

Sustainable Education through Creativity, Activity and Service (CAS)

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Abstract

In this paper, a study has been done to find out, first, how Creativity, Activity, Service(CAS) activity/project is promoting education for sustainable development and second, what approach is used to promote it. The purpose is to bring into focus the significance of education of sustainable development to meet sustainable development goals (SDGs) through CAS. The method used is qualitative content analysis of web pages of 44 IB World Schools websites obtained by applying random sampling technique. The results highlight that CAS activities/projects does have activities directly related to sustainable development, but what is not evident is that how these activities are linked to the SDGs. It is found that CAS activity/project is an efficient tool for promoting education for sustainable development coupled with project focused approach delivered through community service programmes.

Keywords:Education, Sustainable Development, CAS, International Baccalaureate, ESD

1. Introduction

The UNESCO definition reads: “Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behavior and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way” (Pauw, Gericke, Olsson, and Berglund, 2015).

This definition puts forth enormous responsibility for those involved in the education sector directly or indirectly. The issues stated as part of definition are global issues and have their own impact on the growth and development of the nations. Introducing it into the education system is not without its own challenges.

The teaching and learning aspect stated in the definition highlights the fact that any national policy on education, should include concepts on sustainable development. Even though it could be mentioned that these are covered under environmental sciences, it remains to be seen, the impact of these studies on the children.

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The definition also mentions about participatory teaching and learning methods. This approach lets students participate rather than remain as mute spectators. It helps the students to solve any

real problems encountered in the study (Huang, and Wang, 2013, June) by promoting the competencies.

Looking into the delivery systems, apart from the national curriculum followed by various nations through which the learners could be educated on sustainability practices, international education plays a key role in connecting the nations globally. The prominence of international education is growing at an alarming rate and one such programme is the international baccalaureate.

The international baccalaureate connects the concepts of education for sustainable development, not explicitly, through creativity, activity, service (CAS) projects. The CAS, along with the other components such as Extended Essay (EE) and Theory of Knowledge (ToK) forms the core of IB Diploma programme. The CAS forms the major component of experiential learning as advocated by John Dewey and is spread across the IB continuum from PYP to Diploma Programme and CP, which is service learning (Hayden, Hemmens, McIntosh, Sandoval-Hernández, and Thompson, 2017).

Sustainability is a global issue and it has to be tackled by countries from all parts of the world. As such, education for sustainability will be the responsibility of individual countries. IB is a pioneer in international education and could be the forerunner to take up education for sustainability through its various programmes offered in several countries (Sáez Ortega and Taboada 2018). The characteristics of sustainability issues are complexity and uncertainty and since education for sustainable development is about preparing the learner to play an active role towards sustainability, it has to keep evolving in order to provide skills and competences (Lambrechts and Hindson, 2016).

Similarly work on CAS programme is majorly done by researchers funded by IB and spans the period between 2002 and 2019 and is scarce (Hayden, Hemmens, McIntosh, Sandoval-Hernández, and Thompson, 2017). The research projects aimed to understand the impact of CAS on students and communities. A case study carried out by Florence and et al. reports that there is stress on community service by the students in order to fulfill their requirements to obtain their IB diploma. It reports further that not all students are happy or motivated to carry out their CAS projects and they do it out of compulsion. In one of the schools mentioned in their study, has not made it compulsory to take the CAS as some students do not work towards their full diploma (Kulundu and Hayden, 2002).

CAS is mandatory for IBDP. CAS programme is not assessed or evaluated as part of fulfilling their IB Diploma. The students have to complete a required number of hours of participation (Cambridge, and Simandiraki, 2006) and are required to provide evidence demonstrating the achievement of all CAS outcomes (Martin, R. A., Tanyu, M., & Perry, S. 2016). Variations in CAS reflection activities were also identified during the pilot study (Billig, 2017).

The following research questions are addressed through this study:

How CAS activity/project is promoting education for sustainable development?

What approach is used to achieve education for sustainable development?

2. Methodology

The research design is based on qualitative content analysis. The researcher has taken the following steps to arrive at the inference (Klaus Krippendorff, 1980)

1. Formulating research questions
2. Ascertaining stable correlations
3. Locating relevant texts
4. Defining and identifying relevant units in texts
5. Sampling these units of texts
6. Developing coding categories and recording instructions
7. Selecting an analytical procedure

8. Adopting standards
9. Allocating resources

The population is obtained from International Baccalaureate Organisation, (IBO) website. Only institutions offering International Baccalaureate Diploma Programme (IBDP) in India is considered for the study. There are 146 institutions offering the programme.

A simple random sampling is used to obtain the sample. The 146 institutions were arranged alphabetically. Numbers were allotted to the institutions. Using Microsoft Excel function, RAND (), the institutions were ranked. 50 Institutions were selected for the study.

Of the 50 institutions, 44 institutions (88%) fit into the inclusion criteria and 6 institutions (12%) were excluded. The exclusion criteria are provided below:

- a. Only CAS activities of International Baccalaureate Diploma Programme (IBDP) offered by the sampled institutions were included. CAS activities of Primay Years Programme (PYP), Middle Year Programme (MYP), and _____, Cocurricular activities and extracurricular activities were excluded.
- b. Only CAS activities published in English were included.
- c. If group of institutions belonged to the same management offered the IBDP porgramme, the CAS activities of the institution which came first in the order was included.
- d. Wrong website address which does not access the stated institution.

A sample of 44 gives the analyst 99% certainty that the sample includes at least one of these instances. (Klaus Krippendorff, 1980)

The researcher then carried out content analysis. The Google search engine was used. The unit of analysis is the phrase “Creativity, Activity, Service” and its abbreviated form “CAS”. The researcher in recording the data based on searches in the following web pages.

- a. Institution’s webpages including CAS activity page.
- b. IB community blog
- c. YouTube
- d. Facebook
- e. Blogs

Generic search was done for the key words by providing the following search prompt – IB CAS Portofolio and IB CAS reflections. From the sample units, recording units are derived. Holsti (1969), relying on the image of categorization, defines a recording unit as “the specific segment of content that is characterized by placing it in given category” (Klaus Krippendorff, 1980)

On identifying the key words, the author read the content of the article to identify the activities carried out. The activities were categorised and then aligned to the respective sustainable development goal (SDG). The units are defined based on categorial distinctions where the units are defined by their membership in a class or category – by their having something in common (Klaus Krippendorff, 1980).

The following paragraph highlights the categorizing technique applied:

From the webpage of an institution, the following paragraph is obtained related to their CAS activity:

“..... project that was dedicated to recycling waste.” The phrase ‘recycling waste’ is analysed in the context of the project. Based on the context of the project / activity, it is categorized as waste management. All similar CAS activity is categorized into this category. After categorizing, the category is linked to the respective SDG. The category on waste management can be linked to following SDG:

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SDG 12 - 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

SDG 11 - 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

3. Results and Discussion

It is observed from Figure 1 that out of 44 institutions, only 27 (61.36%) institutions had activities related to sustainability. No activities were seen in the web pages for 12 (27.27%) institutions. For 5 (11.36%) institutions, the activities were not related to sustainability.

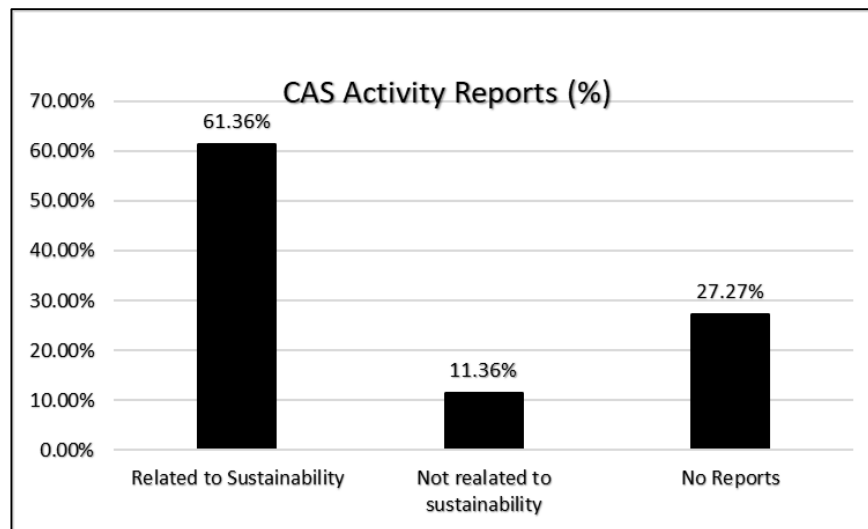


Figure 1: % of CAS Activity Reports available related to sustainability out of 44 sampled institutions

Figure 2 shows the medium used to make public the CAS activities carried out by the students. It is observed that institutions CAS page (32.5%) published activities related to sustainable development followed by Facebook (22.5%). IBO community blog accounted for only 2.5% of the activities published by the sampled institutions. The institution's blog did not contribute to publishing students' activities.

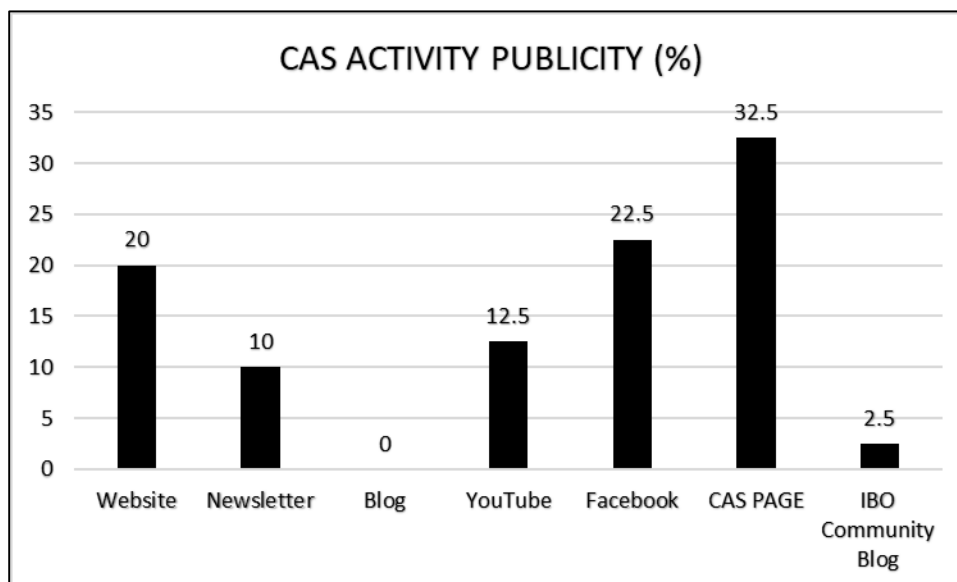


Figure 2: Medium

used to make public the CAS activity of students

In Figure 3, it is noticed that SDG 4 (17.74%) and SDG 3 (12.90%) have more CAS activities in comparison to other SDGs. SDG 7 and SDG 9 accounted for only 0.81% each in terms of the activities. There were no activities observed for SDG 17 (0.0%).

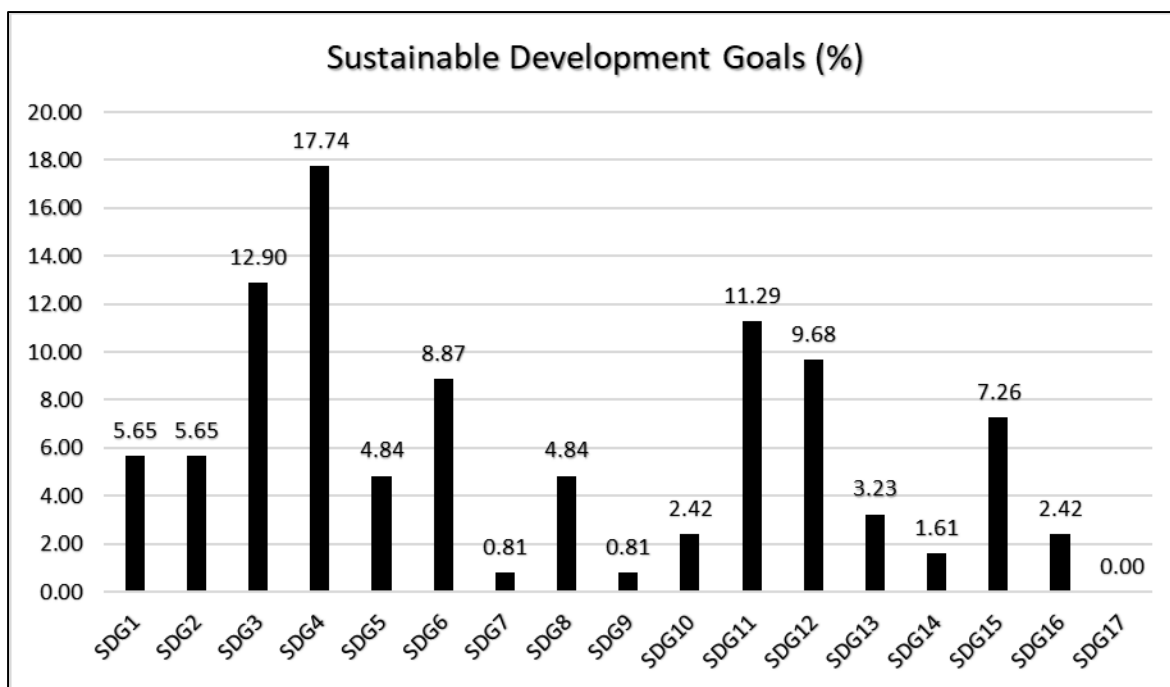


Figure 3: CAS activities in terms of SDGs

Students have the choice to carry CAS activity/projects as per their interest. From what the students have made public through their websites, it is evident that only 27 (61.36%) of CAS activity or project is related to sustainable development. Thus, whether CAS activity/project is promoting education for sustainable development will depend on the student's and teacher's awareness about education of sustainable development.

Since the researchers were able to code and interpret CAS activities/project published in respective webpages with respect to the sustainable development goals, it is evident that students have expressed their concern about sustainability. From the documented evidences, as only two institutions stated about the sustainable development goals, it poses a question whether the students took up these projects/activities not knowing its relevance to sustainable development goals.

Considering the second research question, about the approaches applied for education for sustainable education, all the 27 institutions studied with respect to sustainability, was part of community service and was project focused. This is in agreement with earlier studies carried out by Buizer et. al (2004).

Eventhough CAS promotes education for sustainable development through various activities undertaken by the students and also follows a efficient approach, that is project focused and delivered as part of community service, from Figure 1, it is evident that of the 61.36 % of the reports sampled, had reported about sustainability issues. Of these, 61.36%, it is found from Figure 3, that majority of the projects are linked to SDG 4 (17.7%) and SDG 3 (12.9%). This is

because the institutions are in collaboration with a specific NGO, which has a specific objective. Thereby, the students tend to get experience related to what the NGO's are providing as projects.

The institutions have to come up with methods to include all SDGs as part of their project work. The percentage of projects related to sustainability could vary from year to year as it based on the interest of the students. The CAS activities/projects obtained from the referred sources showcased as per the requirements of the IB. These activities addressed environmental and sustainable development issues supported with pictures. But only very few institutions had activities/projects with direct reference to the word "sustainable" and "SDG" documented. It was also found out that no activities had any direct reference to SDGs.

From the websites, CAS projects of various types are visible such as field trips, learning dance, visits to the local community to help them, cleaning beaches/places by picking up the plastics/and other related wastes, engaging in teaching children who has no access to a good teaching and learning environment, feeding the poor, visiting old age homes and raising funds or goods during any disaster. All these activities were focussed on various strands of CAS such as for creativity, activity or service or any combination of these. Some of these activities were related to sustainable development, but the search could not identify the terminology such as sustainable/ESD in their websites or blogs.

But as Buizer and Nancy have mentioned, the CAS has elements which are project focussed and these elements when directed towards green activities will have an positive impact on student learning and behavior towards the environment, Also, as CAS involves field trips/after school activities, it provides a conducive environment for the students to build appropriate skills required for the 21st century workforce.

4. Conclusion

From the discussion, it is concluded that CAS activities/project is an efficient tool to promote education for sustainable development. It should be aided by project focused approach and should be carried out as part of community service. The research would like to put into focus the following suggestions:

First, it is suggested that the CAS activities should state the concept of sustainable development in their document. This will create in the students the awareness and also the linkages of their activities/projects to sustainable development.

Second, the activities/projects could mention the sustainable development goals. This will encourage the students to identify relevant sustainable development goals that they are engaged with.

Third, another factor, to be noted, is learning is optimized when adult support learning experiences of young people or help them gain access to community resources that provide positive opportunities (Rhodes, 2002). Also, as development researchers state, adolescents spend most of their time with their peers, home or in their community and they suggest that learning will be efficient, if opportunities are created in these settings (Bronfenbrenner, 1979; Nagaoka et al, 2015) [9]. Thus, as sustainability education through CAS is concerned, the CAS coordinator or the institution could look into creating opportunities for learning in their communities where they are most likely to spend most of their time.

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6. References

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