氏　　名	真保　亜紀
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論文題目	知覚標識を誘引とする学校防災におけるエコシステム形成の実証―徳島県鳴門市教育委員会の知識マネジメント―
論文審査委員	郷右近　英臣　北陸先端科学技術大学院大学　准教授
	神田　陽治　同　特任教授
	西村　拓一　同　教授
	白肌　邦生　同　教授
	近藤　伸也　宇都宮大学　准教授

論文の内容の要旨

The purpose of this research is to develop a service-based theoretical model for managing individual knowledge as collective knowledge. It is made possible by situating the new concept of perceptual signs [Merkmal] in knowledge management research. Specifically, the concept of disaster prevention value of phase-free has been used to elucidate and verify the factors behind the success of local disaster prevention. It has contributed to the disaster prevention education in the City of Naruto, Tokushima Prefecture, where the concept of phase-free has been introduced in school education. Through this experience, the concept of perceptual signs [Merkmal] is positioned in the field of service research, which promotes value co-creation.

Japan is known as a disaster-prone country, the lessons learned from the Great East Japan Earthquake have reaffirmed the importance of school facilities as evacuation centers as well as learning centers in the community. Currently in Japan, disaster education is provided in most of the primary and secondary schools, but the decision of the education is left to each region and each school. For teachers who are not experts in disaster education, there is a wide variety of official portals, guides, supplementary readers and case studies. Numerous studies have shown a certain level of effectiveness in implementing disaster education. On the other hand, a survey of boards of education across Japan has pointed out issues in the related field, such as teachers' low knowledge and awareness of disaster prevention, lack of time for disaster education, and the mannerism of teaching subjects. Against this setting, existing research on disaster education focuses on institutional (static) disaster education based on official curricula and discusses disaster education from the perspective of the creator of the system/framework. However, few papers have addressed the issue of dynamic knowledge creation activities, such as teacher ingenuity in creating disaster education curriculum. This research therefore sheds light on the process of teachers' lesson planning and discusses the implementation of effective disaster education from the perspective of the center of disaster education.

This research investigates knowledge management to improve the quality of disaster education in Naruto City, (Phase Free Education: hereinafter referred to as PFC Education). Later, a question, has been raised, ‘Why was PFC education institutionalized in Naruto City?’ and analyzed the

factors that enabled PFC education to be institutionalized through six years of research, focusing on interviews with the administration, school board, teachers, other relevant parties, and teacher training. It has discovered the existence of concepts connecting diverse teacher contexts in the PFC education ecosystem. This research refers to the concept that facilitates the sharing of people's knowledge as perceptual signs [Merkmal]. Perceptual signs are <signs> of rationality accessible to all actors and are the key to increasing resource density in practices of service exchange.

Theoretically, this research has proposed a new theoretical model (Coordination Model of Service Ecosystem) which situates perceptual signs [Merkmal] in the discussion of institutions in service research. Practically, this research has shown that knowledge management by school boards contributes to disaster management education in the community.

Keywords: Merkmal, S-D logic, service ecosystem, knowledge management, disaster education, phase-free

論文審査の結果の要旨

徳島県鳴門市を事例として、平時に使用しているものに災害時にも利用可能な機能を付与することでその価値を向上させるという新しい考え方「フェーズフリー」というコンセプトを用いた防災教育が普及・制度化していくメカニズムについて、新しい知見を示した実証研究である。

研究では、知覚標識・サービスエコシステム・知識マネジメントのフレームワークを応用することで、複数のアクターが持つ主観的なものの見方（環世界と表現）の間に、フェーズフリーという知覚標識によって知識共創が行われる共通の場が構築された。その場ができたことで、従来はトップダウンで行われてきた小中学校の教育制度の殻を破り、ボトムアップ的に工夫をしながら知識共有・知識活用を生み出す「知識マネジメント」の土壌が醸成され、フェーズフリー防災教育の普及と発展が行われてきた。

研究ではフェーズフリー防災教育の普及を成功させた社会的条件やアクター同士の相互作用を丁寧に調査し、社会科学で用いられているさまざまな理論に基づき、その現象の学術的な説明に挑戦した。フェーズフリー防災教育が社会システムとして醸成していく過程を明らかにした初めての研究であり、新規性・独創性は十分なものと考えられる。他地域への応用に向けた議論を今後進めて行く際に、基礎となる研究成果を示した点において、有用性も大きい。

これらのことから知識科学の学位にふさわしいものと認める。