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Designing Sustainability for All

Pranay Arun Kumar, Royal College of Art

Encouraging DfE in Design Education for Medical Product Design

Without disputing the importance of eco-design and sustainability in design education, there is little evidence of work specifically targeting sustainable medical solutions. Developing medical devices is complex, financially risky, requires large upfront investment and involves long lead times to market. In global design education today, the rigour and necessary focus on safety and efficacy of medical devices has meant that efforts to minimize environmental impact are often deprioritized or postponed, but increasingly emphasising on providing guidance to firms.

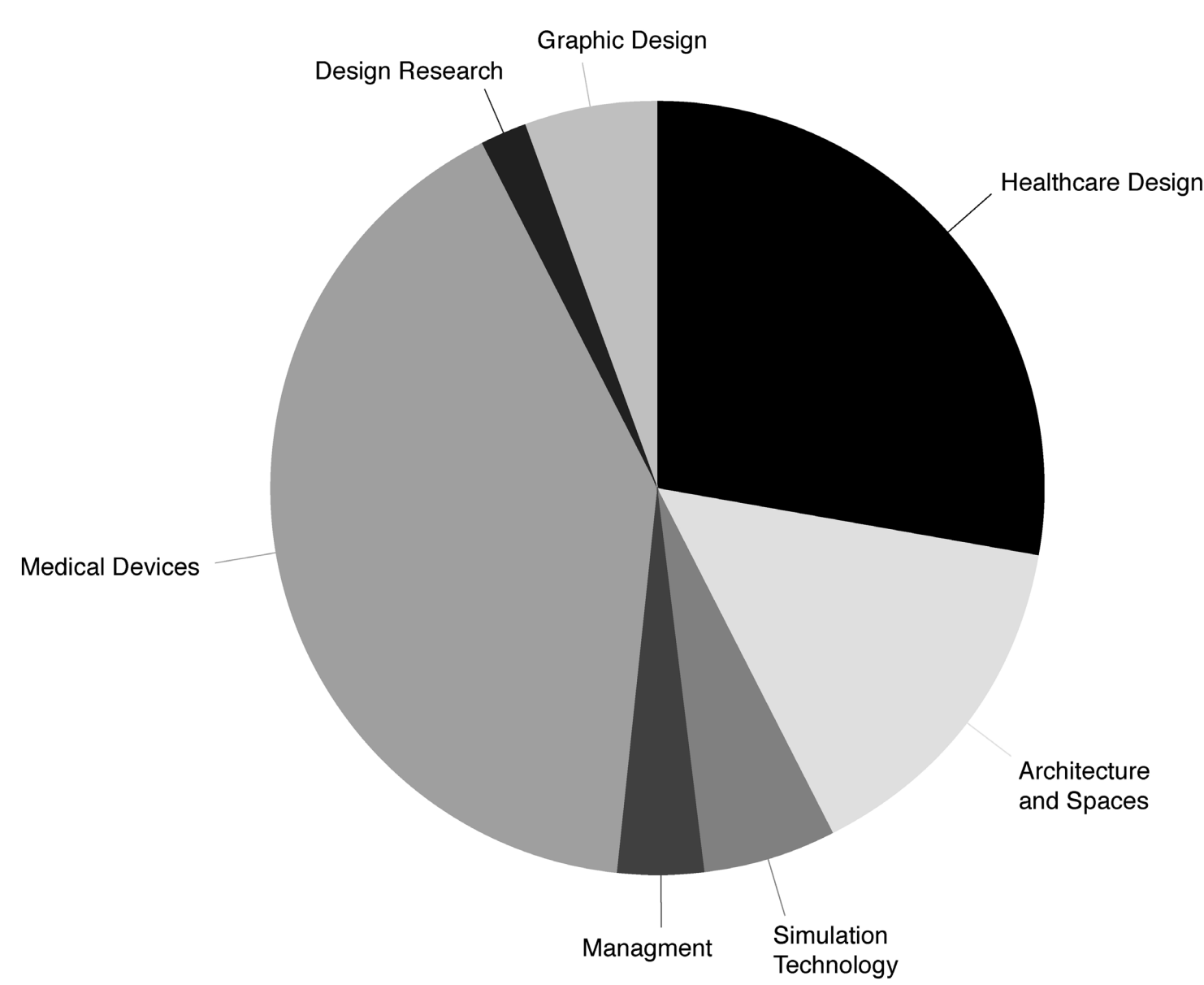
This exploratory study aims at understanding how design education affects DfE implementation in the process of designing medical products. 54 healthcare and medical design programs were identified online and analysed based on the information they provide on their websites. The analysis of the data helped highlight some of the problems in design education and open the platform for future work in environment conscious design education.

Key Words: Design for Environment, Medical Design, Design Education

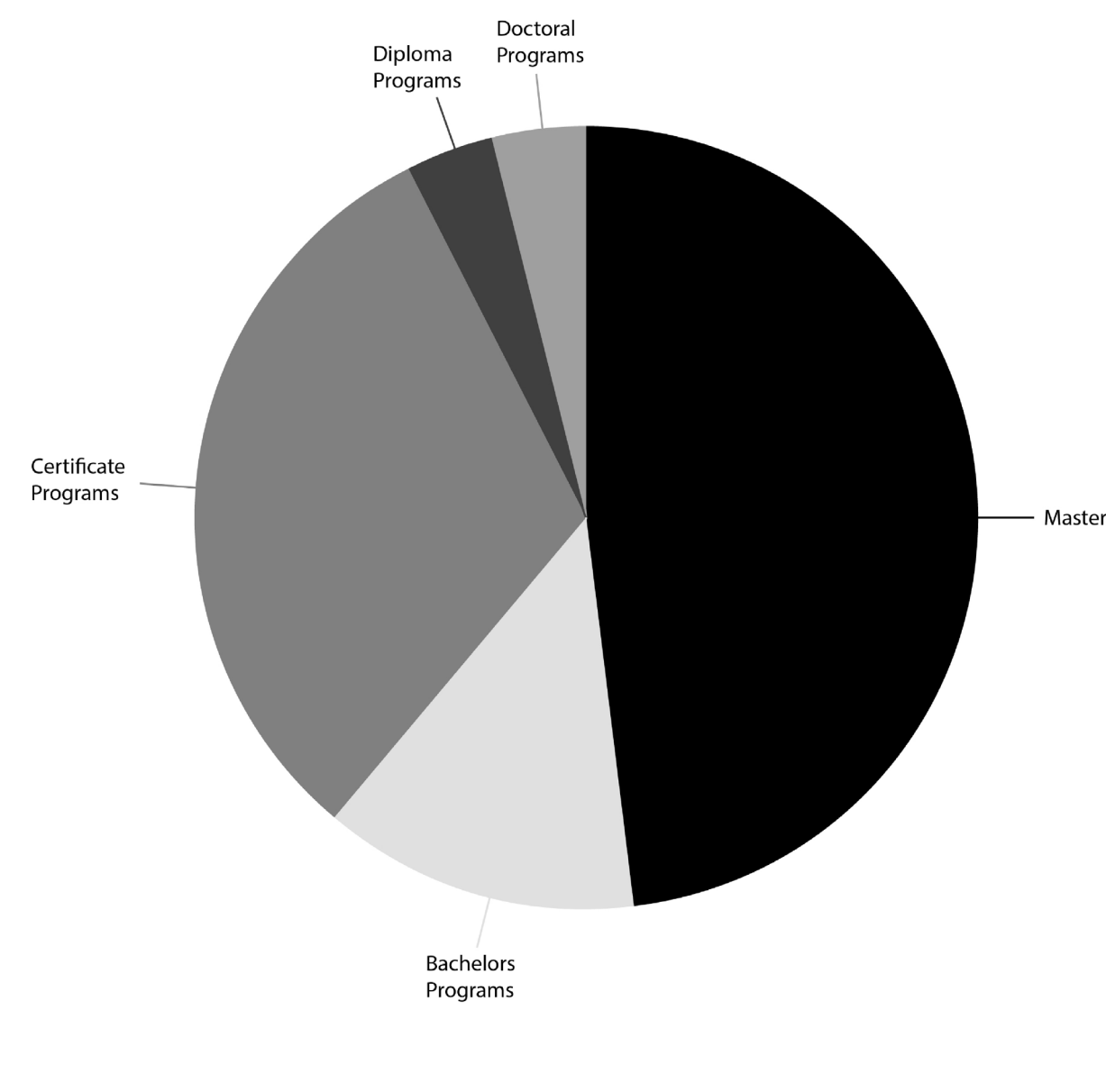


World map depicting the locations of identified programs

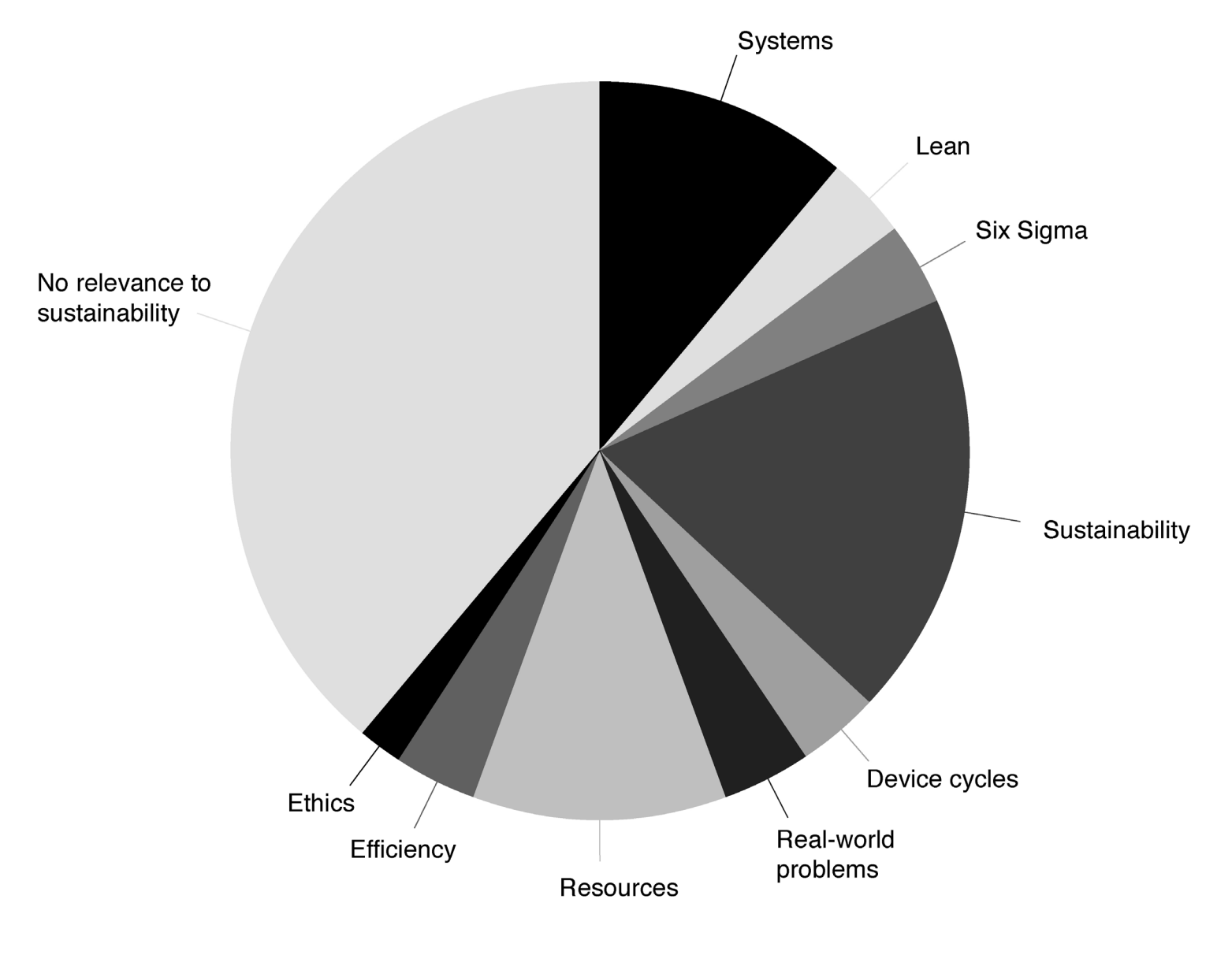
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Piechart depicting the disciplines covered in these programs



Piechart depicting the variety of programs explored in this study



Piechart depicting how programs have sustainability-relevant content

Here we discuss five ways to strengthen the value of sustainability in design education, each bearing its own merits and implications. For more information, please refer to the paper submitted. In case of queries and engaging in further discussion, please do contact on the e-mail ids provided on the paper.

Thank you!

reanalysing pedagogy

- introducing systems thinking as a problem solving approach.
- holistic understanding of input and output of projects.
- using online-courses for knowledge dissemination and classrooms for practical exploration.

praxis, not just poesis

- focus on design education beyond just making new things
- sustainable solutions an inherent part of the education
- problem solving without having to make a new tangible product (frugal innovation, retrofitting)

explicit or implicit

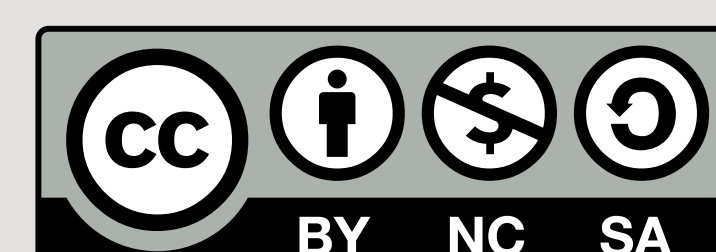
- making sustainability implicit in design education.
- not glorifying sustainable solutions
- not accepting unsustainable solutions
- raising awareness on the need for sustainability.

education and praxis

- using education to define practice rather than follow it.
- creating an ethical stance for sustainable design
- using design education to raise awareness and lead by example.

sustainability of design education

- focus education on community development rather than individual growth.
- enable peer to peer knowledge transfer.
- engage students in group projects and community initiatives



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