Teaching-Research Nexus of Teacher Educators in Myanmar:
Perceptions and Practices

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Abstract: Although teaching and research are at the forefront of the multiple roles of teacher educators, studies on their interrelations remain limited. This study explores the teaching-research nexus patterns of teacher educators in Myanmar to answer the following research questions: i) How do teacher educators perceive the link between their teaching and research? and ii) How do their research practices demonstrate this link? Data were drawn from semi-structured interviews with eight teacher educators working at a leading university of education in Myanmar and their research articles. Thematic analysis revealed a firm belief that research reinforces teacher educators' teaching. Perceiving themselves as practitioners and educational researchers, they conducted their research activities to improve their teaching and develop teacher education and the field of education in general. They were satisfied with their improved practices and believed their student teachers would apply the research-based knowledge they imparted. Still, they wished their research to have a greater impact by going beyond individual-level practices to the policy level. Furthermore, the data revealed three main patterns of practices: "integrating research-based knowledge with teaching content," "researching as a practitioner researcher and research-informed practices," and "researching as an educational researcher." Teacher educators' perceptions and practices of the teaching-research nexus indicated their hybrid researcher identity as practitioner researchers and educational researchers. Overall, by adding insights drawn from research practices in a teaching-oriented education university context, this study enriches our understanding of the teaching-research nexus of teacher educators. Based on the findings, the study suggests that an association between teaching and research exists in teaching-oriented teacher education. It also offers recommendations for policymakers and individual teacher educators so that the teaching-research nexus can be strengthened.

Key words: teaching-research nexus, teacher educators, Myanmar

1. Introduction

As teaching and research are two fundamental functions of universities in many countries, the relationship between university faculty members' teaching and research has occasioned a long-standing debate (Uaciquete & Valcke, 2022). Various scholars have used different perspectives on the concept of the teaching-research nexus. It relates to undertaking practice-based research on teaching pedagogy and methods (Czerniawski et al., 2017); furnishing teaching practices based on research findings (la Velle & Flores, 2018); connecting the use of academic resources to professional learning (Cochran-Smith et al., 2020); or developing new concepts or theories based on research findings (la Velle & Flores, 2018).

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Research in varied contexts has yielded contradictory results about the association between teaching and research. Several scholars have claimed a synergistic relationship between teaching and research (e.g., Tight, 2016), while others have reported no statistical correlation between university teachers' research capabilities and teaching performance, arguing that teaching and research could be separate activities or even impede each other (e.g., Hattie & Marsh, 1996).

Like the other university academics, teacher educators are obliged to multitask, with teaching and research as their main tasks (Boyd & Szplit, 2017). Some scholars assert that the association between teacher educators' teaching and research improves their teaching and overall work performance as teacher educators (Cao et al., 2019; Leite et al., 2023). Their research not only enhances their professionalism by upgrading their professional knowledge and practices but also gives rise to values for the improvement in teacher education, in particular, and education, in general. Teacher educators' research and teaching are viewed as mutually linked (Borg & Alshumaimeri, 2012). As practitioner researchers, teacher educators undertake researching on their teaching for further improvements in their professional practices. Furthermore, their teaching practices in classrooms serve as data sources for their research (Borg & Alshumaimeri, 2012). Involving their students in research is also beneficial since it can facilitate their learning to be teachers and inspire them as an educational researcher (Cochran-Smith, 2005).

Scholars have recently examined teacher educators' research and how they meaningfully associate it with their teaching (MacPhail et al., 2019). Furthermore, scholars such as Leite et al. (2023) noted the need to foster the linkage between teaching and research both conceptually and as implemented in teacher education. Although teaching and research are recognized as forefront among the multiple roles of teacher educators (Boyd & Szplit, 2017), few studies have investigated how these two responsibilities are related. These few studies identified teacher educators' self-reported ways of teaching and the forms of linkage between their research and teaching (Cao et al., 2019, 2023; Gutman, 2021). Research is thus needed on how this link is implemented in reality (Cao et al., 2019). Although some have debated the value of research at teaching-focused universities, it is important to study the connection between teaching and research at such universities (Hu et al., 2014). As Cao et al. (2023) suggested, understanding how teacher educators perceive and implement the linkage between their teaching and research can help foster it. Research in this study covers all types of research activities that teacher educators undertake, including practitioner research for further improvements in their professional practices, academic research for the augmentation of their expertise in their teaching subject, and/or educational research on teacher education or education in general for the improvements in a wider educational system (Pollard, 2006).

1.1 Purpose of the study

This study explores how teacher educators in Myanmar perceive and practice the link between their teaching and research. This study is guided by the following two research questions.

1. How do teacher educators perceive the link between their teaching and research?
2. How do their research practices demonstrate this link?

1.2 Study context

In Myanmar, basic education covers education in primary (KG + Grades 1–5), middle (Grades 6–9), and high schools (Grades 10–12). Teacher education is mainly the responsibility of state-funded public universities and colleges. Under the Ministry of Education's (MOE) guidance, two universities of education (UOE) provide teacher education programs for high school teachers, and 25 education degree colleges (EDCs) offer primary and middle school teacher education programs. UOE have bachelor's, master's, and doctoral programs, while EDCs have bachelor's and diploma programs for teacher trainees with their first degrees. In either case, teacher educators are recruited permanently as civil servants. In Myanmar, teaching is the major responsibility of university teachers and teacher educators

alike. The career path of teacher educators at UOE and EDCs is linear from tutor to assistant lecturer, to lecturer, to associate professor, and to professor. The recent policy sets years of teaching experience and academic qualifications as the main criteria for promotion (MOE, 2022). Although the MOE has provided research funds to promote research by university faculty and teacher educators (MOE, 2016), Myanmar's universities have lacked well-defined research functions or focus on research (Lall, 2021) and faced several challenges including inadequate resources for research, such as updated international books and journals, and laboratories (Lall, 2021).

This study was conducted in a leading teacher education institution in Myanmar. Historically, the studied university used to be the Institute of Education since 1964 and became a university in 2014. Until now, it has served as a professional university that mainly prepares high school teachers. Compared to universities in international contexts which generally have a great focus on research functions, this university can be categorized as a teaching-oriented university, as it lacks well-defined research functions. Furthermore, both the recruitment and promotion of teacher educators fail to consider their research activities as explained above. Nevertheless, this UOE registered several international research collaborations and research projects with the MOE in the Fiscal Year 2022–2023 (UOE, 2023), reflecting the willingness and efforts of Myanmar's academics to engage in research. Then, an interesting question worthy of exploration can be how teacher educators at a teaching-oriented university engage in research and connect it with their teaching.

2. Literature Review

Scholars have extensively discussed contradictory views of the relationship between teaching and research. One the one hand, several scholars argue that research can enhance the effectiveness of teachers' teaching. For instance, university academics who are more active researchers tend to deliver more advanced and updated knowledge during their teaching (e.g., Tight, 2016). On the other hand, teachers' teaching and research have been reported to be uncorrelated or negatively correlated in some cases (Hattie & Marsh, 1996; Lubbe & Duff, 2020). For instance, university teachers' research and teaching could be competing activities because they, as university teaching staff, must teach and simultaneously conduct research for their promotion (Geschwind & Broström, 2015).

Uaciquete and Valcke's (2022) systematic review found teaching and research to be statistically less connected in most quantitative research, while the value of research and a positive correlation between teaching and research were reported in qualitative studies. Specifically, the relation appeared more unidirectional, underlining the merits of research for teaching but not vice versa. However, Cao et al. (2023) claimed that despite no statistical impact of the teaching-research linkage on teachers' teaching approaches, research synergistically reinforces teaching.

University academics may also hold a wide range of opinions on the association between teaching and research. For instance, the Portuguese university teachers in the study of Farcas et al. (2017) believed in a mutually supportive relationship, though some professors expressed their concerns about the negative aspects of the link that may arise when teachers' research interests are overweighed in deciding the curriculum.

Teaching and research may also be related in diverse ways. Neumann (1992) discussed three major forms of connection: tangible, which is visible in terms of transmitting research findings from teacher to learners (students); intangible, which is implicitly connected by reinforcing students' learning and/or research skills; and global, which goes beyond the individual level practices, helping improve the departmental-level or program designs. Similarly, Brew (2012) noted that teachers can associate their research and teaching by transmitting research-based knowledge to facilitate students' learning about the teaching content. Healey (2005) proposed four forms of the teaching-research linkage: In

the research-led form, the teacher transmits the knowledge derived from research and students are just the knowledge recipients; in the research-oriented form, the teacher teaches students research methodologies or the research process; in the research-tutored form, the teacher supervises students' research and mentors them in writing research articles; and in the research-based form, the teacher and students co-research, co-author, and interact horizontally in the learning process. The author claimed that the connection between teachers' research and teaching can take various forms, as demonstrated by other scholars (e.g., Leite et al., 2023; Li et al., 2020).

In the field of teacher education, researchers have recently investigated how teacher educators perform their teaching and its association with research. Chinese teacher educators' teaching approaches and the linkage with their research were studied by Cao et al. (2019) by employing an inventory to examine teaching approaches. The authors reported that most teacher educators viewed their teaching and research as related. However, some expressed concerns about the obstructing impacts of research activities on their teaching performance, especially if their research and teaching foci differed. The authors also noted that the teacher identity, rather than that of a researcher, is more likely to appeal to those with more teaching-focused responsibilities (Cao et al., 2019). A later study (Cao et al., 2023) explored how Finnish teacher educators associate their teaching and research and how this association supports their teaching. The survey results revealed that combining research with teaching content was the most commonly reported linkage, while combining research with pedagogical approaches and doing inquiry-based research in teaching were less observed (Cao et al., 2023).

The study of Li et al. (2020) in Hong Kong, through classroom observations and an interview with one professor teaching in a Master of Education program, found that all four of Healey's (2005) types of teaching-research nexus were present and interwoven. The authors also discussed how the professor educated their students to be researchers and taught them as a productive researcher. Similarly, through email internet interviews with 56 Portuguese professors working in initial teacher education programs, Leite et al. (2023) showed that different forms of the teaching-research nexus could exist. The authors argued that the nexus is beneficial for the professional development of teacher educators since as a kind of professional empowerment, it affords possibilities to improve their professional practices.

Gutman (2021) studied Israeli teacher educators' implementation of the teaching-research nexus. Drawing on the narratives of nine senior teacher educators, three types of agencies were reported: i) "agency of research insights into the educational field, ii) agency of reflective practitioning, and iii) agency of cross-cultural research and agency of comparative research as [a] method" (p. 7). In the first type, student teachers are expected to be agents of change by implementing research insights in basic education schools; in the second type, teacher educators apply their research insights in designing their teaching pedagogies and cultivating student teachers to become reflective teachers; and in the last, teacher educators perceive themselves as agents to accelerate student teachers' learning. Specifically, to develop a holistic understanding of an educational phenomenon, teacher educators examine cultural and individual differences comparatively for an audience of student teachers. The authors concluded that the revealed different patterns of the nexus contribute to fostering academic research and to the improvement of educational field in general.

Overall, previous studies have investigated teacher educators' teaching approaches to find a variety of connection patterns between their teaching and research, although the relationship has appeared sometimes contradictory. Most of the reviewed studies were undertaken in research-focused university contexts where teacher educators' research outputs are required to survive as university teachers (e.g., Cao et al., 2019, 2023; Li et al., 2020); as such, the context of teaching-oriented university is worth studying. Moreover, research has mainly focused on teachers' teaching approaches through self-reported teaching inventories or classroom observation and interviews. This study instead focuses on teacher educators' interview excerpts and research articles to explore their teaching-research nexus patterns.

3. Research Methodology

In this exploratory qualitative study, data were mainly drawn from semi-structured interviews and analysis of research articles authored by teacher educators. Study participants were purposively selected by an intensity sampling technique to draw in-depth knowledge from information-rich participants (Teddlie & Yu, 2007). The present researcher approached 46 teacher educators with experiences in individual or collaborative research and with publications in local or international journals, of whom eight agreed to participate. This ensured that participants had worked as both teachers and researchers in educating teachers. Due to the current political crisis in Myanmar, physical interviews could not be arranged; hence, online interviews were conducted through the Zoom platform from March to May 2023. Interviews took 30–45 minutes for each participant. In the perception section, the participants' perceptions of their roles as teachers and researchers, their ideas about the connection between teacher educators' research and teaching, and the benefits of their research in educating teachers, were asked. In the practice section, they shared their research practice experiences (study titles, research purposes, study participants, and the research methods used) and how they practically connected their research to their teaching. Informed consent was obtained from every participant. This study obtained the approval by the Research Ethics Review Committee of Hiroshima University. All were female participants, reflecting the predominantly female teaching workforce in Myanmar. In the studied university, 91.84% of the academic staff were female as of April 2023. Six participants held doctoral degrees, while two had master's degrees. They were 32–57 years old, and their work experience as teacher educators ranged from 3–19 years.

Furthermore, a review of 23 research articles authored by the selected teacher educators (2–5 articles per participant) was carried out to complement the analysis of the teaching-research nexus patterns. This type of document analysis is valuable to better comprehend the research interest, which is how teacher educators' teaching and research are associated. The review particularly paid attention to the research themes, research purposes, and study participants of the teacher educators. Thematic analysis then determined the patterns of teacher educators' research and teaching linkages. First, data from interviews and documents (research articles) were subjected to open coding, resulting in 21 and 27 codes in the perception and practice sections, respectively. The 7 (in the perception section) and 8 (in the practice section) categories were refined to generate the main themes relevant to the research purpose and questions. This resulted into two main themes, "research to reinforce teaching" and "research to solve issues in education," in the perception section and three main patterns in teacher educators' practices, "integrating research-based knowledge with teaching content," "researching as a practitioner researcher and research-informed practices," and "researching as an educational researcher." The process of data analysis and generation of finalized themes were shared with a critical colleague doing research in the same field to enhance the reliability of this study. The detailed results and a comparison with previous literature are discussed in the next section.

4. Findings and Discussion

4.1 Perceptions
4.1.1 Research to reinforce teaching

All participants considered that their core responsibility is teaching. They also considered that being a researcher is one of their roles as teacher educators at a university. Seven of the eight participants stated that their teaching and research were related. Some teacher educators at a research-focused university expressed concerns about research hindering their teaching performance in a prior study (Cao et al., 2019). However, no participant in this study reported such concerns,

perhaps because teaching and research were not competing activities in this study's context. Respondents reported that their research supported their teaching by strengthening their expertise in teaching content and pedagogical skills, enhancing their confidence as teacher educators. This finding is consistent with previous studies reporting a unidirectional relation between teaching and research, with research supportive of teaching (Uaciquete & Valcke, 2022). This is probably because teacher educators are more likely to focus on the benefits of their teaching in line with the teaching-oriented context of their work. For example, two participants in the current study stated:

> *"I think so because when teacher educators know the research findings either from their own research or their supervised students' research, they can apply them in their teaching. That is beneficial, I think."* (TE7)
>
> *"When we do research, we have to learn very intensively about everything related to our research, so while doing research and after examining a particular research topic, it increases my confidence in my teaching. For example, when I have to explain a word in my teaching, I have a lot to share with my students. So, research is connected to my teaching, and it supports my teaching."* (TE1)

Specifically, when they taught their students about research, they perceived that their research knowledge was essential for their teaching. From the perspective of responents, research-based knowledge either from consuming input about research methodology or drawing from their own research experiences help them in educating their students (especially those at the graduate level and final year of the undergraduate level) as researchers. This reflects the research-oriented teaching noted by Healey (2005), who mentioned that teachers teach the research methodology and process to students. For instance, TE2 and TE4 gave detailed accounts of their perceptions of how teacher educators' research contributes to teaching students to become researchers and to supervising the latter's research.

> *"Yes, teaching and research are related because in our university, we need to teach students in master's and PhD programs. Actually, in BEd programs, too, we teach about research, so I think research is connected to our teaching."* (TE2)
>
> *"Our teaching in our university is always connected with research. Even when teaching bachelor's degree students, we train them to be able to do research, to search literature, to collect data, and to analyze data… For master's and PhD levels, we intensively train them for research. For us, teacher educators are always engaging in research, since we supervise our students' research and we have to think deeply and give instructions and supervision during our students' research…"* (TE4)

4.1.2 Research to solve issues in education

Many respondents perceived that as teacher educators at a leading education university, their research sought the most suitable ways to solve educational issues. However, although they believed they could connect their research to educating teachers to some extent, they felt that their findings were not widely used in the program or at the national level and wished they could broaden the boundary of that connection. Many teacher educators (TE1, TE2, TE4–TE8) illustrated their expectations that the contributions of their research could go beyond their teaching practices. Some participants noted:

> *"Since we are working in the field of education, our research is supposed to be connected with education in some way. It can be related to teachers or students, or teacher education or basic education or higher education… I think we are supposed to find out the current issues in our education… so if the findings can be applicable in real practices, I think it will contribute to the development of our education in some way…Meanwhile, research that we aim for the basic education, I don't think they apply those research practically there. Although we give suggestions based on our findings, those suggestions are not reachable to basic education level."* (TE1)
>
> *"I think our research findings surely produce value to us and our immediate environment among our colleagues, but I am not sure about the national-level benefit."* (TE2)

"By doing research, we can find the best ways to solve problems, and we have so much research being done about finding ways to solve issues in our education. We can share our findings with our students and colleagues, although I think it's better to share with other people associated with schools, like teachers, school principals, or township education officers." (TE4)

Thus, teacher educators perceived themselves as educational researchers and expected to have greater impacts at the teacher education program or national levels. This form of linkage is similar to what Neumann (1992) conceptualized as a global nexus, where implications of teachers' research go beyond their individual-level practices, and changes can happen in the entire teacher education or education system. Contrary to Cao et al. (2019), the respondents in this study perceived themselves as educational researchers despite teaching at a teaching-oriented university, perhaps because they taught at a leading UOE, where their perceived responsibilities were not only to nurture future teachers but also to educate education researchers for the country.

4.2 Practices

4.2.1 Integrating research-based knowledge with teaching content

Like Finnish teacher educators who combined research with their teaching content (Cao et al., 2023), in this study, teacher educators' research-based knowledge was integrated with their teaching content in training students as researchers and enriching the teaching content to prepare future teachers. The document analysis showed that teacher educators' research concerned classroom management, instructional technology, educational administration, intelligence, or personality related to topics in their teaching subjects. Most research articles (17 out of 23) involved theoretical research on their teaching content. Respondents reported sharing the insights of their research on basic education or teacher education with their students to enhance the latter's learning and for implementation when they became teachers. Participants noted:

"After I do research, unlike before, I no longer just translate sentences in the textbook. I have much more information and facts to share with my students. Those are that I have learned from participating in-depth in [the] research process... when I can share research findings related to our teaching topic, students can adjust their practices to them in the future when they become teachers." (TE4)

"I have also researched school principals' administrative support. We have those kinds of supports like tangible supports, and intangible supports, such as emotional support, in theory. So, from that research, I learned whether teacher commitment is increased if these kinds of supports are provided. Also, I learned how to improve teacher commitment. I share the knowledge from that research so that my students can understand the theory concretely." (TE5)

Drawing on Neumann (1992), this form of association is intangible, as the research-based knowledge developed by teacher educators is delivered to student teachers to accelerate the latter's learning. It is also consistent with Brew's (2012) assertion that teachers' advanced knowledge through research can enhance students' learning.

4.2.2 Researching as a practitioner and research-informed practices

Some participants (TE1, TE3, TE4, TE5, and TE7) demonstrated the teaching-research linkage patterns by engaging in inquiry-based research on their practices, albeit informally in most cases. For instance, when they encountered certain issues in their teaching or classroom practices and/or wanted to try different teaching techniques to improve the teaching-learning process, they usually engaged in classroom-based research. TE5 and TE7 provided detailed accounts of the same:

"We occasionally do small research, like when we want to change our teaching methods or use of activities or teaching materials in our classroom. But that research is not for publications or conference presentations... I do so in my classroom. There are around 80 students, so not many research participants. I do such classroom-based research when I find difficulties in my teaching. I try to identify students' needs and do research accordingly. But that is not big research." (TE5)

> *"Sometimes, in our classrooms, we try different teaching techniques or activities. For example, if we find that we use a particular activity and students are more active in their learning this year, we may consider using this activity like this next year. It is not like systematic research like we do using questionnaires, but it is on a small scale."* (TE7)

This research guided them in designing their teaching pedagogies. This is a tangible relation (Neumann, 1992) in which teacher educators can augment their teaching with knowledge drawn from research, including their own. It also aligns with what Gutman (2021) termed "agency as reflective practitioning" regarding the connection between Israeli teacher educators' teaching and research.

4.2.3 Researching as an educational researcher

According to Lunenberg (2010), besides research on their practices, the themes of teacher educators' research cover issues in teacher education or education in general. Indeed, this study's findings showed that teacher educators' research practices on educational phenomena were situated either in basic education or teacher education. Their research provided policy and practical recommendations for improvement in related researched area. Such patterns of linkage were witnessed in the research articles examined in this study. For example, their research participants were pre-service teachers at different teacher education institutions and also included school principals, schoolteachers, students, and parents. Of the 23 articles analyzed, 15, 7, and 1 concerned basic education, teacher education, and both, respectively. They conducted research on educational issues in the hope that their research findings would have greater impacts at a broader level beyond their practices. Some respondents noted:

> *"Based on our research findings, we wrote recommendations about what kind of changes should be made somewhere…"* (TE6)

> *"…in the previous departmental research, we studied and analyzed the extent of the involvement of principals and teachers in the implementation of a new curriculum in our basic education."* (TE8)

Li et al. (2020) reported similar sentiments by an education professor at a Hong Kong university. They explained that their education policy-related research went beyond the course's subject matter and how they conveyed the researcher identity to students. However, the authors did not explicitly discuss the professor's hope to have a greater impact at the policy and individual implementation levels.

5. Conclusion and Implications

This study explored the perceptions and practices of teacher educators at a teaching-oriented university in Myanmar while focusing on the teaching-research nexus. Participants perceived research as a means to improve their teaching practices and teacher education and education more broadly. They were satisfied with their improved professional practices and believed their student teachers would apply the research-based knowledge, although they hoped their research contributions could extend further. Specifically, perceiving themselves as educational researchers able to have larger impacts or inform policy, they hoped that schoolteachers and other stakeholders would apply their research findings. Their perceptions and practices of the teaching-research nexus in this study indicated a hybrid researcher identity as a practitioner researcher and an educational researcher. Although this study presents the teaching-research linkage patterns separately, one teacher educator can combine different patterns. This is consistent with prior research (Cao et al., 2023; Healey, 2005; Leite et al., 2023), showing that university teachers and teacher educators used several ways to connect their teaching and research.

This study can enhance our knowledge as well as practices. Its insights can be valuable not only to the study context but also to other countries, particularly in strengthening the teaching-research association and promoting teacher educators' professionalism in a wider sense, as this professional group, regardless of national context, shares common challenges and experiences in their endeavor

to fulfill their multiple roles (Cao et al., 2023; Gunn et al., 2016). Furthermore, this study revealed a unique finding related to the teacher educators' perceived role as educational researchers, contrary to previous researchers' assertion that the teacher identity is more likely to appeal to those with more teaching-focused responsibilities (Cao et al., 2019). Besides, by offering a detailed discussion of how teacher educators expect to have a greater impact to the policy-making level and a wider individual implementation level, this study expands our understanding from the previous literature, which reported similar sentiments of teacher educators going beyond the course's subject matter (Li et al., 2020). Moreover, by adding insights drawn from research practices in a teaching-oriented education university context, the study enriches our understanding of the teaching-research nexus of teacher educators. Studies of research-focused education university contexts (e.g., Cao et al., 2019, 2023) have discussed that the linkage between teaching and research can be enhanced in teacher education. This study contributes to this discussion by suggesting that an association between teaching and research exists in teaching-oriented teacher education. For practical implications, policymakers' awareness of the expectations of these teacher educators at the country's leading UOE may be beneficial. Individual teacher educators may also need deep reflections on their role as teacher educators to find ways to mediate the macro-level policy context and micro-level practices.

However, this study's scope is limited to teacher educators' perceptions and practices of the teaching-research linkage, mainly demonstrated in their research work. Their teaching approaches, which integrate their research and teaching practices, were not observed. Future work should both observe their teaching and analyze their research work. Furthermore, longitudinal studies can be helpful to better understand how teacher educators engage in research, perform teaching tasks, and integrate these two tasks. Finally, the participants were restricted to those with research experience and publications. The purposively selected sample in this qualitative study cannot provide representative or generalizable results. Researchers could thus apply quantitative or mixed methods.

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<div align="right">(Chief academic advisor: Takayoshi Maki)</div>