What is this research about?
In Ontario, technological studies includes programs such as manufacturing, construction, design, and transportation. It has been suggested that such classes have the potential to engage students in practices that may lead to the design and construction of a more sustainable and environmentally aware society in the future (O'Sullivan, 1999).

This study examined technological studies teachers' understanding of the concept of sustainable development. More specifically, the researcher was interested in identifying which aspects of sustainable development these teachers considered to be most significant from a personal, collegial, and student interest perspective.

What did the researcher do?
During 2002-2003, 45 technological studies teachers, including 10 pre-service teachers, completed a questionnaire that explored their thinking about sustainability.

What you need to know:
This study examined technological studies teachers' understanding of sustainable development and which aspects of sustainable development they considered most important. This study found that teachers, in general, lacked understanding about the relationship between consumerism, industry, and sustainability and assigned a relatively low importance to challenging existing non-sustainable industry practices.

Teachers also reviewed 130 newspaper editorial cartoons related to sustainability issues such as technology in the developing world, labour and environmental practices, global warming, population growth, and consumerism. In particular, teachers were asked to view the cartoon and indicate their perceptions, on a scale of 1 (not important) to 10 (very important), of how strongly the issue raised was related to sustainability, how
important the issue was to them personally, and how important it was to their technological education colleagues.

10 teachers also participated in semi-structured interviews to further explore the issue of sustainability and its relationship to teaching design and technology in greater depth.

**What did the researcher find?**

This study found that:

- only a few teachers indicated their frustration with the lack of critical thinking in the technological studies courses;

- of the sustainability issues teachers were asked to rate in terms of importance, teachers ranked population growth, human rights, exploitative labour and pollution issues as most important, while biodiversity, economic subsidies and international trade were rated the least important;

- teachers reported that students would be the most interested in pollution and the least interested in consumerism. The authors flagged this as an interesting finding considering the relationship between many of the products society consumes and the pollution they create;

- teachers ranked student interest in most sustainability issues as low – which the authors note as a concern since teachers may avoid exploring these issues if they think students do not find them interesting;

- only 10% of teachers had a basic understanding of the concept of “ecological footprint,” which is a measure of how much land is required to produce a product and deal with the waste the product generates;

- teachers tended to engage in workshops and activities that involved businesses and industry practitioners, although the researchers note that this may be problematic if industry practices are environmentally damaging.

The researcher concluded that, in general, teachers assigned a relatively
low importance to challenging existing industry practices and demonstrated a lack of understanding of the relationship between consumerism, industry, and sustainability.

**How can you use this research?**

Teachers and administrators may wish to consider the larger body of literature on teachers’ perceptions of sustainability. In addition, the researcher suggests the following:

- investing in additional resources that encourage technological studies teachers to examine sustainability issues;

- advocating for professional development activities so that teachers can learn more about the relationship between technological design, society, and the environment;

- engaging technological students in activities that promote the critical examination of how technology impacts sustainability.

**Original Article:**
To learn more about this study, we invite you to read the original research article:


**Other references:**

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About this summary
The Ontario Education Research Exchange (OERE) is a project of the Knowledge Network for Applied Education Research, an Ontario network promoting the use of research in education. The OERE’s clear language summaries of academic research aim to support this mandate.

This summary has been adapted from the ResearchSnapshot series developed by York University and ResearchImpact and has been developed according to writing and design principles unique to OERE. For more information about this summary or the OERE network please contact oere.knaer.oise@utoronto.ca.

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