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Introduction

In an era of growing environmental challenges, media arts and film production carry significant responsibility for sustainability. This report analyses survey data from university film and media students to identify good practices in sustainable media production. The goal of GEM Work Package A3.3 is to document sustainable practices in student films and coursework, guiding young filmmakers toward green production methods. The study focused on how students integrated carbon reduction, waste minimization, renewable energy use, and other eco-friendly measures into their projects. The collection of case studies and examples that follows is intended to inspire environmentally responsible creativity in higher education.

Survey and Methodology

Data were gathered via an online survey (Google Forms) distributed to students involved in GEM partner projects. The questionnaire covered university affiliation, project titles and descriptions, media formats, team size and roles, and the sustainability aspects addressed. Questions specifically probed how projects engaged with sustainable development goals (e.g. waste reduction, renewable energy, social impact) through their creative work.

Respondents Profile

Students from multiple institutions participated in the survey, reflecting a variety of disciplines and perspectives. Represented schools include **University of Zagreb**, **University of Malta**, **Łódź Film School, Tampere University of Applied Sciences** and **Film University Babelsberg, KONRAD WOLF**. Respondents held roles ranging from producers and directors to graphic artists, environmental managers, and UX/UI designers. This interdisciplinary mix enriched the findings, as students applied their diverse skills to sustainability challenges in film, animation, mobile apps, and other media projects.

Insights from the Student Survey

Digital Technologies and Innovation

In the survey, many teams highlighted the use of digital tools to promote sustainability. For example, one project (the DEMOLA app) minimized paper use through regular **online meetings** while also "empowering users to make sustainable choices in their daily lives." Although no one explicitly mentioned AI/VR/AR, students emphasized the use of digital communication and applications – which can be seen as supporting the direction of "digital technology use" in media education. A useful quotation: "As a team, we minimised our use of paper by meeting through online… to empower users to make sustainable choices in their daily lives." – this underlines the role of digital tools and apps in student projects (**theme: remote collaboration and user education**).

Education and Social Responsibility

Students define sustainability in the context of education and creative ethics. One respondent described it as *"creating user-centric projects… contributing to a more responsible and ethical creative industry."* Another stressed that **art should "bring added value to the world and society,"** including ecological aspects. They also recommended integrating sustainability earlier in the project process: *"In future projects I would initiate a discussion on sustainability at the beginning of the work and involve the team in tools and methods for environmentally friendly production."* These insights confirm the importance of embedding sustainability and responsibility in education. In the report, such quotes could be integrated to justify the need for **training and early-stage sustainability discussions** (e.g., highlighted as student reflections).

Interdisciplinary Collaboration

Survey responses clearly demonstrated the importance of teamwork and interdisciplinarity. One participant noted that the team was "*multidisciplinary, we meet weekly via Zoom to communicate*" (DEMOLA project). Others referred to **international collaboration** ("our team was from Brazil and ... we worked together on the project") and to resource-sharing between student teams ("we talked to all film crews at the school to exchange things... not to drive twice, to have a full car, to save resources"). This confirms the recommendation to promote **inter-university and cross-sector projects**. In the report, these quotations could serve as strong evidence, e.g., a student explicitly describing a "multidisciplinary team" and resource sharing.

Climate and Social Initiatives

Most student projects (7 out of 8) focused on **environmental aspects**: recycling materials, reducing plastics, transport planning ("with a full car, to save resources"), eco-friendly set design (e.g., biodegradable or compostable materials), or promoting vegetarianism. Some students calculated the **carbon footprint** of production and switched catering services to seasonal/vegan options. Expressions such as "sustainable production process," "reducing plastic use," or "promoting vegetarian options" confirm this ecological engagement. The **social dimension** was mentioned less frequently – e.g., raising awareness among users or local communities (one project educated about underwater life in line with SDGs). A numerical highlight for the report: **7 out of 8 projects focused on environmental aspects, only 1 clearly addressed social issues**. This shows a strong environmental orientation and the need to broaden the social dimension. Quotes like *"our theme was education and sustainability"* or *"art should bring added value to the world"* reinforce the idea of linking environmental and social goals.

Soft Skills Development

Although the survey did not ask directly about soft skills, many responses pointed to their development. Working in a "multidisciplinary team via Zoom," international collaboration, and coordination with other school teams all reflect training in **communication, negotiation, and cooperation**. Students also mentioned creativity and resourcefulness: one summarized sustainability as *"being resourceful and thinking outside the box."* Such reflections show the enhancement of critical thinking and problem-solving. In the report, it is worth stressing that these projects not only taught environmental awareness but also strengthened interpersonal and organizational competencies. Quotes about teamwork challenges ("our team from Brazil... we all worked together") and resource-sharing ("collaborate with the school so other teams can use the tools") could illustrate this effectively.

Key Aspects of Sustainable Student Projects

Analysis of the survey data and accompanying literature highlights several key themes. Notably, students' projects often spanned multiple fields and themes, reflecting an **interdisciplinary nature** and a diversity of interests. As one educator observed, student projects ranged "from computer games to mobile applications and animated films," underscoring how varied disciplines can integrate creative problem-solving. Similarly, many projects directly addressed **sustainable development problems**, indicating students' awareness of global issues and motivation to find solutions (e.g. a game about plastic-eating worms to teach ecological farming).

Collaboration and soft skills were also emphasized. Most projects were team efforts, highlighting **communication, collaboration, and project management** as critical competencies. Teachers noted that embedding sustainability topics into projects tended to raise students' ecological and social consciousness. For example, group projects like an animated film with 200 participants required coordinated work and carbon-footprint reduction strategies, teaching students about practical sustainability measures in production. Overall, students developed a broad skill set: technical know-how (often via new technologies like mobile apps and VR) combined with innovation, problem-solving, and responsibility for environmental impact.

Key aspects summarized

- **Interdisciplinarity and Diversity**: Student work covered a wide range of fields, showing interdisciplinary approaches and diverse skill sets.
- Engagement in Sustainable Development: Projects often focused on environmental/social issues, reflecting student commitment to future-oriented solutions.
- **Teamwork and Collaboration:** Group projects taught communication and project management, building social skills alongside sustainability awareness.
- **Incorporating Sustainability into Curriculum:** Students advocated integrating SD themes at all education levels to heighten awareness.
- Leveraging Technology: Modern tools (AI, VR, AR, etc.) enabled innovative solutions for environmental problems.
- **Encouraging Topic Diversity:** Allowing students to tackle varied issues led to creative, cross-cutting projects (e.g. games, documentaries, public campaigns).

These findings suggest that embedding sustainability into diverse, technology-enabled, collaborative projects can foster both environmental and educational benefits in media education.

Case Studies

The following case studies present concrete examples of how students translated sustainability principles into real media and film production contexts. While the survey offered valuable insights into general trends, these individual projects demonstrate how theory becomes practice. Each case highlights specific strategies—such as eco-friendly set design, resource-efficient logistics, or inclusive teamwork—that showcase the diversity of student approaches to green filmmaking. Together, these examples illustrate that sustainable production is not limited to high-budget or professional contexts; it can be meaningfully integrated into student work, even under resource constraints. The selected projects demonstrate creativity, responsibility, and innovation in addressing both environmental and social aspects of sustainability.

Project Bär

The **Bär** project is a stop-motion animation produced by student filmmakers with sustainability at its core. The team constructed the entire film set from biodegradable materials and composted it after filming. As one student explained, *"my entire stop-motion set was made of materials that are biodegradable. … And I threw that in the compost so it*

could compost.". This hands-on approach ensured that set design had minimal environmental impact. The students also applied broader green-production ideas: at a sustainability panel, one noted, *"Your crew should eat vegan food, and we all use green electricity. … There's a guy trying to make a silicone substitute out of cactus juice, because many puppets are made of rubber… it's just absolute crap for the environment.".* These reflections show how the Bär team considered everything from catering to material sourcing, constantly innovating (e.g. exploring cactus-based puppet materials) to reduce waste and emissions while making the film.

Project Rauchhaus

Figure: Frame from the movie Rauchhaus

The **Rauchhaus** project (a student short film shot in Berlin) deliberately integrated green practices into its production logistics. The directors chose a single location equipped with a kitchen so the crew could prepare meals with reusable dishes, avoiding disposables. They also arranged train travel and limited vehicle use: *"We only had two cars. One is for the equipment… we only borrowed a van on the first day… So, there was really only one trip from the equipment rental to the location,"* one student explained. This planning not only saved costs but also reduced fuel consumption and emissions. The crew also secured a sponsor that provided organic reusable bowls and cups. Reflecting on improvements, students noted trade-offs and next steps: *"It would be nice if we could pay more attention to regional and organic products… avoid plastic packaging. … Greener is always possible, if everyone really pulls together.".* Even with a limited budget, the Rauchhaus team showed that modest changes in procurement and waste management could significantly reduce the film's environmental footprint.

Figure: Frame from the movie Ash Wednesday.

The **Ash Wednesday** project was filmed in Brazil with an international student crew. Social sustainability (team well-being and communication) was a key focus. The team worked in English to ensure transparency among Brazilian and international members: *"Our team was from Brazil and our language was English. … We always talked together: 'How about if we all speak one language so everyone understands.' That was part of it.".* This practice prevented misunderstandings and conflicts in a diverse group. The students emphasized that striving for sustainability can be challenging but rewarding: *"It's sometimes difficult, but it's worth it to be as sustainable as possible. It doesn't hurt the art. It can also be good for the project,"* noting that creativity often increases when seeking eco-friendly solutions. By fostering open communication and treating team members fairly, the Ash Wednesday project demonstrated that social and environmental considerations go hand-in-hand in film production.

Summary

The case studies show that sustainable practices in student film production are achievable and impactful across varied contexts—from stop-motion animation sets built of biodegradable materials, to on-location shoots with minimal transport emissions, to international teams prioritizing inclusivity and fair communication. Despite limited budgets and resources, students demonstrated that practical changes—such as reducing disposable products, composting materials, or organizing shared transport—can significantly lower environmental impact. Equally important, social sustainability prove that sustainability is not a barrier to creativity, but rather an opportunity to innovate and reimagine film production processes.

Directions and Recommendations

Based on this research and current trends, the following tables summarize strategic directions and actionable recommendations for supporting sustainability in student media projects.

The first table presents the main directions in which media and film education should develop to support sustainability. It reflects both technological trends and social as well as organizational aspects of student training.

Table 1. Directions for Sustainable Media Education

Direction	Description
Increased Use of Digital Technologies	AI, virtual reality (VR), augmented reality (AR) and similar tools are becoming more accessible, offering new possibilities for creative, research and educational projects.
Focus on Sustainable Development and Social Responsibility	Educational programs should value projects that address climate change, resource management and social inequalities. Key skills like critical thinking, creativity, adaptability, communication and collaboration will be increasingly important in the job market.
Interdisciplinarity and Cross-Sector Collaboration	Collaboration across disciplines (e.g. combining arts, science, technology) and with industry/NGOs can spark innovative solutions and bridge academic learning with practical, societal impact.

The key directions include the growing use of digital tools (AI, VR, AR), a strong focus on sustainable development and social responsibility, and the promotion of interdisciplinarity and cross-sector collaboration. This approach will give education a modern dimension, based on critical thinking, creativity, and tangible social impact.

The second table focuses on practical recommendations that can be implemented in the everyday activities of students and educational institutions to foster sustainable media projects.

Table 2. Recommendations for Student Project Practice

Recommendation	Description
Promote Interdisciplinary & Cross-Sector Projects	Encourage student projects that bring together different academic fields to innovate on social and environmental challenges.
Support Sustainable Development Initiatives	Provide funding, resources and mentorship specifically for student projects focused on sustainability goals (e.g. climate action, circular economy).
Develop Soft Skills	Integrate courses and workshops on teamwork, communication, leadership and project management into the curriculum, preparing students for collaborative, diverse production environments.

The recommendations include promoting interdisciplinary and cross-sector projects, supporting sustainability-focused initiatives (through funding, mentoring, and resources), and developing soft skills such as teamwork, communication, and project management. These actions will prepare students to work in complex, diverse production environments and enhance their ability to create innovative and socially responsible projects.

These guidance tables highlight priority areas (digital innovation, sustainability focus, collaboration) and concrete strategies (funding support, skill training) to reinforce green filmmaking practices. Implementing such directions will better prepare students to create sustainable media and contribute to a more responsible industry.

Conclusion

Higher education must prepare students for a future of rapid change by emphasizing innovation, sustainability, and collaboration in media projects. Integrating new technologies (AI, VR, AR, mobile platforms) into student filmmaking is crucial, but so is fostering social responsibility and cross-disciplinary teamwork. As shown by the case studies, even low-budget student productions can achieve significant environmental gains through creative planning (e.g., local logistics, green materials, waste reduction) and by prioritizing clear team communication and diversity of perspectives.

The findings of GEM Work Package A3.3 demonstrate that sustainability in student film and media projects is not only possible but also enhances the creative process. By reducing waste, experimenting with renewable or biodegradable materials, and designing efficient workflows, students proved that ecological awareness can be embedded into production without limiting artistic freedom. Moreover, social sustainability practices—such as inclusivity, equitable collaboration, and shared responsibility—strengthen both team performance and final project outcomes.

At the same time, the survey highlights areas for growth: while environmental initiatives were strongly represented, the social dimension of sustainability received less attention and should be further encouraged. Embedding social responsibility into curricula, alongside environmental awareness, will ensure that future media professionals develop a holistic understanding of sustainability.

The recommendations outlined in this report—promoting interdisciplinarity, supporting sustainability-focused initiatives, and building soft skills—offer a roadmap for institutions to integrate sustainability systematically into media education. Universities, educators, and industry partners must work together to provide resources, mentorship, and platforms for experimentation, enabling students to test innovative solutions in real projects.

Ultimately, sustainable student practices today anticipate the professional standards of tomorrow. By equipping young creators with the knowledge, skills, and values of responsible filmmaking, higher education can play a pivotal role in shaping a media industry that is not only innovative and competitive but also environmentally conscious and socially just. The future of film and media depends on the ability of the next generation to balance creativity with accountability—an ambition that GEM proudly supports.