T. Potts (Ed.), *The Oxford Handbook of Ancient Iran* (pp. 528–546). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199733309.013.0019>
- Hotson, H. (2018). Catchment Areas and Killing Fields: Towards an Intellectual Geography of the Thirty Years' War. In P. Meusburger, M. Heffernan, & L. Suarsana (Eds.), *Geographies of the University* (pp. 135–192). Springer International Publishing. https://doi.org/10.1007/978-3-319-75593-9_4
- ICRC. (1949). *The Geneva Conventions of 12 August 1949*. International Committee of the Red Cross. <https://www.icrc.org/en/publication/0173-geneva-conventions-august-12-1949>
- ICRC. (1977). *Additional Protocols to the Geneva Conventions of 1949*. International Committee of the Red Cross. <https://www.icrc.org/en/document/additional-protocols-geneva-conventions-1949-factsheet>
- Isakhan, B., & Meskell, L. (2019). UNESCO's project to 'Revive the Spirit of Mosul': Iraqi and Syrian opinion on heritage reconstruction after the Islamic State. *International Journal of Heritage Studies*, 25(11), 1189–1204. <https://doi.org/10.1080/13527258.2019.1578988>
- Khalaf, S. (1987). *Lebanon's Predicament*. Columbia University Press. <https://cup.columbia.edu/book/lebanons-predicament/9780231063784>
- Khoury, D. R. (2003, September 1). Iraq's Lost Historical Heritage. *Perspectives On History*. <https://www.historians.org/perspectives-article/iraqs-lost-cultural-heritage-september-2003>
- Knight, W. A. (2022). The interregnum: Governance in the new world disorder. *International Journal: Canada's Journal of Global Policy Analysis*, 77(3), 485–502. <https://doi.org/10.1177/00207020221143277>
- Kuhrt, A. (2007). *The Persian Empire: A Corpus of Sources from the Achaemenid Period*. Routledge. <https://doi.org/10.4324/9780203944899>
- Lane, G. (2003). *Early Mongol Rule in Thirteenth-Century Iran: A Persian Renaissance*. Routledge. <https://doi.org/10.4324/9780203417874>
- Le, K., & Nguyen, M. (2018). *Aerial Bombardment and Educational Attainment* (MPRA Paper No. 90766). University Library of Munich, Germany. https://mpra.ub.uni-muenchen.de/90766/1/MPRA_paper_90766.pdf
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>
- Mahgoub, E. A. A., Khairy, A., Osman, S., Haga, M. B., Osman, S. H. M., Abbu Hassan, A. M., Kamal, H., et al. (2024). War and education: the attacks on medical schools amidst ongoing armed conflict, Sudan 2023. *Conflict and Health*, 18(1), 23. <https://doi.org/10.1186/s13031-024-00584-7>
- Marginson, S. (2025). Problems of the public good in higher education: building the common amid sovereign individualism, capital and the state. *Higher Education*, 89(1), 29–52. <https://doi.org/10.1007/s10734-024-01341-8>
- Mark, J. J. (2019, November 22). *Alexander the Great & the Burning of Persepolis*. World History Encyclopedia. <https://www.worldhistory.org/article/214/alexander-the-great-the-burning-of-persepolis>

- McCook, K. (2025, Oct 16). *Ebla to E-Books: The Preservation and Annihilation of Memory*. <https://kathleenmccook.substack.com/p/viet-nam-lost-75-of-its-archival>
- McLaughlin, C., Dillabough, J.-A., Fimyar, O., Al-Azmeh, Z., & Jebril, M. (2019, June 18). *Syrian higher education system facing 'complete breakdown' after eight years of war – study*. University of Cambridge. <https://www.cam.ac.uk/research/news/syrian-higher-education-system-facing-complete-breakdown-after-eight-years-of-war-study>
- Médecins Sans Frontières. (2026, January 22). *Attacks on medical care in armed conflict reach record levels* [Internet]. <https://www.msf.org/attacks-medical-care-armed-conflict-reach-record-levels>
- Nowotny, H., Scott, P. B., & Gibbons, M. T. (2001). *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty*. Polity Press. <http://www.polity.co.uk/book.asp?ref=9780745626079>
- Raven, J. (2004). *Lost Libraries: The Destruction of Great Book Collections Since Antiquity*. Palgrave Macmillan. <https://doi.org/10.1057/9780230524255>
- Riedlmayer, A. (1996). Libraries are not for burning: international librarianship and the recovery of the destroyed heritage of Bosnia-Herzegovina. *Art Libraries Journal*, 21(2), 19–23. <https://doi.org/10.1017/S0307472200009834>
- Ross, A. S. (2014). Pupils' Choices and Social Mobility After the Thirty Years War: A Quantitative Study. *The Historical Journal*, 57(2), 311–341. <https://doi.org/10.1017/S0018246X13000575>
- Sassòli, M. (2019). *International Humanitarian Law: Rules, Controversies, and Solutions to Problems Arising in Warfare*. Edward Elgar Publishing. <https://doi.org/10.4337/9781786438553>
- Sawahel, W., & MacGregor, K. (2026, April 10). Attacks on leading universities hit science and research. *University World News*. <https://www.universityworldnews.com/post.php?story=20260410155441391>
- Schmitt, M. N. (2022). Normative architecture and applied international humanitarian law. *International Review of the Red Cross*, 104(920-921), 2097–2110. <https://doi.org/10.1017/S1816383122000662>
- Shahawy, S., & Diamond, M. (2016). Attitudes of Palestinian medical students on the geopolitical barriers to accessing hospitals for clinical training: a qualitative study. *Conflict and Health*, 10(1), 5. <https://doi.org/10.1186/s13031-016-0067-8>
- Shih, T., Chubb, A., & Cooney-O'Donoghue, D. (2024). Scientific collaboration amid geopolitical tensions: a comparison of Sweden and Australia. *Higher Education*, 87(5), 1339–1356. <https://doi.org/10.1007/s10734-023-01066-0>
- UNESCO. (2024a, May 30). *Analysis of war damage to the Ukrainian science sector and its consequences*. <https://www.unesco.org/en/articles/analysis-war-damage-ukrainian-science-sector-and-its-consequences>
- UNESCO. (2024b, March 11). *Ukraine: Restoring scientific infrastructure will cost over \$1.26 billion (UNESCO)*. <https://ukraine.un.org/en/263017-ukraine-restoring-scientific-infrastructure-will-cost-over-126-billion-unesco>
- UNESCO. (2025a). *Revive the spirit of Mosul: the rebirth of a city: a people's hope, a story of reconstruction 2018–2025*. Paris: UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000383321>
- UNESCO. (2025b, November 20). *UNESCO presents the assessment of damage and reconstruction needs for higher education institutions in Gaza*. <https://www.unesco.org/en/articles/unesco-presents-assessment-damage-and-reconstruction-needs-higher-education-institutions-gaza>
- United Nations Security Council. (2016). *Resolution 2286 (2016)*. New York: United Nations. <https://digitallibrary.un.org/record/827916>
- United Nations Security Council. (2021). *Resolution 2601 (2021)*. New York: United Nations. <https://digitallibrary.un.org/record/3946429>
- Universität Leipzig. (2009). *Die Zerstörung von Leipziger Universitätsgebäuden*. <https://research.uni-leipzig.de/agintern/UNIGESCH/ug241.htm>
- van der Hoeven, H., & van Albada, J. (1996). *Lost Memory: Libraries and Archives Destroyed in the Twentieth Century*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000105557>