ecomedia literacy & SDGs

A Handbook for Higher Ed

LAS COLLAB

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Acknowledgements

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SUSTAINABLE DEVELOPMENT GOALS

THIS GUIDE SUPPORTS THE SUSTAINABLE DEVELOPMENT GOALS

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This handbook is complemented by resources and a toolkit available at ecomedialiteracy.org. QR codes throughout this guide indicate a link to relevant resources. You can scan or click them.

Follow these icons for connections to:

ECOMEDIA LITERACY

SUSTAINABLE DEVELOPMENT GOALS

LIBERAL ARTS AND SCIENCES

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1. Introduction

Global environmental challenges and the climate emergency demand urgent action in higher education. To students the climate crisis is not abstract; it is a tangible reality that impacts their mental health, shapes their future prospects, and aligns with their values of social justice and active societal engagement. As university students increasingly engage with environmental issues, it is crucial for academic programs to incorporate sustainability into curricula.

Students are at the forefront of climate activism, demanding action and inspiring hope for a more sustainable future. They are also acutely aware that climate change will shape their careers, with a growing demand for jobs in climate-related fields. By integrating the climate crisis into the curricula of liberal arts and sciences, university educators can not only enrich academic learning but also address the interests and concerns of their students, supporting a generation of informed, engaged, and proactive climate citizens ready to tackle the challenges of our changing world.

One way universities across the globe are addressing the climate crisis is by embracing the United Nations Sustainable Development Goals (SDGs). Encompassing 17 interconnected goals that address global challenges like poverty, inequality, and, crucially, climate action, the SDGs are often referred to as “the world’s most important to-do list.” By adopting these goals to their unique contexts and strengths, universities can become powerful agents of change, braiding sustainability into their core operations, research, and education.

Ecomedia literacy serves as a method for embedding SDGs within liberal arts and sciences curricula. It investigates the nexus between media, information, and communication technology (ICT), and environmental sustainability. Ecomedia literacy engages the ecological consequences of media systems and technologies (their "ecomedia footprint"), alongside the role of media in shaping environmental awareness, beliefs, narratives, and actions (their "ecomedia mindprint").

This guide is designed to inspire curriculum designers and planners in the liberal arts and sciences to integrate SDGs through ecomedia literacy across disciplines. It aims to empower educators and institutions to become catalysts for social and environmental change through innovative learning activities that integrate media literacy, environmental awareness, and the interconnected goals of the UN's SDGs.

SDGs in Higher Ed

The United Nations developed the Sustainable Development Goals (SDGs) as a response to the urgent need for a comprehensive and universally applicable framework to address the world's most pressing challenges. Building on the successes and addressing the limitations of the Millennium Development Goals (MDGs), the SDGs tackle interconnected issues such as poverty, inequality, climate change, and environmental degradation while promoting sustainable development principles. Universities around the world are now adapting SDGs as part of their mission to educate global citizens.

The SDGs provide a roadmap for global action, mobilizing partnerships across sectors and borders to promote a more equitable, prosperous, and sustainable world for present and future generations. The adaptation of the SDGs goes beyond simply teaching about them. It allows universities to become living laboratories for sustainable practices, demonstrating leadership and inspiring others to follow suit. By embracing the SDGs, universities can play a vital role in creating a more equitable and sustainable future for all.

How Universities are Incorporating SDGs

<u>Integrating SDGs into curricula</u>: Embedding sustainability principles across disciplines, from media studies to engineering, empowers students to tackle real-world environmental challenges.

<u>Developing innovative solutions</u>: Promoting research collaborations and partnerships to address key issues like renewable energy, clean water, and sustainable food systems.

<u>Mobilizing communities</u>: Engaging students, faculty, and staff in climate action initiatives, promoting sustainable practices on campus, and collaborating with local communities.

<u>Advocating for change</u>: Leveraging their platforms to raise awareness, influence policy, and inspire others to join the fight for a more sustainable future.

Caveats and Disclaimer: Some critics argue that the SDGs do not challenge the prevailing economic model. They assert that prioritizing economic growth leads to ecological degradation and social conflicts. They contend that the strong focus on economic growth results in a relative weakening of sustainable resource use. Additionally, some critics point out that the SDGs promote a universalist agenda underpinned by Global North and neoliberal interests, which may not align with the diverse economic and ecological realities of the Global South. Furthermore, concerns have been raised that the SDGs promote growth as the main solution to poverty, despite the tenuous relationship between growth and poverty reduction.

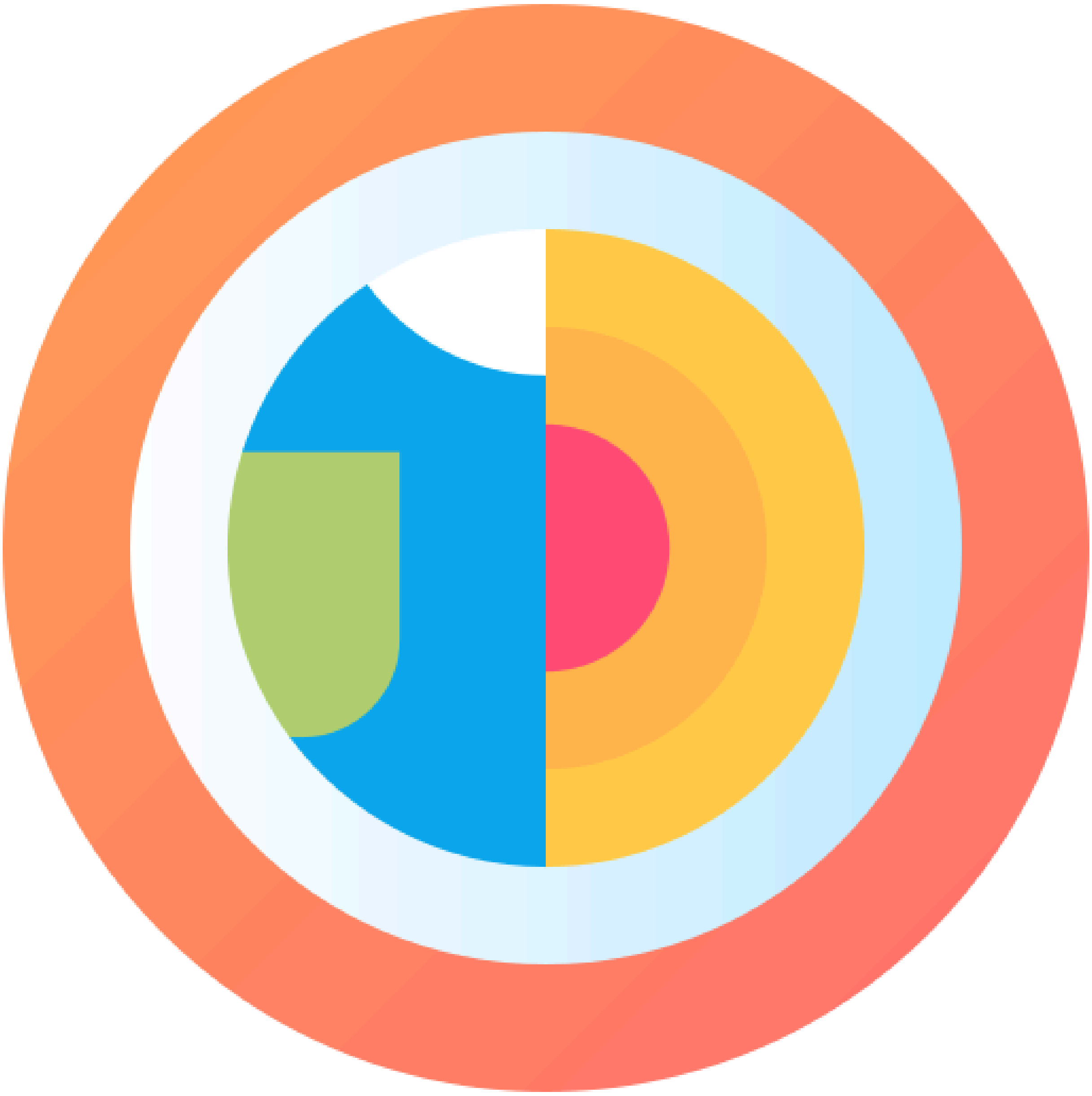
Why Ecomedia Literacy in Liberal Arts & Sciences?

Ecomedia literacy serves as a bridge connecting science and liberal arts education, furthering an interdisciplinary approach that highlights the ties between media, ICT, and environmental issues. This framework encourages students to explore the scientific dimensions of ecological challenges while delving into the cultural, social, and ethical aspects from a liberal arts perspective. By promoting critical thinking and problem-solving, ecomedia literacy equips students with the essential skills to scrutinize media representations of environmental issues, benefiting both scientific and liberal arts contexts. In science, it aids in evaluating research findings and their effective communication, while in liberal arts, it facilitates the analysis of how environmental narratives are constructed in literature, film, and other media forms. Additionally, ecomedia literacy's engagement with climate disinformation advances science, information, and news literacy in tandem.

Ecomedia literacy enhances students' media production and communication capabilities, prompting them to create media content related to environmental topics. This not only improves their digital media skills but also hones their ability to convey complex scientific concepts in an accessible and compelling manner, a skill valuable for science communication and persuasive writing within the liberal arts. This cultivation of environmental awareness and active citizenship empowers students to become more informed and environmentally conscious global citizens. It develops an appreciation for the role of liberal arts in shaping public discourse on environmental matters while enhancing their scientific knowledge about ecological challenges.

Ecomedia literacy places a strong emphasis on experiential learning by incorporating real-world examples and case studies. In the liberal arts, these case studies are employed to dissect how media influences public perceptions of environmental issues and policies. On the scientific front, these examples offer insight into the ecological repercussions of media technologies. In promoting global citizenship, ecomedia literacy provides students with a comprehensive understanding of global environmental challenges, encouraging them to think beyond their local contexts and embrace a sense of global responsibility. This approach aligns with the values of inclusive education, acknowledging that environmental issues impact people from all walks of life and promoting diverse voices and perspectives, particularly from the Global South. This inclusivity resonates with the liberal arts' commitment to diversity and the sciences' dedication to equitable research.

2. Ecomedia Literacy



Picture students using social media to debunk greenwashing tactics, creating documentaries that illuminate local sustainability initiatives, or even designing video games that gamify environmentally responsible choices. Going beyond likes and shares, ecomedia literacy equips students to become responsible media consumers and creators. They learn to advocate for ecojustice - environmental fairness for all - by challenging harmful narratives and crafting their own media messages that champion a healthy planet.

Most people are unaware that media and ICT have a significant environmental impact. This includes energy consumption by data centers, electronic waste (e-waste), and the mining of minerals for electronic components. These processes contribute to carbon emissions, resource depletion, water scarcity, and toxic pollution. Media also shape our understanding of environmental issues, influencing our perceptions of the climate crisis, and how to take action.

While traditional media education focuses on analyzing messages, ecomedia literacy delves deeper. It examines the environmental costs of media production and disposal, revealing how these practices disproportionately affect lower-income regions. Students confront the reality of extractive “sacrifice zones” and “disposable people” within global production chains, and consider the increasing environmental burden posed by emerging technologies like artificial intelligence(AI)and cryptocurrencies.

Ecomedia literacy not only highlights problems but also empowers students with solutions. They learn about responsible electronics recycling, sustainable data centers, and how media can promote eco-friendly practices and climate citizenship. It encourages students to question how media shapes their perception of the environment and understand the impact of their media habits. Ecomedia literacy helps unravel the ecological biases and ideologies embedded within media narratives, empowering students to become agents for positive environmental change.

In the following pages, the essential concepts and methods of ecomedia analysis are detailed. The discussion begins with defining “ecomedia objects,” the primary unit of analysis, and then the “four zone” methodology is introduced. The main learning objectives of ecomedia literacy are outlined, followed by a presentation of key concepts. These foundational approaches establish the basis for the ecomedia literacy activities described in the subsequent sections.

LEARN MORE!

Learning Objectives

Ecomedia literacy emerged as a response to standard media education practices that don't take into account media's environmental impacts. In doing so, it engages with the relationship between media, ICTs, and the environment, serving as an analytical framework and methodology based on systems thinking. As a source for learning activities and lesson plans, it can promote the SDGs in the liberal arts and sciences.

Examples of Learning Objectives and Activities

Imagine learning about the environment not just through textbooks, but through the media we consume every day. This is the power of ecomedia literacy. The following examples demonstrate how students can meaningfully explore and learn about the world they are directly participating in.

Understand the material impacts of media technologies through their full lifecycle from production to disposal (e-waste, mining of minerals, energy use, etc.)

- Describe the lifecycle of media technologies from production to disposal.
- Explain the environmental impacts associated with each stage of the lifecycle.

Analyze how different media frame environmental issues and spread environmental discourses and ideologies

- Compare and contrast the framing of environmental issues across different media platforms.
- Identify the underlying discourses and ideologies in media representations of environmental issues.

Evaluate media organizations and tech companies based on their environmental policies and practices

- Assess the environmental policies of various media organizations and tech companies.
- Critique the effectiveness and sincerity of these policies in promoting sustainability.

Produce counter-narratives and alternative media that challenge anthropocentric worldviews and promote more ecocentric perspectives

- Create media content that offers alternative narratives to mainstream anthropocentric views.
- Design campaigns that advocate for ecocentric perspectives and sustainable living.

Cultivate self-reflexivity about one's own media use habits and how they connect with sustainability concerns

- Reflect on personal media consumption habits and their environmental impacts.
- Develop a plan to modify media use habits to reduce ecological footprints.

Apply systems thinking to map out and re-design media infrastructures to align with ecological principles

- Map the current state of media and identify areas for improvement.
- Propose redesigns of media infrastructures that adhere to ecological principles.

Imagine alternative sustainable futures mediated through different technologies

- Envision future scenarios where media and technology contribute to sustainability.
- Speculate on the role of emerging technologies in promoting environmental stewardship.

HOW UNIVERSITY COURSES ARE USING ECOMEDIA LITERACY

- The University of Oregon: Launched a project analyzing the environmental impact of streaming services.
- Appalachian State University: Dr. Theresa Redmond proposed, designed, and developed a First Year Seminar course called "Media Literacy and the Environment" that combines media literacy education with ecomedia literacy principles and an emphasis on creative climate communication.
- Denison University: In a course called “Ecomedia Literacy,” students examine the symbolic and material relationships between media, people, and the planet.
- The University of California, Los Angeles: Offers a course on Environmental Justice through the lens of media and education.
- Linnaeus University: Developed a transdisciplinary platform for research, education and action related to the mediation of climate and ecological emergency.
- The University of Münster: Offers courses focusing on the potential of ecomedia literacy in the English language classroom.
- University of Amsterdam: Teaches a course on digital media sustainability.

Ecomedia Objects

An ecomedia object refers to any media text or artifact that reflects, represents, or engages with environmental issues, themes, or the relationship between humans and the environment. There are four types of ecomedia objects.

Representational media texts

Advertisements, greenwashing, news articles, films, TV commercials, websites, food packaging, NFTs, etc.

Platforms

Streaming services, social networks, apps, or media organizations.

Gadgets

Smart phones, tablets, computers, wearable technology, servers, etc.

Hyperobjects

An amorphous disbursed phenomenon that behaves like a system, such as the data cloud, cryptocurrency, climate disinformation, ariticial intelligence, or the media industry.

Ecomedia literacy encourages a critical analysis of ecomedia objects using questions like:

- How is the environment represented? Is it idealized, endangered, or presented in a more complex way?
- What values or ideologies are embedded in the ecomedia object? Does it promote consumerism, environmentalism, or some other perspective?
- How does the ecomedia object make us feel about the environment? Does it inspire hope, fear, guilt, or action?
- What is the material impact of the object itself? Consider the energy used to create and distribute digital media, or the environmental impact of physical media production.

The Four Zones of Ecomedia Literacy

Ecomedia literacy uses four zones of analysis—ecoculture, political ecology, ecomateriality, and lifeworld—to provide a holistic framework for understanding the complex interplay between media technologies and the environment. It encourages systems thinking and a deeper contemplation of the interconnectedness of media, culture, society, and the environment. This methodology allows students and educators to critically analyze the ecological mind/footprint of ecomedia objects, such as personal gadgets and other media technologies.

Ecoculture

Shared environmental beliefs, eco-ethics, and environmental ideologies that are communicated through discourses, representations, symbols, and language. This zone helps in studying the cultural narratives and stories associated with ecomedia objects. It is essential for understanding the ideological and cultural dimensions of ecomedia objects and their environmental implications.

Political ecology

The study of how economic and power structures influence the design of ecomedia objects and their environmental impacts. This zone is crucial for analyzing the social and political factors that influence the production, consumption, and distribution of ecomedia objects and their environmental costs.

Ecomateriality

The environmental impacts that result from extraction, manufacturing, and consumption, as well as the physical properties of the media and their infrastructures. It corresponds with how the gadget is made and what materials it's composed of, including the physical footprint of ICTs. This zone is vital for assessing the direct environmental impacts of media technologies, from resource extraction to waste generation.

Lifeworld

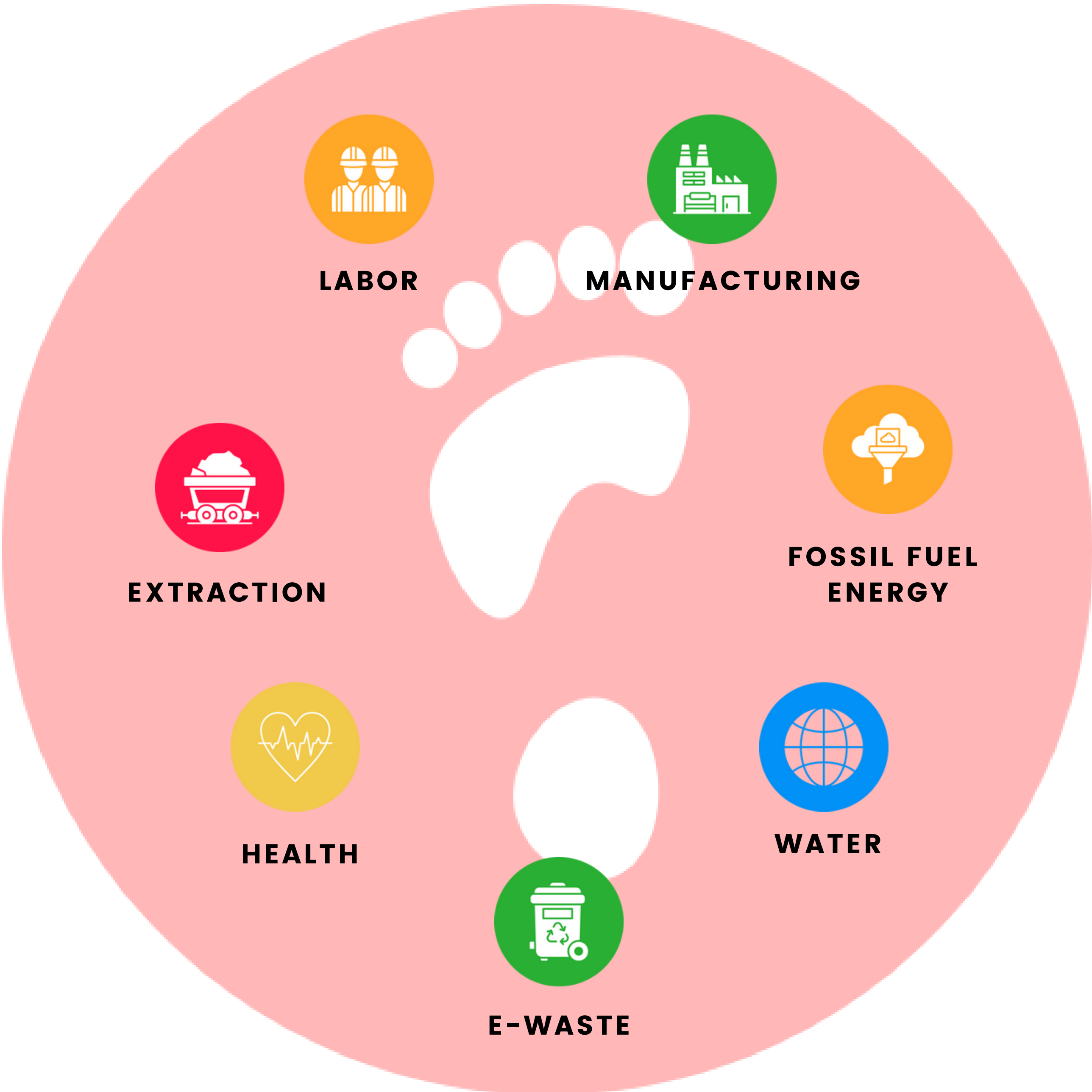
The ecology of perception: our cognitive and sensory experience of space, place, and time. It explores how the gadget generates sensory, cognitive, and emotional experiences, such as feelings of addiction, alienation, or connection with the living planet. This zone is important for understanding the phenomenological experience of media technologies and their effects on human perception and behavior.

KEY CONCEPTS

Mind/Footprint

ECOMEDIA FOOTPRINT

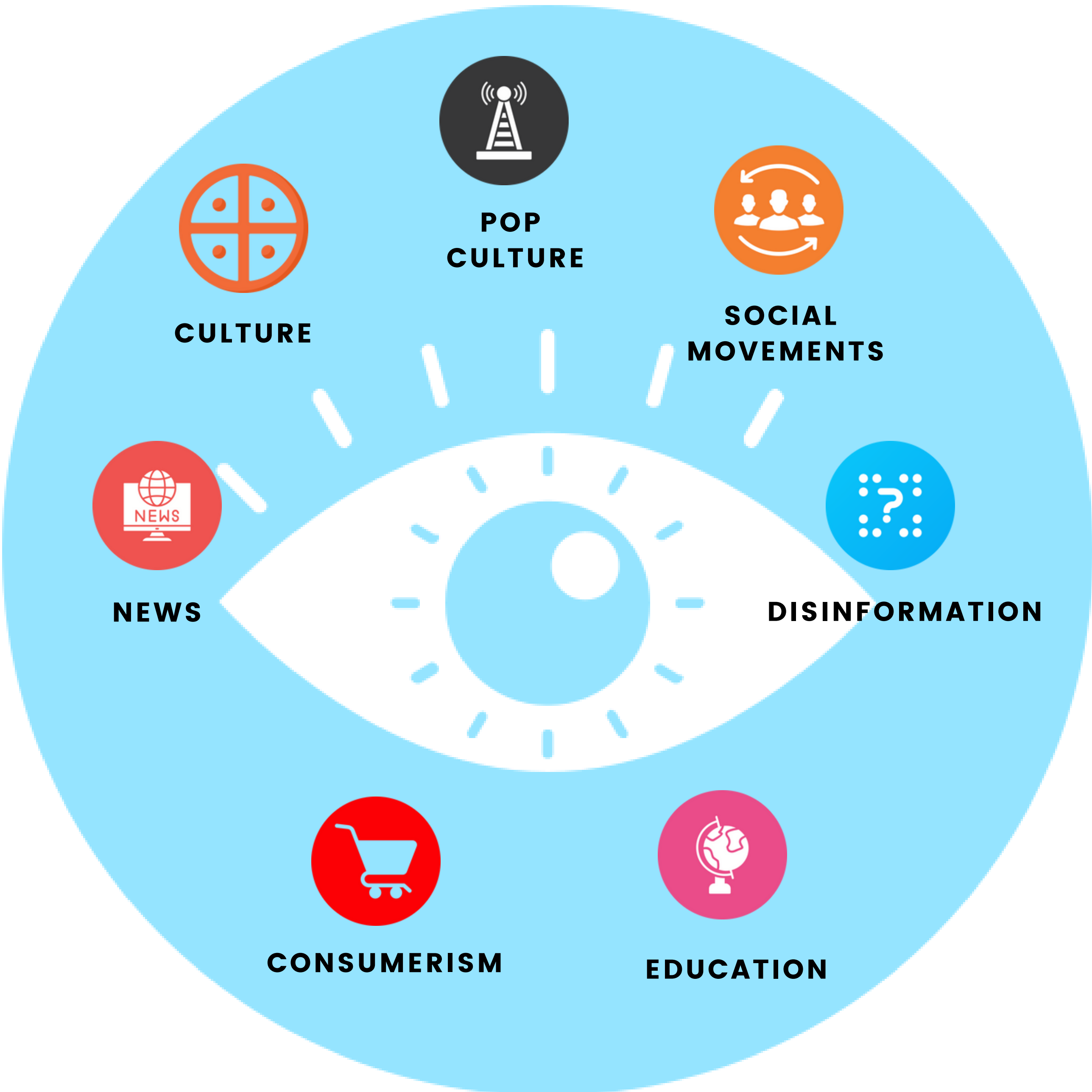
This realm of study examines the environmental footprint of media and communication technologies, encompassing the energy use, resource extraction, manufacturing, transportation, and disposal of devices, as well as the impact of data centers and infrastructure involved in content creation and distribution.



Mind/Footprint

ECOMEDIA MINDPRINT

The area of inquiry concerns the way the media shape our perceptions, values, and behaviors related to the environment. It encompasses how media representations of nature, environmental issues, and consumerism influence our understanding of the relationship between humans and the environment.



Nature, Environment, Ecosystem. What’s in a Word?

Nature, environment, and ecosystem are complex terms that have been historically used with Eurocentric and colonial assumptions. “Nature” has traditionally been seen as separate from culture, with the sciences studying it objectively and the humanities focusing on its subjective dimensions. However, scholars in the environmental humanities have highlighted the cultural constructedness of these concepts, showing how they support forms of colonial, patriarchal, ableist, and heteronormative discourse.

The nature-culture dualism has been critiqued for supporting a logic of domination, where one group is privileged over another. Postcolonial and decolonial theorists have extended this critique to encompass histories of colonialism that continue today in various power relations. In response, alternative understandings of ecology, cosmology, and ontology have been proposed, drawing from Indigenous traditions, postmodern conceptions of science, and other philosophies.

As metaphors, "environment," "ecology," and "ecosystem" have both informed and obfuscated the ecological conditions shaping media. The concept of "environment" is often tied to the idea of enclosed surroundings and is used to justify economic expansion and growth. Media ecology, as proposed by Neil Postman, is based on a normative concern with how a new medium emerges to dominate an established medium environment, achieving a "cybernetic balance" with society's overall health and harmony. However, this approach is anthropocentric, regarding "media health" as something that can benefit or harm humans. An alternative, rhizomatic approach describes networks and complexity in the flow of information, with humans being just one node in symbolic and material networks.

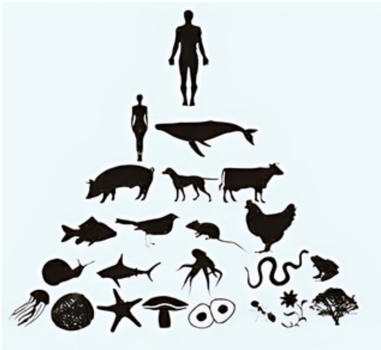
When it comes to applying these metaphors to media, scholars have proposed alternative understandings to challenge these dualisms. The metaphor of the ecosystem has been used to support both organic and market-competition perspectives of media, but it is important to recognize that technological and political processes behave differently from natural ecosystems.

For the purpose of this guide, “natural world” or “environment” are used to describe the physical world and are not meant to reinforce the duality between humans and the other-than-human world.

KEY CONCEPTS

Environmental Ideology

Environmental ideology is a spectrum of beliefs about the natural world that shapes how people understand their relationship with the environment and guides their actions towards it. It encompasses views on topics like conservation, resource use, and the balance between human needs and ecological well-being.

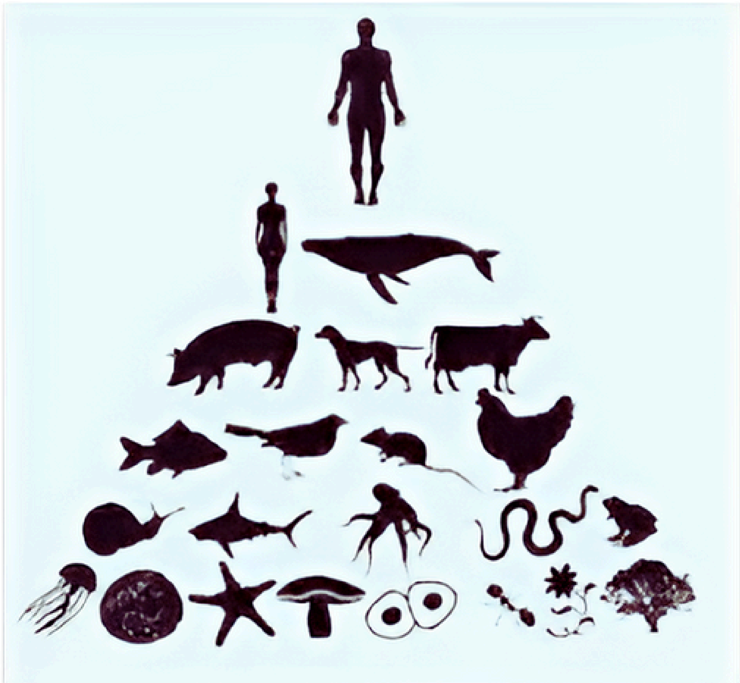


Anthropocentrism: A worldview that considers humans as the central and most important beings in the universe. It often views nature as a resource existing primarily for human benefit and exploitation.

Ecocentrism: A worldview that places intrinsic value on the whole ecosystem, rather than just humans. It emphasizes the interconnectedness of all living beings and promotes a more holistic view of the natural world, where humans are seen as part of nature rather than separate from or superior to it.

Environmental ideologies are explored in ecomedia literacy's concept of the ecological footprint by analyzing how environmental beliefs, eco-ethics, and ideologies influence the tangible impacts of media technologies on the environment, which includes the extraction, manufacture, and disposal processes that affect people and ecological systems.

Environmental ideologies are explored in ecomedia literacy's concept of the ecological mindprint by examining how digital technologies and media representations shape our understanding, beliefs, and ideologies about the environment, thereby influencing our perceptions and interactions with the natural world.



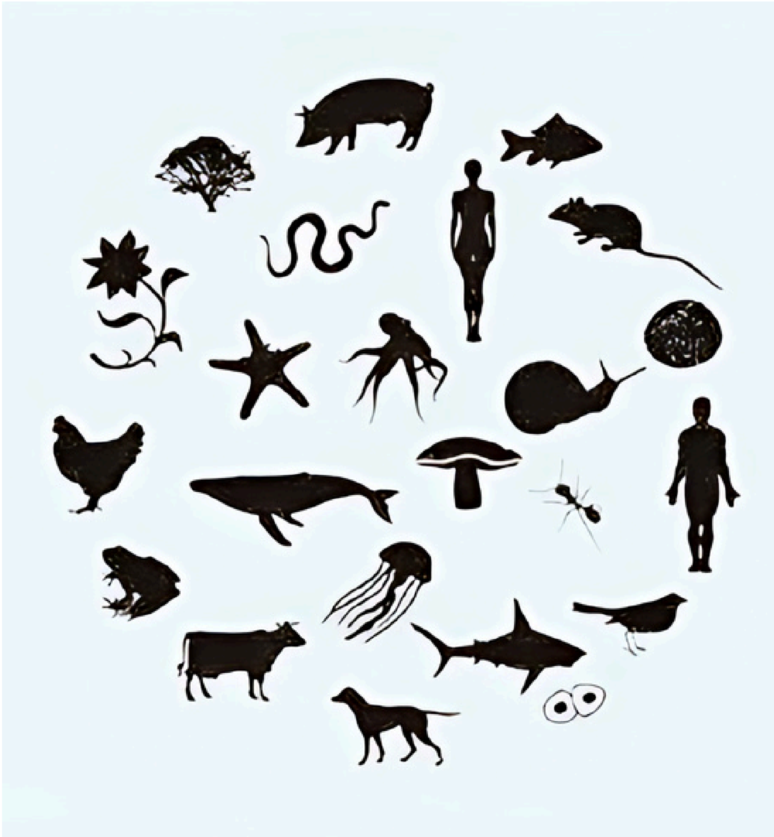
ENVIRONMENTAL IDEOLOGIES OF ANTHROPOCENTRISM IN MEDIA

Ecoculture: Anthropocentrism can be examined through the narratives and symbols in media that prioritize human convenience, progress, and economic growth over environmental sustainability. Ecomedia literacy can reveal how media representations often center human experiences and needs, potentially at the expense of ecological systems.

Political Ecology: This ideology's impact on social structures and political systems can be analyzed to show how anthropocentric views influence policies and practices that prioritize human development, often leading to environmental degradation. Ecomedia literacy can help uncover the political and economic systems that support and perpetuate anthropocentric values.

Ecomateriality: By focusing on the material aspects of media, ecomedia literacy can highlight how anthropocentrism manifests in the unsustainable extraction of resources, production processes, and disposal of digital technologies, disregarding their ecological costs.

Lifeworld: This zone of analysis encourages reflection on how anthropocentric ideologies shape our sensory, cognitive, and emotional experiences with technology, potentially leading to alienation from the natural world and an underappreciation of the intrinsic value of other-than-human entities.



ENVIRONMENTAL IDEOLOGIES OF ECOCENTRISM IN MEDIA

Ecoculture: Ecocentrism, which recognizes the inherent value of all living beings and the interconnectedness of ecosystems, can be explored through media that challenge anthropocentric narratives and promote a more holistic understanding of human-environment relationships. Ecomedia literacy can identify and analyze ecocentric discourses and representations in media.

Political Ecology: This approach examines how ecocentric ideologies might influence or challenge existing social and political structures, advocating for policies and practices that prioritize ecological balance and sustainability over human-centered development.

Ecomateriality: Ecomedia literacy can reveal how ecocentric values could influence the design and production of media technologies, promoting sustainable practices, minimal environmental impact, and a consideration of the full lifecycle of gadgets.

Lifeworld: This zone of analysis encourages individuals to consider how ecocentric ideologies can transform our experiences with media, cultivating a sense of connection with the natural world and a deeper understanding of our place within ecosystems.

3. Ecomedia Literacy & SDGs

There are 17 Sustainable Development Goals in total. While they are all important and interrelated, some are more relevant to ecomedia literacy than others. Overall, ecomedia literacy supports multiple UN SDGs by cultivating environmental and social awareness, education, critical thinking, advocacy, responsible behavior, and collaboration.

No Poverty

Ecomedia literacy highlights the environmental and social impacts of media production, such as the exploitation of labor in low-income countries, raising awareness about the intersection of poverty and environmental degradation. It encourages media content that advocates for sustainable economic practices and policies that address both poverty alleviation and environmental sustainability.

Zero Hunger

Ecomedia literacy examines the environmental footprint of media campaigns promoting agriculture and food security, emphasizing the need for eco-friendly production practices. It also cultivates critical engagement with media narratives that influence public understanding and actions towards reducing hunger and supporting sustainable food systems.

Health and Well-being

Critically engaging the environmental impacts of digital technologies, such as water pollution from e-waste, which can negatively affect human health, allows people to make more informed choices about technology use and advocate for sustainable practices in the tech industry. Individuals can study how media promote unhealthy lifestyles, but also how can media be used to promote good health and well-being.

Quality Education

Promoting education and awareness about the environmental crisis and the interconnectedness of media and the environment equips individuals with the skills to critically analyze media content, understand environmental issues, and make informed decisions, thereby contributing to a more educated and aware society.

Gender Equality

Challenging gender stereotypes in media portrayals and advocating for inclusivity addresses the gendered environmental impacts of gadget production and resource extraction, promoting more equitable and sustainable practices.

Clean Water and Sanitation

Revealing the environmental impacts of digital technology manufacturing, resource extraction, and e-waste, including substantial water usage and pollution, can promote responsible consumption and water management practices. This framework can also be used to analyze the ecocultural aspects of bottled water marketing, which often obscures its environmental impacts.

Affordable and Clean Energy

Raising awareness about the energy consumption of energy intensive digital technologies like AI and cryptocurrencies and their reliance on fossil fuels can help people understand the interconnectedness of media, environment, and the vested interests that shape fossil fuel narratives. Critical thinking skills can be used to identify and counter climate disinformation that promotes nonrenewable energy.

Decent Work and Economic Growth

Raising awareness of the environmental and social impacts of the gadget production chain, including the extraction of minerals and the disposal of e-waste, often exposes the exploitation of labor and harm to communities in lower-income countries. This encourages a critical perspective on more sustainable and equitable practices that respect both labor rights and environmental integrity.

Reduced Inequalities

Ecomedia literacy addresses the environmental and social inequalities perpetuated by media production and consumption, such as the exploitation of marginalized communities for resource extraction. It promotes media content that advocates for social equity and environmental justice, highlighting the interconnectedness of income inequality, racism, and environmental degradation.

Responsible Consumption and Production

Promoting responsible media consumption and raising awareness of the environmental impact of media gadgets and data storage encourages responsible consumer behavior by educating individuals about the environmental and social impacts of their choices. It also addresses greenwashing to support sustainable consumption and production patterns.

Climate Action

Raising awareness of the climate crisis and its impacts through education about the environmental consequences of media empowers individuals to engage in discussions, advocate for policies, and make eco-conscious choices. Additionally, it addresses disinformation that promotes climate inaction.

Life Below Water

Highlighting the importance of marine conservation is vital. Media communicate information on ocean ecosystems, pollution, overfishing, and climate change, urging action to protect precious marine life. It also encourages environmentally healthier manufacturing and consumption practices to reduce waterway contamination.

Life on Land

Drawing attention to the interconnectedness of media and the environment encourages a more ecologically conscious understanding of our relationship with the planet. This approach promotes understanding of land conservation, biodiversity, and sustainable land management. It can help communicate the importance of protecting terrestrial ecosystems and wildlife.

Peace, Justice, and Strong Institutions

Critically analyzing media representations and advocating for social justice, equity, and human rights are crucial for peace and strong institutions. This approach equips individuals with tools to address environmental and economic discrimination that disproportionately affects marginalized communities, and foregrounds the environmental impacts of war.

Partnerships for the Goals

Collaboration is key to achieving the SDGs. Cultivating partnerships by connecting educators, scholars, activists, and media practitioners with shared interests in sustainability facilitates knowledge exchange and best practice sharing.

Case Study

Lebanese American University

A project at Lebanese American University (LAU) in Beirut aimed to advance the UN's Sustainable Development Goals (SDGs) with ecomedia literacy. Students studied localized case studies, focusing on the ecological footprint and mindprint of media in the Lebanese context. They analyzed the impact of e-waste and Bitcoin mining on the environment, examining activist campaigns and media reporting to understand and address unsustainable practices in media consumption and technology use. Pre- and post-surveys assessed students' learning and engagement, revealing that the case studies effectively enhanced ecomedia literacy skills and contributed to understanding the SDGs.

The inclusion of localized examples allowed students to relate the concepts to their own experiences, encouraging dialogue and promoting social action. Findings demonstrated that critical thinking and dialogue facilitated by the curriculum empowered students to recognize and address environmental issues, leading to tangible actions such as promoting electronic recycling and advocating for sustainable practices within the university. Overall, the project demonstrated the effectiveness of ecomedia literacy education in mobilizing students to take action towards achieving sustainability goals, both in the classroom and beyond.

Project designer and lead researcher: Perla Daou
Supervisor: Dr. Gretchen King

Click or scan for a detailed overview

Learning Activities

This section features learning activities to teach ecomedia literacy and SDGs. It starts with an introductory workshop that models using ecomedia literacy to teach the SDGs. It then follows with more specific learning activities that tie the SDGs to liberal arts and sciences education. They include QR codes for links to more detailed instructions.

Introductory Workshop

Exploring the SDGs Through Ecomedia Literacy

This multi-session workshop is designed to equip students with the skills to critically analyze and understand the complex relationship between media representations of environmental issues and the Sustainable Development Goals (SDGs). It aims to cultivate critical thinking, scientific understanding, and effective communication and persuasion skills related to environmental sustainability. The lessons are structured around several key components, including an introduction to ecomedia literacy and the SDGs, media analysis, examining visual communications, class discussions, and creating eco-conscious media with scientific rigor. Ideally this workshop is team-taught with instructors from liberal arts and sciences.

Level: Freshmen/Sophomore

Subjects: English Language Arts, Environmental Science, Social Studies (with potential links to Art/Design for the communication component)

Use below QR code (click or scan) for more detailed instructions, slides, and handouts.

Learning Objectives

- Critical Thinking & Analysis: Students will analyze media representations of environmental issues related to the SDGs, identifying biases, agendas, underlying messages, and the interplay between scientific data and its communication to the public.
- Scientific Understanding: Students will investigate the scientific basis behind the environmental issues portrayed in the media, linking to specific SDGs and the potential impact of solutions or lack thereof.
- Communication and Persuasion: Students will develop strategies for creating clear, compelling eco-conscious media messages that integrate scientific accuracy with persuasive storytelling to promote the achievement of the SDGs.

Click or scan for detailed instructions, slides, and handouts

Materials

- News articles, documentaries, and scientific reports on environmental issues related to the SDGs
- Tools for media analysis
- Examples of data visualizations and infographics related to environmental issues
- Tools or software for creating infographics

Procedure

1) Introduction to Ecomedia Literacy, the SDGs, and the Science Connection

- Define ecomedia literacy and its role in understanding the interplay between media and societal action towards sustainability.
- Introduce the SDGs, emphasizing their interdisciplinary nature.
- Highlight the crucial role of science in understanding environmental issues and the importance of effective media communication to convey science-based solutions for the SDGs.

2) Decoding Media: Analysis and Scientific Assessment

- Divide students into groups. Assign each group media content (article, documentary segment, etc.) focusing on an environmental issue related to an SDG.
- Task 1: Media Analysis - Use worksheets/organizers to identify biases, agendas, framing, and persuasive techniques in the media piece.
- Task 2: Scientific Assessment - Students research the relevant science behind the issue, focusing on data used to support claims in the media. Were crucial data points omitted or misrepresented?

3) Examining Visual Communications: Infographics and Data Assessment

- Discuss the power of effective data visualization: How do they communicate complex scientific concepts in an understandable way? Can they be used to persuade audiences?
- Present examples of infographics communicating environmental issues and their connection to SDGs.
- Highlight potential for misleading data visualization and how to spot it.

4) Class Discussion: Media, Science, and the SDGs

- How does media shape public understanding of scientific issues related to the SDGs?
- How can media be used more effectively to bridge science and public action for SDGs?
- Challenges of communicating complex science for general audiences.

5) Creating Eco-conscious Media with Scientific Rigor

- Students choose an SDG focus area and brainstorm media strategies (infographic, short video, etc.) to communicate a key issue.
- Emphasize: Messages should marry impactful storytelling with scientifically accurate data, visualized effectively.
- Provide time for initial message development, with guidance from both the communications/liberal arts instructor and the science instructor.
- Students present their media messages, receiving feedback on: 1) clarity of the scientific concept; 2) effectiveness of persuasive elements and visual communication; 3) overall audience impact toward the chosen SDG

Assessment

- Analysis Worksheet: Evaluate students' ability to dissect media and check for scientific accuracy.
- Eco-conscious Media Project: Assess the media piece for scientific accuracy, clarity, and persuasive potential.
- Reflection: Students write a short reflection on the interplay between science and media communication, and the role they can play as informed citizens.

Interdisciplinary Applications

- Environmental Science (Natural Science): Analyzing how the media communicates scientific data, framing environmental risks, and influencing solutions aligns with scientific methods and evaluating the reliability of information sources.
- English Language Arts (Humanities): Students dissect language, persuasion techniques, bias identification, and author intent – all core ELA skills. Creating their own media messages further develops communication, persuasion, and argumentative writing/visual design skills.
- Social Studies (Social Science): Evaluating media's impact on attitudes and actions towards the SDGs ties into the study of public opinion, social movements, and how agendas are shaped by and shape society.

Strengthening Integration

- Connect the dots more explicitly: During instruction, directly address how scientific data translates (or doesn't) into media messages. What gets lost or emphasized? This helps students bridge scientific and social processes of environmental issues.
- Incorporate data analysis/visualization: Have students find graphs or data used in SDG-related media. Discuss how this data is presented, and if it accurately reflects scientific findings - a science AND media analysis skill!
- Explore Global Perspectives: Compare media coverage of an environmental issue from sources representing different nations/regions with varying impacts from the SDGs. This adds a geopolitical layer.

Liberal Arts Learning Objectives (Skills and Habits of Mind)

- Critical Thinking: Analyzing bias, agenda, and underlying messages in media requires students to think deeply, question, and evaluate information.
- Communication: Creating media messages builds on written, verbal, and visual communication skills – central to a liberal arts education.
- Ethical Reasoning/Decision-Making: The SDGs have ethical dimensions (resource use, justice, equity). Evaluating media and creating their own necessitates ethical consideration of impacts.
- Global Awareness: The SDGs are international. Considering how media coverage might differ by region and comparing sources would expand global perspectives.

ENVIRONMENTAL IDEOLOGY:
A SPECTRUM OF ENVIRONMENTAL WORLDVIEWS

Click or scan for detailed instructions, slides, and handouts

This discussion-based activity introduces students to a range of environmental ideologies in the media. Environmental ideologies are core beliefs about the relationship between humans and the more-than-human world. Ranging from anthropocentric to ecocentric, environmental ideologies are usually taken for granted but are at the root of how we value and act upon the environment. These ideologies are commonly conveyed through "stories we live by," which are narratives shared among individuals across a culture that shape their collective understanding. Students discuss and evaluate media texts from advertising, popular culture, entertainment, and news media to identify different environmental ideologies and to critique them according to eco-ethical values.

4 QUALITY EDUCATION

The activity promotes education for sustainable development and global citizenship by encouraging critical thinking about environmental ideologies and media content.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

By analyzing media representations of environmental ideologies, students can learn about sustainable consumption patterns and the impact of advertising on consumer behavior.

13 CLIMATE ACTION

The activity raises awareness about the role of media narratives in shaping public perception and action on climate change.

15 LIFE ON LAND

Discussions on ecocentric worldviews and the ethics of environmental ideologies can lead to a deeper understanding of the importance of protecting, restoring, and promoting sustainable use of terrestrial ecosystems.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

The activity touches on environmental justice and the need for inclusive societies that provide access to information and protect fundamental freedoms.

ENVIRONMENTAL IDEOLOGY:
A SPECTRUM OF ENVIRONMENTAL WORLDVIEWS

Social Sciences

- **Environmental Sociology**: Investigate the influence of environmental ideologies on social movements, environmental policy, and public opinion. Examine how these ideologies shape conflicts surrounding resource use and climate change.
- **Political Science**: Analyze how political actors frame environmental positions using specific ideologies. Deconstruct campaign materials and speeches to identify underlying ideologies and their impact on environmental policy debates.
- **Anthropology**: Explore the diverse cultural expressions of environmental ideologies. Investigate Indigenous worldviews as examples of ecocentrism.
- **Media Studies/Communications**: Critically analyze how media narratives, advertising, and popular culture construct and promote environmental ideologies.

Humanities

- **Philosophy/Environmental Ethics**: Explore ethical dimensions of environmental ideologies. Introduce key theories (ecocentrism, biocentrism) and discuss their alignment or conflict with ideologies found in media.
- **Literature (Environmental Literature)**: Examine how literary works embody or challenge various environmental ideologies. Analyze authors' use of literary devices to express these worldviews.
- **History**: Trace the evolution of environmental ideologies through historical movements and events. Analyze how key figures and texts expressed their relationship with the natural world.

Natural Sciences

- **Environmental Science**: Connect environmental ideologies to scientific data on pollution, biodiversity loss, and climate change. Discuss how different ideologies might approach this data.
- **Biology/Ecology**: Examine how environmental ideologies differentially value ecosystem function and biodiversity.

Cross-disciplinary Dialogue

- **Joint Projects**: Collaborate across disciplines to analyze environmental issues from multiple perspectives.
- **Debate**: Have students defend positions along the ideological spectrum, grounding arguments in their field of study.
- **Reflective Writing**: Encourage students to connect their own environmental ideologies to their coursework for deeper critical thinking.

ECO-ANALYSIS OF PERSONAL GADGET

Click or scan for detailed instructions, slides, and handouts

This learning activity is designed to engage students in the critical examination of the environmental impacts of their personal electronic devices. Through this activity, students will apply ecomedia literacy to understand the complex interconnections between digital technology and environmental sustainability. The goal is to cultivate a deeper awareness of how personal gadgets contribute to environmental challenges and to encourage more responsible use and disposal of technology. This activity underscores the importance of considering the ecological footprint of our digital lives within the broader context of ecomedia literacy.

4 QUALITY EDUCATION

Promotes responsible consumption and critical thinking skills regarding the impacts of personal technology.

8 DECENT WORK AND ECONOMIC GROWTH

Brings awareness to labor practices and economic systems behind gadget production.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

The activity encourages students to analyze the life cycle of personal gadgets, promoting awareness of sustainable consumption and production patterns.

13 CLIMATE ACTION

By evaluating the environmental impact of gadgets, students are indirectly contributing to climate action through increased awareness and potential behavior change.

14 LIFE BELOW WATER

Raises awareness about how gadgets pollute and harm marine ecosystems.

15 LIFE ON LAND

Addresses the impacts of conflict minerals, rare earth metal mining, and e-waste on terrestrial ecosystems.

ECO-ANALYSIS OF PERSONAL GADGET

Social Sciences

- **Environmental Sociology**: Students can investigate the social implications of personal gadget consumption and disposal, examining how societal values and norms influence environmental impact and sustainability efforts.
- **Political Science**: Analyze the role of policy and governance in regulating the production, use, and disposal of personal gadgets, and how these policies affect or are affected by environmental ideologies.
- **Anthropology**: Explore the cultural significance of personal gadgets in different societies and how these cultural practices impact the environment.
- **Media Studies/Communications**: Critically examine how media narratives and advertising shape consumer behavior towards personal gadgets and their environmental consequences.

Humanities

- **Philosophy/Environmental Ethics**: Discuss the ethical considerations of the environmental impact of personal gadgets, including the moral responsibility of consumers, producers, and policymakers.
- **Literature (Environmental Literature)**: Analyze how environmental themes related to technology and gadgets are portrayed in literature, and how authors use these narratives to reflect on human-environment interactions.
- **History**: Trace the historical development of personal gadgets and their environmental impacts, considering how past practices inform current attitudes and policies.

Natural Sciences

- **Environmental Science**: Study the ecological footprint of personal gadgets, including resource extraction, energy use, and waste management, and their effects on ecosystems.
- **Biology/Ecology**: Investigate the impact of the materials and processes used in personal gadgets on biodiversity and ecosystem health.

Cross-disciplinary Dialogue

- **Joint Projects**: Encourage interdisciplinary projects that bring together students from different fields to analyze the environmental impact of personal gadgets from multiple perspectives.
- **Debate**: Organize debates where students from various disciplines argue the environmental, social, and economic aspects of personal gadget use.
- **Reflective Writing**: Assign reflective writing tasks that prompt students to consider their own use of personal gadgets in relation to environmental sustainability and their field of study.

4. Course of Action

Next Steps

Universities worldwide are increasingly implementing the SDGs to promote sustainability. Integrating ecomedia literacy into curricula bridges the realms of liberal arts and sciences education while also supporting the SDGs. Here's how.

01. Raise awareness and prompt critical thinking

- Expose the hidden environmental impact of media: Students analyze the production, consumption, and disposal of media technologies, understanding their carbon footprint, resource depletion, and electronic waste issues.
- Challenge greenwashing narratives: Students critically evaluate media messages about sustainability, uncovering hidden agendas and promoting responsible consumption habits.
- Examine media's influence on environmental attitudes: Students analyze how media portrays environmental issues, fostering critical thinking and challenging biased narratives that hinder progress.

02. Empower action and advocacy

- Develop media literacy skills for environmental campaigns: Students learn to create and share impactful media content that raises awareness, promotes sustainable practices, and mobilizes action on climate change.
- Collaborate with environmental organizations: Universities can partner with NGOs and communities to develop and implement media campaigns addressing specific environmental challenges.
- Promote responsible media production: Students advocate for sustainable practices within the media industry, encouraging eco-friendly production methods and ethical sourcing of materials.

03. Integrate sustainability across disciplines

- Bridge the gap between media studies and environmental science: Interdisciplinary collaboration enriches existing curricula and offers new research opportunities.
- Develop future-proof graduates: Equipping students with critical thinking and communication skills about the environment and media prepares them for careers in sustainability-focused fields.
- Lead by example: Universities can implement sustainable practices in their own media operations, demonstrating commitment to environmental responsibility.

Further Reading

Sustainable Development Goals (SDGs)

The UN's portal dedicated to the SDGs is the most comprehensive source for action steps, overviews, and reports (https://sdgs.un.org/). UNESCO's handbook, Education for Sustainable Development Goals: Learning objectives (2017), offers a good overview for educators and institutions on how to implement curricula.

For an investigation into how mainstream media, governments, NGOs, and other organizations portray and support sustainability narratives related to the SDGs, see The Mediation of Sustainability: The United Nations Sustainable Development Goals, Social Movements and Public Discourse, ed. by Ben Harbisher, (Rowman & Littlefield, 2023). The UNESCO publication, Media and Information Literacy for the Sustainable Development Goals (Nordicom, 2015), edited by Jagtar Singh and others, offers practical tips about communicating the SDGs. The Lebanese case study is documented in Perla Daou, Gretchen King, and Antonio López, "Advancing sustainability in media education through ecomedia literacy: A case study from Lebanon," in Medien - Bildung - Nachhaltige Entwicklung Inter- und transdisziplinäre Diskurse, ed. by Jan-René Schluchter and others (Juventa Verlag ein Imprint der Julius Beltz GmbH & Co. KG, 2024).

Debates and critiques of sustainable development from the perspective of the Global South often focus on the disparities in global power dynamics, the perpetuation of neocolonial practices through economic policies, and the environmental injustices that result from these processes. The Post-Development Reader (Zed Books, 1997) edited by Majid Rahnema and Victoria Bawtree critiques the entire concept of development as viewed through the lens of Western ideologies, offering perspectives from the global south that challenge mainstream development practices and propose alternative visions for societal progress. In The Darker Side of Western Modernity: Global Futures, Decolonial Options (Duke University Press, 2011), Walter D. Mignolo explores the concept of modernity from a decolonial perspective, critiquing the global power structures that sustain inequality and advocating for a world in which many worlds fit, including those visions of development emerging from the Global South. Adam Sneyd's analysis of the SDGs in Hidden Politics in the UN Sustainable Development Goals (Fernwood Publishing, 2024) challenges the conventional view that they are progressive reforms, revealing instead their minimalist intentions and capitalist orientation that reinforce the existing international economic order rather than tackling global challenges.

Further Reading

Media and the Environment

The Routledge Handbook of Ecomedia Studies, ed. by Antonio López and others (Routledge, 2024), offers a comprehensive collection that addresses the intersection of media and environmental studies, emphasizing the material and social mediation of environments. It covers five critical areas: ecomedia theory, ecomateriality, political ecology, ecocultures, and eco-affects, providing a holistic overview of the field and its future directions. On the discussion of how we define the environment, nature, and ecosystems, see Chapter One, "When Media Become Ecomedia." On incorporating ecomedia studies into university curricula, see Chapter Nine, "Ecomedia Literacy: Bringing Ecomedia into the Classroom."

The concept of environmental ideology is discussed in Julia B. Corbett's book Communicating Nature: How We Create and Understand Environmental Messages (Island Press, 2006).

Ecomedia Literacy

To learn more about ecomedia objects, the four zone methodology, ecomedia mind/footprint, and ecomedia literacy more generally, see Antonio López, Ecomedia Literacy: Integrating Ecology into Media Education (Routledge, 2021). Concerning how ecomedia literacy ties into ecojustice, see Antonio López, "Ecomedia Literacy: Ethics, Ecojustice, and the Climate Emergency," in Media Literacy for Justice: Lessons for Changing the World, ed. Belinha S. De Abreu (ALA Neal-Schuman, 2022). This chapter argues for incorporating ecomedia literacy, which recognizes media's material and ideological interconnections with environmental issues and social injustices, into media education to promote eco-citizenship, decolonize knowledge systems, and ethically address the climate emergency through critical analysis and media production grounded in ecojustice principles.

Further Reading

Scientific Assessment and Ideological Bias

Educators exploring climate literacy and English language arts have noted that scientific methods are limited when it comes to debunking climate disinformation and the bias of environmental ideologies. Historically scientific communicators have relied on the "banking" method of education, which approaches learning as a matter of "depositing" facts so that students make rational decisions. Instead, Douglas Kellner and Jeff Share, The Critical Media Literacy Guide: Engaging Media and Transforming Education (BrillSense, 2019), and James S. Damico and Mark C. Baildon, How to Confront Climate Denial: Literacy, Social Studies, and Climate Change (Teachers College Press, 2022) assert that critical media literacy is preferable because it rejects the top-down instructional approach of teachers depositing fragmented information into passive students. Instead, it promotes a problem-solving, dialogic approach grounded in praxis (putting literacy into practice) that empowers students to critically analyze media messages and create their own alternative media. Additionally, studies such as Alice Fabbri et al., "The Influence of Industry Sponsorship on the Research Agenda: A Scoping Review," American Journal of Public Health 108, no. 11 (November 2018) demonstrate how corporations influence scientific research and introduce bias, highlighting how they can affect research from the outset by deciding which questions will be asked and how they are framed. Antonio López's "Gaslighting: Fake Climate News and Big Carbon's Network of Denial," in The Palgrave Handbook of Media Misinformation, ed. Julian McDougall and Karen Fowler-Watt (Palgrave MacMillan, 2022)explores how various forms of climate denial are tied to ideological commitments and are impervious to fact-checking and scientific methods. This touches upon the critique of science offered by decolonial scholars and philosophers like Bruno Latour, who argue that science is always a value-driven enterprise, influenced by the culturally constructed and institutional bias of modernity. Issues of power and democracy are indispensable when considering science as a corrective to greenwashing and disinformation. Studying discourses, narratives, and critical political economy can help students negotiate how science and climate stories are told.

Further Reading

More...

Click or scan the QR codes for comprehensive reading lists:

Teaching Ecomedia

Ecomedia Studies

Research Ecomedia

Last Words!

Universities can adapt curricula to include ecomedia literacy and the UN's Sustainable Development Goals (SDGs), cultivating global citizenship and equipping students to address environmental challenges. This approach enhances critical thinking, promotes sustainable practices, and aligns academic goals with global sustainability efforts. But remember ecomedia literacy is not a one-size-fits-all solution. Each university should tailor its approach to its specific context and resources. However, its potential to contribute to climate action makes it a valuable tool for universities to consider in their efforts towards a sustainable future. By integrating ecomedia literacy with SDGs, universities can create a powerful learning environment that equips students not just to understand the issues, but to become active agents of change.