

科学研究費助成事業 研究成果報告書

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研究課題名(和文) Campus Sustainability Assessment for Interdisciplinary and Intercultural Learning

研究課題名(英文) Campus Sustainability Assessment for Interdisciplinary and Intercultural Learning

研究代表者

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研究成果の概要(和文)：この研究プロジェクトは、キャンパスや地域の持続可能性に関する新しい知見とコミュニティの結びつきを生み出した。また、大学の意思決定者、地域社会のメンバー、大学の学生等におけるキャンパスや社会の持続可能性に対する意識を高めることができた。

更にSustainability(持続可能性)について、大学機関の地域コミュニティ向きWebコミュニケーションについて研究した。持続可能性という概念や価値観は他の地球規模及び地域規模の概念や価値観と複雑に繋がっていることが明らかになった。

研究成果の概要(英文)：This research project resulted in the creation of knowledge and community connections around important issues of campus and local sustainability. It also led to increased awareness about issues of campus sustainability among university decision-makers, community members, and the student population at our university.

In addition, we researched the multimodal communications of universities with their surrounding communities. We found that multimodal sustainability discourses and values were complexly interwoven with other (global and local) discourses and values.

研究分野：Educational Research

キーワード：sustainability discourse communities of practice

1. 研究開始当初の背景

As the most recent Intergovernmental Panel on Climate Change (IPCC) report highlighted in the clearest of terms, climate change is a real and present danger for the planet. Further, issues related to energy resources, production, and consumption have taken on new meaning in Japan since 3/11. That is, energy issues have again revealed themselves to be central to Japan's economic, geo-political, and ecological future (Vivoda, 2012).

Education for Sustainable Development (ESD) is the field of study focused on educational outcomes that contribute to local and global environmental care. Cortese (2003) has shown the critical role universities can play in advancing sustainability goals. More specifically, Ryan et. al (2010) note the “need to harness national policy, to develop local and regional initiatives and to work effectively towards more profound change in higher education (HE) curricula and through collaboration with external communities and stakeholders.”

Several universities in Japan, particularly large, well-funded ones, have taken up the cause of creating more sustainable campuses. As leading institutions that create and disseminate knowledge, these universities recognize the value of developing sustainability practices and fostering sustainability education as a means of contributing to local and global community while enhancing their own profiles and reducing costs. However, top ESD researchers have noted that although Japan is a world leader in sustainability education, HE campus “greening” initiatives “seldom integrate multiple functions of universities in the direction of sustainability” (Abe & Nomura, 2014). Further, these scholars call for what they term a “whole institution approach” that is “situated in the local context” (Abe & Nomura, 2010, 2014).

Other research points to the challenges of affecting change at large institutions such as the five leading Japanese universities supported under the *Integrated Research System for Sustainability Science (IR3S)* program. Few case studies on campus sustainability initiatives in Japan exist, but one comparative case study research

paper (that included the cases of 3 Japanese universities) showed that factors such as entrenched disciplinary structures, traditional hierarchy and incentive arrangements, and a general lack of desire for change inhibit the implementation of broadly-embraced sustainability transformation (Ferrer-Balas, et. al, 2008).

2. 研究の目的

The purpose of this interdisciplinary research project was to explore ways that students and faculty can work together locally to evaluate and improve campus sustainability while fostering new relationships and intercultural learning through online and face-to-face collaboration with domestic and international partners. We investigated 1) best practices for supporting the growth of a campus sustainability *community of practice*, 2) obstacles and opportunities for sustainability project “investment” and 3) the development of “international posture” among undergraduate university students.

3. 研究の方法

This research project employed mixed (qualitative and quantitative) methods in order to answer the questions set out above and explore, create, and share discourse and practice related to campus sustainability transformation from many different angles. In our primary published study (Hourdequin & Tani, 2017), we employed multimodal discourse analysis (MDA) to understand how and why universities communicate about issues of campus sustainability. Site visits were conducted at multiple stages of the research project in order to strengthen connections with domestic and international university partner institutions and learn from best practices for interdisciplinary campus sustainability efforts.

4. 研究成果

This research project resulted in the creation of knowledge and community connections around important issues of campus and local sustainability, and led to increased awareness about issues of campus sustainability among university decision-makers, and the student population at our university.

In the early stages of this project, two significant revelations affected the course of our research activities. First, shortly after receiving this grant, we learned that CAS-net Japan—Japan's primary network for university

campus sustainability—was in the final stages of completing set of campus sustainability criteria based on the American Association for Sustainability in Higher Education (AASHE) campus sustainability standards and other global standards. In the initial stage of our project we had planned to continue our efforts with students to translate AASHE’s Sustainability Tracking, Assessment & Rating System (STARS), but after learning that CAS-net Japan was in the late stages of completing a Japan-centric set of standards we decided to focus our own efforts elsewhere. The second revelation that affected the course of our research was learning that our own university was planning to move our faculties (Education and Foreign Studies) to a new, nearby campus which would be designed and built during the course of our research project.

In light of these two significant revelations we made two changes to our research design: 1) Instead of trying to translate and promote a parallel set of campus sustainability standards based on STARS, we decided to lend our support to the CAS-net standards that were being developed. We promoted these with our university administration, and among the student population. Second, in light of the plans to build a new campus, we refocused our efforts more broadly on campus sustainability discourse and practice. We sought to understand more about how universities perceive issues of campus sustainability vis-à-vis the local community. As we pursued this research, we also sought to influence decision makers at our university to take issues of long-term sustainability into account when designing and building the new campus that we would move to in April of 2018.

It was not politically feasible to collect data on exactly how much of an impact our activities had on the decision-makers who planned our university’s new campus, but the new campus itself shows evidence of many of the practical changes that students promoted. Examples include: high-efficiency motion-activated lighting, comprehensive recycling, shared faculty facilities (common refrigerators, hot water, facilities), etc.

Some of the efforts that we believe helped to raise awareness at our campus about sustainability included:

- student projects focused on pet-bottle recycling
- online collaboration between students

on our campus and American students at the University of Colorado at Colorado Springs (UCCS).

- A regional community conference entitled “Campus Sustainability Across Cultures and Disciplines: Connecting Local Actors community that we held in October of 2016 (we subsequently published open-access proceedings from this conference on a website we made and at our university’s electronic research repository).
- A workshop held by Dr. David Havlick (research collaborator) at our campus that highlighted campus sustainability efforts at UCCS and opportunities at our campus (and the one then being built).

As previously mentioned, our main research activities involved investigations of campus sustainability discourses and practices. One main subproject involved analysis of how universities in Japan at different tiers position themselves and represent their activities to the communities within which they reside. Given the value placed upon contribution to the community (地域貢献) at our university, we saw this research as having practical benefits for helping us to influence decision-makers at our university.

We undertook a project that analyzed websites of universities at each of the four main tiers of Japanese higher education. Our analysis of four university websites found significant variance in the prominence of campus sustainability discourse amidst the primary four discourses that we identified: internationalization, technological innovation, contribution to the community, and pastoral campus life.

Of the four different types of universities we studied from one geographical region, we found that the national university and the local private university employed discourse about campus sustainability most prominently on their websites. The public university we studied also included information about campus sustainability as central to its mission, and provided easily accessible (though not as prominent) information about “eco-campus” or “green campus” activities. Information about

campus sustainability was least prominent on the website of the elite private university included in our study despite the fact that this university is one of a small group of Japanese universities that is a member of an international campus sustainability network.

5. 主な発表論文等

(研究代表者、研究分担者及び連携研究者には下線)

[雑誌論文] (計 2 件)

The Role of Campus Sustainability Discourse on the Websites of Four Japanese Universities

Peter Hourdequin & Seiji Tani

Language and Ecology 3(2) 1-18 Oct 2017

Greening PanSIG

Mark Brierley, Peter Hourdequin, Brent Simmonds, Catriona Takeuchi, Tim Prichard

The 2015 PanSIG Journal 23-30 May 2016

[学会発表] (計 5 件)

The Discourse of Campus Sustainability at Public and Private Japanese Universities

Peter Hourdequin & Seiji Tani

Hawaii International Conference on Education 3 Jan 2017

Cultivating Campus Sustainability at a Japanese University: Student, Faculty, and Administration Perspectives

Peter Hourdequin

Hawaii International Conference on Education 5 Jan 2016

EFL & Sustainability: Multiple Approaches

Peter Hourdequin (invited presentation as part of a panel discussion)

JALT 2015: 41st Annual Conference on Language Teaching and Learning & Materials Exhibition. Shizuoka (Granship) 21 Nov 2015

Language learning through campus sustainability Poster Session by 3 undergraduate students (organized by Peter Hourdequin)

JALT 2015: 41st Annual Conference on Language Teaching and Learning & Materials Exhibition. Shizuoka (Granship) 22 Nov 2015

特別ワークショップ

Campus Sustainability: The University of Colorado at Colorado Springs and Tokoha University, Shizuoka

(Special hosted-workshop on campus sustainability)

Dr. David Havlick June, 2017 (Tokoha University, Sena Campus, Shizuoka)

[図書] (計 件)

[産業財産権]

○出願状況 (計 件)

名称:

発明者:

権利者:

種類:

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名称:

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権利者:

種類:

番号:

取得年月日:

国内外の別:

[その他]

ホームページ等

On October 15th, 2016, we held a regional community conference entitled “Campus Sustainability Across Cultures and Disciplines: Connecting Local Actors.” The conference brought together community members, researchers, and students interested in issues of local sustainability. The conference was a success in its efforts to connect community members to the common ideals of sustainability. We also believe we helped influence decision-makers at our university who were in the process of planning the construction of a new campus (where our university now resides). The website for this conference is listed here:

<https://sites.google.com/site/ecotokoha>

Conference proceedings from the event can be downloaded from the site at: <https://sites.google.com/site/ecotokoha/proceedings>

6. 研究組織

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