

# Evaluating the 17 SDGs within the Nova Scotia Grade 10 Curriculum

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## Introduction

There are three pillars of sustainability for sustainable development:







1. Economic sustainability,
2. Social sustainability, and
3. Environmental sustainability (Diaz-Sarachaga et al., 2018).

All over the world and right here in Canada there are sustainability crises happening that fall under each pillar of sustainability. Sustainability has been defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Kuhlman & Farrington, 2010).

UNESCO has recognized and stated the importance of individuals learning about Education for Sustainable Development (ESD) in order to become better world citizens that have the proper education to address all 17 sustainable development goals (UNESCO, 2017, as cited in Griffiths, 2021). It has also been recognized that education is a necessary component of sustainable development (Abu-Alruz et al., 2018). To date there has been no studies examining the role of the 17 SDGs in the Nova Scotia high school curriculum. This study aimed to examine the extent of to which the 17 UN sustainable development goals were incorporated into the Nova Scotia grade 10 curriculum.

## Literature Review

There were several themes that were explored throughout the literature review including:

 <p>History of Curriculum Design: Teachers have historically designed curriculums (Huizinga et al., 2014).</p>	 <p>Commitment to Sustainability in Canada: In 2017, Justin Trudeau expressed a commitment to implementing and meeting each goal (United Nations, n.d.).</p>
 <p>History of Sustainable Development: After the UN published the Brundtland report, the Millennial Development Goals (MDGs) were published to work towards sustainable development. In 2015, the MDG timeline expired, and the SDGs were published (Diaz-Sarachaga et al., 2018).</p>	 <p>Current Curriculum Design: In 2006, the United States pushed STEM education due to the economic depression. Not far behind, Canada implemented this method of education to help foster innovation and research (Krug &amp; Shaw, 2016).</p>
 <p>Education for Sustainable Development: Researchers and UNESCO have claimed the importance of ESD to become better world citizens and to be able to address sustainability issues (Griffiths, 2021).</p>	 <p>Grade 10 Curriculum in Nova Scotia: There are 25 classes offered to grade 10 Nova Scotian students. Only one of these classes is mandatory to take for graduation (Province of Nova Scotia, n.d.; Province of Nova Scotia, 2021).</p>

## Research Question

To what extent are the 17 United Nations Sustainable Development Goals represented in the Nova Scotia grade 10 curriculum?



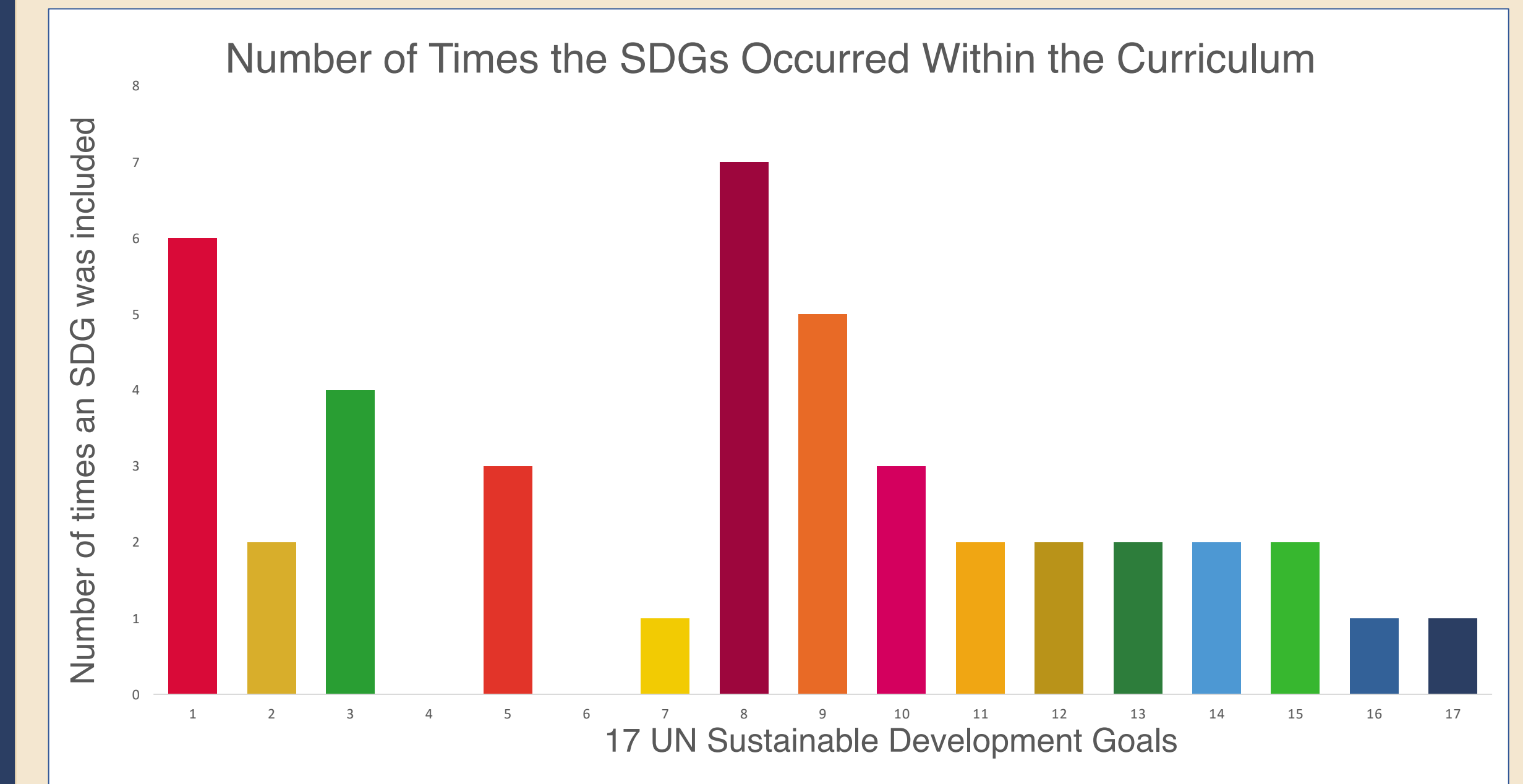
## Methods

This research was carried out in three different phases.

- 1 Phase one: Design SDG curriculum analysis key and to create key words for every SDG
- 2 Phase 2: In phase 2 data was collected. All class learning outcome documents and curriculum descriptions were scanned for key words or themes that related to any of the SDGs. If any curriculums used the same learning outcome document, the document was only analyzed once and given the same SDG indications for each class. If a class had information relating to an SDG, it was given a 1 for that SDG. If the class did not have information relating to that specific SDG it was given a 0. Next personal interpretations were made about how the class incorporated the SDG. These interpretations were a discussion including what information the class outcome had that pertained to the SDG.
- 3 Phase 3: Phase 3 is data dissemination in which the results of this study are given in a presentation and the study is posted online with the past Dalhousie ESS Honours Theses.

## Results

There was SDG representation in the Nova Scotia Grade 10 curriculum. The number of times an SDG subject occurred in the curriculum is represented below by the graph.



## Discussion

Each class had different frequencies of SDG incorporation into the class learning outcomes. This shows that students are learning about a broad range of SDG subjects and issues, although several SDGs were not mentioned in the grade 10 curriculum. Other studies done around the world depicted that curriculums had overall poor SDG incorporation (Pálsdóttir & Jóhannsdóttir, 2021). This signifies there are underlying issues as to why SDG representation is disproportionate based on curriculum such as improper SDG education for staff and lack of support for educators (Kang, 2019).

Moving forward, based on this analysis it is recommended that Nova Scotia high schools:

1. Incorporate better ESD integration
2. Include all of the SDGs within the grade 10 curriculum
3. Provide adequate staff support, education, and budget so that staff can teach ESD

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