

Development Process of *Kaigokan* Among Japanese Students Studying Caregiving in A Four-Year College Degree Course: A Longitudinal Study

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ABSTRACT

Objective: This study conducted a longitudinal survey of students studying caregiving through a certified care worker program at a four-year college to clarify the development process of *kaigokan*. **Method:** Participants were 23 students enrolled in the care worker program at Nihon Fukushi University. A questionnaire was administered five times to observe changes in *kaigokan* during a four-year period. Text mining was used to obtain factors concerning caregiving from free response data. Participants' outlook on caregiving was compared and examined each academic year, based on the categories extracted from the co-occurrence network. **Results:** In the first year, a foundational perspective on caregiving was cultivated through on-campus learning. In the second year, students had first-hand experience of their practicums, leading to knowledge and skills integration, and started to develop *kaigokan* through reflection. In the third year, an ethical perspective was incorporated. In the fourth year, students, as caregiving professionals, cultivated a perspective of providing support that meets care users' needs. **Conclusion:** Recognizing their *kaigokan* in the second year led to its further structuring in the third and fourth years. This is extremely important for the quality of the students' education and caregiving.

Keywords: *kaigokan*, development process, longitudinal study, certified care workers, four-year college students, text mining

INTRODUCTION

In March 1987, the Certified Social Worker and Certified Care Worker Act established a national certification known as a "certified care worker" [1]. Training and education of certified care workers in Japan began the following year, signifying that the profession has only a short 34-year history. In 2017, the certified care worker training course curriculum for the 2019 academic year was revised considering the report *Toward the Clarification of the Functions Required of Care Personnel and Realization of a Career Path* [2]. The guidance of educational methods based on this

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concept specifically cited the importance of *kaigokan* [3].

Kaigokan is not a clearly defined concept; it is described in past research as “the value system and attitude established by a care worker through engaging with care work” [4, p.164] and as “one’s outlook or point of view on caregiving, which forms the foundation for deciding the direction of support and understanding patients” [5, p.4]. Generally, it can be defined as the beliefs and values that underlie the care practices of each care worker.

Concerning the factors that comprise *kaigokan*, Yamashita et al. [6] stated that “*kaigokan* requires background knowledge, ethics, and personal experience” [p.45]. Mizutani et al. [7] extracted seven factors involved in the development of *kaigokan* among college students in a four-year education course for certified care workers, including family caregiving, volunteer experience, community understanding, relationships with users, relationships with supervisors, reflection, and the meaning of care. Regarding research on the development process of *kaigokan*, Yoshida et al. [8] indicated that “as students progress through their years of training, the knowledge, techniques, and attitudes that comprise their *kaigokan* become more varied” [p.43]. Further, Kimura [9] stated that *kaigokan* “is always being reconfigured as a result of a student’s experience and possesses an indeterminable quality” [p.13]. As *kaigokan* is impacted by caregiving education and experience and changes every year, emphasis has been placed on educational practices that facilitate the development process of *kaigokan*.

However, research on *kaigokan* has been cross-sectional thus far [4–7, 9], and, to the best of the authors’ knowledge, there are no longitudinal studies covering freshman to senior year. While a cross-sectional study is conducted at a specific time, a longitudinal study is conducted over an extended period, suggesting that the development of *kaigokan* for this four-year degree has not been previously studied. Considering that the development of *kaigokan* is clearly presented in the new curriculum, clarifying its concrete development process through a longitudinal study can benefit the training and education of certified care workers, leading to qualitative improvements in caregiving.

Features of the curriculum at Nihon Fukushi University

Nihon Fukushi University provides students with the qualifications required for the National Examination for

Certified Care Workers and Certified Social Workers through a four-year program. The first two years consist primarily of certified care worker training courses, and the remaining comprises certified social worker training courses.

A certified care worker, as defined in the Certified Social Worker and Certified Care Worker Act (Act No. 30 of 1987), has expert skills and knowledge and uses the appellation “certified care worker” to engage in the business of providing care for individuals with physical disabilities, mental disorders, or intellectual disabilities that make it challenging to lead a regular life (including conduct necessary for the daily routine of a person, such as mucus aspiration, exercised under the direction of a medical doctor and limited to services provided in the ordinance of the Ministry of Health, Labour and Welfare). Certified care workers also provide instructions on caregiving to the individual and their caregiver (such as family or a spouse). Based on the same law, a certified social worker has expert knowledge and skills and uses the appellation “certified social worker” to provide advice, guidance, or welfare services in consultations about the welfare of persons with physical disabilities, mental disorders, or intellectual disabilities and persons facing difficulty in leading a normal life due to environmental factors. Social workers are also often engaged in the business of communicating and coordinating with and providing assistance to doctors, other health and medical service providers, and other related parties.

MATERIALS AND METHODS

Participants

Participants were 23 students enrolled in the care work course at Nihon Fukushi University from 2018 to the 2021 academic year. Those who repeated a year or withdrew from school were excluded.

Survey method

Questionnaire surveys were administered to the same students five times to observe changes in *kaigokan* across a four-year period. Students were provided both verbal and written explanations of the study’s purpose and methods in advance, and those who provided consent were tasked with completing the open-ended questionnaires. In years one and two, the survey items were: (1) outlook on caregiving, (2) comparison between before enrollment and present, and (3) triggers of change. Participants also described their

kaigokan after the care practicum III in year two. In years three and four, the survey items were the following: (1) what caregiving is to you, what you want to emphasize in caregiving, and your thoughts and impressions of caregiving;

(2) experiences or circumstances from which your ideas about caregiving sprouted (what caused them); (3) changes to the *kaigokan* summarized at the end of care practicum III (Table 1).

Table 1. Practicum stages and survey stages

Academic year	First semester	Second semester
First year	Survey: (1) July	Care practicum I: September Care practicum II: February
Second year	Survey: (2) July	Care practicum III: September Survey: (3) December
Third year	Certified social worker practicum A: August	Survey: (4) September Certified social worker practicum B: February
Fourth year		Survey: (5) November

Analysis method

Text mining was used to obtain factors related to caregiving from free response data. Outlook on caregiving in each academic year was compared and examined based on the categories extracted from the co-occurrence network. Text mining used KH Coder 3. Beta.03i software [10].

The students' free responses were input as text data while ensuring that the typographical errors and omitted characters were corrected, and students' varied ways of referring to care users were standardized to "user." The corrected text data underwent preprocessing in the KH Coder.

Preprocessing is an operation that distinguishes extracted terms automatically, classifying them based on the part of speech they represent, using morphological analysis. Morphological analysis is the smallest unit of a word that has meaning (natural language processing) and words (language), excluding particles and auxiliary verbs. Extracted terms appearing at a high frequency in the text data were connected by lines to create diagrams known as co-occurrence networks that illustrate the strength of interconnections through a web. Owing to differences in the number of descriptions in text data, the minimum frequency of the appearance for extracted terms was adjusted for each year. Specifically, the minimum term frequency was

10 for years one and two (before care practicum), 20 for year two (after care practicum III), and two for years three and four. The maximum frequency was set to 60 instances. Subcategories and categories were generated with attention to extracted terms and the context surrounding them.

Ethical considerations

This research was conducted following the official regulations of the Nihon Fukushi University ethics committee for research involving human subjects, Aichi, Japan in October 2017 (17-24). The survey form clarified that participants' free responses would not be used for any purpose outside of the study. Participant consent was confirmed through the submission of a completed consent form.

Definition of terms

In this study, *kaigokan* was defined as "what a care worker wants to emphasize in caregiving or thoughts and impressions of caregiving" (here, thoughts represent beliefs or values).

RESULTS

Of the 23 students, 7 were male (30.4%), and 16 were female (69.6%). Subcategories and categories were generated while reviewing the subgraph terms extracted from the co-occurrence networks and their surrounding context (Table 2)¹.

Table 2. Categories and subcategories for each survey

Category Year	Caregiving basics	Caregiving perspective	Interpersonal helping perspective
	Subcategory		
First year	a) Basic knowledge of caregiving	<ul style="list-style-type: none"> a) Learning on campus (assignments) b) Striving for care c) Noticing a change since enrollment d) Accumulating everyday experiences e) Learning the importance of communication and observation f) Understanding needs g) Understanding the necessity of support methods h) Considering <i>kaigokan</i> 	
Second year (before care practicum III)	a) Integration of knowledge and skills	<ul style="list-style-type: none"> a) Learning in practicums b) Learning an individualized care perspective c) Taking an interest d) Taking on the worldview of dementia e) Getting to know the user that one is working with f) Building trusting relationships g) Assessment h) Spend time socializing at institutions i) Responding according to needs 	
Second year (after care practicum III)	a) Reflection	<ul style="list-style-type: none"> a) Learning in practicums b) Learning from staff members c) Using easy-to-understand language d) Being able to reach mutual understanding e) Creating moments of light-heartedness f) Developing communication skills g) Having respectful interactions h) Observation i) Providing company in patients' final days j) Addressing needs 	
Third year	a) Ethics	<ul style="list-style-type: none"> a) Absorbing an individualized care perspective b) Support of remaining function c) Participate in engaging and fun experiences for patient d) Empathize with feelings e) Being compassionate f) Taking on the user's worldview g) Respecting patients' dignity 	<ul style="list-style-type: none"> a) Life space b) Thinking about support quality c) Interpersonal helping
Fourth year	a) Support that meets needs	<ul style="list-style-type: none"> a) Bringing about smiles in daily interactions b) Learning how to provide appropriate care c) Creating a lifestyle suited to the individual d) Individualized support grounded in dignity 	<ul style="list-style-type: none"> a) Supporting one another

¹Terms are written in double angle brackets «», subcategories in square brackets [], and categories in curly brackets {} for each survey results.

First year (first survey)

A total of 12,739 terms were extracted. Extracted terms included user (149 instances), before enrollment (26 instances), *kaigokan* (20 instances), care worker (20 instances), and 49 other terms with at least two instances. Fourteen terms from subgraphs extracted from the co-occurrence network, including «care», «use», «consider», «colleague», «learn», «enrollment», and «before», described outlook on caregiving before enrollment and learning basic knowledge of everyday support skills and technical terminology after college enrollment. Therefore, one subcategory, a) [basic knowledge of caregiving], was extracted and included in the category {caregiving basics}.

Subsequently, eight subcategories were extracted and included in the category {caregiving perspective}. These subcategories were as follows: a) [learning on campus (assignments)], derived from eight terms, including «lecture», «lab», and «assignment»; b) [striving for care], derived from eight terms, including «self» and «strive»; c) [noticing a change since enrollment], derived from the two terms «a little» and «notice»; d) [accumulating everyday experiences], derived from the two terms «daily» and «watch»; e) [learning the importance of communication and observation], derived from four terms, including «communication» and «observation»; f) [understanding needs], derived from the two terms «needs» and «occupation»; g) [understanding the necessity of support methods], derived from the two terms «method» and «necessary»; h) [considering *kaigokan*], derived from four terms, including «present» and «*kaigokan*».

Second year (before care practicum III: second survey)

In the second round of surveys, a total of 20,081 terms were extracted. Extracted terms included user (205 instances), trusting relationship (19 instances), care worker (19 instances), and 62 other terms with at least two instances each. Ten terms from subgraphs extracted from the co-occurrence network, including «care», «use», «consider», «independence», «person», and «self», described learning by personally experiencing knowledge learned on campus through care practicums. Therefore, one subcategory, a) [integration of knowledge and skills], was extracted and included in the category {caregiving basics}.

Subsequently, nine subcategories were extracted and included in the category {caregiving perspective}. These

subcategories were as follows: a) [learning in practicums], derived from the two terms «practicum» and «learn»; b) [learning an individualized care perspective], derived from fourteen terms, including «aid» and «perform»; c) [taking an interest], derived from five terms, including «now» and «disability»; d) [taking on the worldview of dementia], derived from the two terms «cognition» and «world»; e) [getting to know the user that one is working with], derived from the two terms «partner» and «know»; f) [building trusting relationships], derived from the two terms «trusting relationship» and «build»; g) [assessment], derived from five terms, including «impression» and «behavior»; h) [spend time socializing at institutions], derived from four terms, including «smile» and «fun»; i) [responding according to needs], derived from the two terms «needs» and «environment».

Second year (after care practicum III: third survey)

A total of 31,552 terms related to *kaigokan* were extracted in year two (after care practicum III), including user (395 instances), care worker (57 instances), trusting relationship (42 instances), and 149 other terms with at least two instances. Nineteen terms from subgraphs extracted from the co-occurrence network, including «care», «use», «consider», «living», «support», «important», and «learn», described upon reflecting after personally experiencing care practicums. Therefore, one subcategory, a) [reflection], was extracted and included in the category {caregiving basics}.

Subsequently, ten subcategories were extracted and included in the category {caregiving perspective}. These subcategories were as follows: a) [learning in practicums], derived from eight terms, including «practicum» and «older adult»; b) [learning from staff members], derived from the two terms «staff» and «together»; c) [using easy-to-understand language], derived from the two terms «word» and «understand»; d) [being able to reach mutual understanding], derived from three terms, including «convey» and «intention»; e) [creating moments of light-heartedness], derived from three terms, including «conversation» and «listen»; f) [developing communication skills], derived from the two terms «communication» and «language»; g) [having respectful interactions], derived from the two terms «thought» and «relationship»; h) [observation], derived from three terms, including «smile» and «watch»; i) [providing company in patients' final days], derived from the two terms «final days» and «accompany»;

j) [addressing needs], derived from three terms, including «needs» and «understanding».

Third year (fourth survey)

A total of 1,802 terms were extracted, including user (30 instances), care worker (5 instances), carer (3 instances), and 9 other terms with at least two instances. The four terms «care», «use», «consider», and «important» from the subgraphs extracted from the co-occurrence network described the ethical behavior of approaching care recipients as individuals rather than as care users. Therefore, one subcategory, a) [ethics], was extracted and included in the category {caregiving basics}.

Subsequently, seven subcategories were extracted and included in the category {caregiving perspective}. These subcategories were as follows: a) [absorbing an individualized care perspective], derived from twelve terms, including «interact» and «body»; b) [support of remaining function], derived from five terms, including «support» and «residual»; c) [participate in engaging and fun experiences for patient], derived from the two terms «together» and «time»; d) [empathize with feelings], derived from the two terms «feelings» and «accept»; e) [being compassionate], derived from the two terms «compassion» and «kind»; f)

[taking on the user's worldview], derived from three terms, including «partner» and «world»; g) [respecting patients' dignity], derived from fourteen terms, including «awareness» and «precious».

Finally, three subcategories were extracted and included in the category {interpersonal helping perspective}. These subcategories were as follows: a) [life space], derived from seven terms, including «living» and «spend»; b) [thinking about support quality], derived from three terms, including «quality» and «impression»; c) [interpersonal helping], derived from six terms, including «life» and «difficult».

Fourth year (fifth survey)

A total of 1,599 terms were extracted in the final survey, including user (30 instances), individualized support (3 instances), people (2 instances), each person (2 instances), and care worker (2 instances). There were five extracted terms with at least two instances. The seven terms «care», «use», «consider», «living», «support», «important», and «needs» from the subgraphs extracted from the co-occurrence network described practicing support as a care professional that meets the care users' needs. Therefore, one subcategory, a) [support that meets needs], was extracted and included in the category {caregiving basics} (Figure 1).

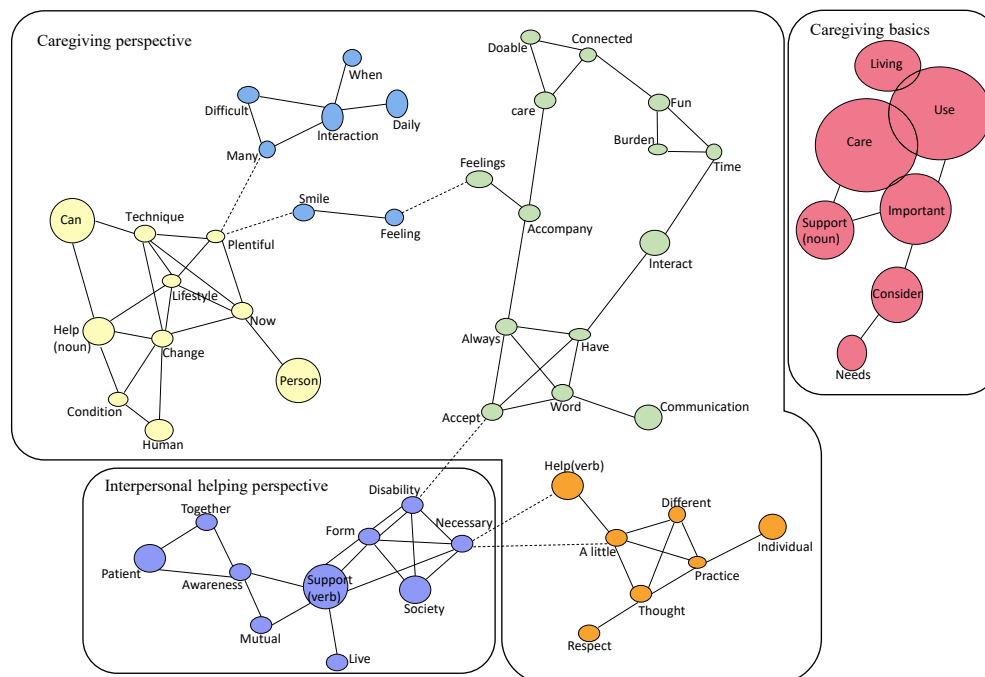


Figure 1. Fourth year co-occurrence network

Subsequently, four subcategories were extracted and included in the category {caregiving perspective}. These subcategories were as follows: a) [bringing about smiles in daily interactions], derived from seven terms, including «daily» and «when»; b) [learning how to provide appropriate care], derived from fourteen terms, including «communication» and «word»; c) [creating a lifestyle suited to the individual], derived from ten terms, including «person» and «lifestyle»; d) [individualized support grounded in dignity], derived from seven terms, including «respect» and «thought».

Finally, one subcategory was extracted and included in the category {interpersonal helping perspective}. This subcategory was a) [supporting one another], derived from ten terms, including «support» and «live».

The categories {caregiving basics} and {caregiving perspective} were most common across all years, while {interpersonal helping perspective} was typical in years three and four.

DISCUSSION

No longitudinal studies exist for *kaigokan* in Japan from enrollment in a four-year college. To observe changes in the *kaigokan*-development process of students across four years, this study administered five questionnaire surveys and obtained factors related to caregiving using text mining. The results demonstrated that with each year, students cultivated an impression of caregiving, built upon caregiving basics and developed and strengthened their caregiving and interpersonal helping perspectives through the experience of their learning of practicums on campus and reflecting on those experiences.

{Caregiving basics}

In the first year, students obtain primary knowledge of skills and information on caregiving through on-campus lectures and practical exercises. In the second year, students' basic knowledge is integrated through care practicum I and II and contemplation on their experience after completing care practicum III. Further, in the third year, certified social work courses help shift their perspective from viewing people who need assistance as care users to interact with them as individuals, thereby cultivating an ethical perspective. Finally, in the fourth year, students consider the support that meets care user needs at the practical level as caregiving professionals.

{Caregiving perspective}

In the first year, students' outlook on caregiving is transformed by learning basic caregiving knowledge and skills and identifying the challenges they will personally experience when implementing their learnings. [accumulating everyday experiences] is considered crucial in facilitating appropriate interactions with care users in future practicums. Further, [striving for care]—the quality of care work one aims to achieve—was extracted as an impetus for considering *kaigokan*. Mase et al. [11] state that “students are impacted by their various classes, and this brings about changes in their thinking and outlook” and that “the fundamental outlook necessary for *kaigokan* development is gradually formed through classes” [p.50]. The results for year one demonstrated that primary knowledge and skills for caregiving are cultivated through on-campus learning after enrollment.

For the second year (before care practicum III), learning from care practicums I and II were extracted. Students personally experience the things they learned on campus through care practicums. They learn that [taking an interest], [taking on the worldview of dementia], [getting to know the user that one is working with], and [responding according to needs] are vital for an [learning an individualized care perspective], [building trusting relationships], and [assessment]. Yokoyama et al. [12] state that “it can be said that a fundamental part of a student's *kaigokan* is gradually developed through study, including practicums” [p.36]. By personally experiencing care practicums, students can perform actions to form their understanding of care users rooted in their on-campus learning.

In the second year (after care practicum III), students receive advice from staff members regarding their responsibility toward care users during their care practicum III and practice and develop the care process, leading to the extraction of [learning from staff members]. Subsequently, with an awareness of [using easy-to-understand language], [being able to reach mutual understanding], and [having respectful interactions] based on learning from year two (before care practicum III), students deepen their practice for [developing communication skills] suited to each care user to providing [creating moments of light-heartedness]. Mizutani et al. [6] state that “the accumulation of internal personal experiences and the accompanying opportunities for reflection are

essential" [p.7] for the development of *kaigokan*. The results for year two demonstrated that accumulating care practicum experiences and self-reflecting after practicum completion led to a strengthening of *kaigokan*.

In the third year, students take a certified social worker course, practicum A, and the [learning an individualized care perspective] from year two (before care practicum III) progresses to an [absorbing an individualized care perspective], which includes [support of remaining function]—paying attention to care users' latent ability or what they can do. Further, participants change their wording from [taking on the worldview of dementia] to [taking on the user's worldview] demonstrating an expanded concept of care users. [Being compassionate] and [empathize with feelings] were added to [developing communication skills], showing a deepening of the affective domain. Students' perspectives also evolved from care workers simply creating [creating moments of light-heartedness] to spending [participate in engaging and fun experiences for patient] with care users. The importance of interacting with care users, not as subjects but as unique individuals, led to the cultivation of a perspective of [respecting patients' dignity]. By studying the certified social worker curriculum, students expanded and strengthened their caregiving perspective while reflecting on what they had studied in the certified care worker curriculum.

In the fourth year, students present what they have learned in college to students in the lower years, reaffirming what they have learned thus far and integrating the words described in years one through three. Students can also earnestly contemplate the caregiving perspective through care work research in the fourth year, leading to students refining their *kaigokan*. Yoshida et al. [8] analyzed *kaigokan* from the second year onward as an evaluation of the effectiveness of caregiving training. Their analysis demonstrates that students grow as care professionals as they progress through their years of training. Similarly, students accumulate and reflect on practical experiences built upon their on-campus learning as they advance in the year and thereby expand and strengthen their *kaigokan*.

{Interpersonal helping perspective}

In the third year, the three subcategories [life space], [thinking about support quality], and [interpersonal helping] were extracted, while only one subcategory, [living in support of

one another], was extracted in the fourth year.

During the third year, students strengthen their understanding of care users living in the community and an expanded view of users' life space through lectures presented as part of the certified social worker curriculum and consultation and assistance practicums with organizations such as community comprehensive support centers and social welfare councils. Niwa et al. [13] stated that students viewed the life space of care users more broadly by learning about the facilities and organizations where certified social workers serve. They understand the duties and roles that social workers are responsible for in those facilities and organizations and experience practical training compared to at the end of a care practicum. The three subcategories of [life space], [thinking about support quality], and [interpersonal helping perspective] extracted in this study aligns with this finding.

During year four, students understand that care users, previously in a position of contributing to and supporting society in a certain way, can now receive support in the form of care due to illness or disability. Thus, their impression of care expands to the life-long level—it expands to the concept that care is [supporting one another]. Similar to the caregiving perspective, interpersonal helping was primarily the process of deepening care to the level of mutual relationships.

Limitations and future recommendations

This study is the first longitudinal research of *kaigokan* from an enrollment in a four-year college in Japan. However, this study has the following two limitations. First, individual student backgrounds were not surveyed in detail. Specifically, the study did not examine whether students had caregiving or volunteer experience at a care facility before enrollment in Nihon Fukushi University or consider the type of facility at which students participated in care practicums after enrollment. Second, participants were limited to students studying caregiving at Nihon Fukushi University; therefore, it is difficult to generalize the present findings.

To address these limitations, we recommend that future research include detailed investigations of factors that influence *kaigokan* and a generalization of the *kaigokan*-development process with appropriate consideration of the differences in the curriculum at each certified care worker training facility.

CONCLUSION

In the first year of their training, students in the care worker program developed a knowledge-level foundational perspective on caregiving from on-campus learning. In their second year, the curriculum integrated knowledge and skills through care practicums, and *kaigokan* was developed through reflection. Further, in their third year, students developed an ethical perspective on caregiving through the program curriculum. Finally, in the fourth year, *kaigokan* is internalized substantially; therefore, it remains with them throughout their lives.

These results illuminate the process of *kaigokan*-development through a four-year college degree course. Specifically, they show that with each year, students cultivate a foundation of caregiving basics and develop and deepen their perspectives on caregiving and helping others through on-campus learning, hands-on experience in practicums, and reflection. Accordingly, recognizing their *kaigokan* in the second year led to further structuring of *kaigokan* in the third and fourth years. This is extremely crucial for the quality of their education and caregiving.

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AUTHOR CONTRIBUTIONS

H.F. and K.T. substantially contributed to the study conceptualization. All authors executed the data collection. K.T. developed the statistical analysis plan, and H.F. conducted the statistical analyses. H.F., K.T., and J.K. contributed to the interpretation of the results. H.F. and K.T. drafted the original manuscript. K.T. supervised the conduct of this study. All authors reviewed the manuscript draft and revised it critically on the intellectual content. All authors approved the final version of the manuscript to be published.

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