

# **TAKAHIRO KITAMURA, SHIGEKI MAESAKA AND ISAMU NAKAMURA**

# **BUDO EDUCATION IN JAPANESE JUNIOR HIGH SCHOOLS: AN EMPIRICAL ANALYSIS OF TEACHERS' COMPETENCE, INSTRUCTIONAL PRACTICE, AND OPEN-ENDED RESPONSES**

## **ABSTRACT**

This study examines the implementation and challenges of budo education in Japanese junior high schools through a nationwide mixed-methods survey of 386 teachers. We analyzed (1) the implementation status of budo classes, (2) teachers' professional expertise and self-perceived instructional competence, and (3) challenges and requests derived from open-ended responses. Quantitative results showed significant associations between dan qualifications and teachers' confidence, with markedly lower self-evaluations among kendo instructors. Qualitative analysis revealed structural barriers specific to kendo, such as equipment cost and time burden, and highlighted institutional and safety constraints. Integrating both dimensions, the study interprets lower self-efficacy as linked to a limited "technical habitus," which teachers compensate by emphasizing moral and cultural values. These findings situate budo education within a broader cultural framework of pedagogical legitimacy and highlight the need for flexible curricula, ongoing teacher development, and structured collaboration with external instructors to sustain its educational and cultural significance.

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## **KEYWORDS**

budo education; Japan; mixed-methods; physical education; self-efficacy; teacher competence

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## Budo Education in Japanese Junior High Schools: An Empirical Analysis of Teachers' Competence, Instructional Practice, and Open-ended Responses

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### INTRODUCTION

The revision of the Basic Act on Education in 2006 identified “fostering love for the country and one’s local community” and “respecting tradition and culture” as key objectives of Japanese education. Following this, the 2008 revision of the National Curriculum Standards for Junior High Schools made budo (Japanese martial arts) a compulsory component of physical education, fully implemented nationwide in 2010. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) regards budo as a means of fostering respect for Japan’s unique traditions and cultural values (MEXT, 2008). Within the curriculum, budo is not merely a sport but an educational practice that emphasizes etiquette (*rei*), discipline, and moral development, representing a central aspect of Japan’s intangible cultural heritage (Ueno et al., 1977; Nakabayashi, 1981; Sasaki, 2006; Sato, 2018).

In light of global efforts to integrate traditional practices into modern education, Shpak and Vasques (2023) reinterpreted budo education as a resource for sustainability and holistic learning. Their perspective aligns with broader international discussions on how embodied cultural disciplines can contribute to holistic development, thereby anchoring budo within a global pedagogical framework. In Japan, the Sports Agency has promoted partnerships between schools and local communities and encouraged the use of external instructors to facilitate high-quality budo instruction (Sports Agency, n.d.). However, despite these policy efforts, the actual utilization and educational impact of such initiatives remain insufficiently understood, highlighting a gap between institutional intentions and classroom realities. Here, it is crucial to distinguish these compulsory classes from extracurricular school clubs (*bukatsudo*). While clubs focus on technical specialization for interested students, compulsory budo classes target the entire student population to foster cultural understanding and etiquette. Therefore, relying solely on club activities would fail to meet the national curriculum’s objective of cultivating cultural identity among all citizens.

While budo education has been introduced to promote moral and cultural growth, it faces numerous implementation challenges. Major hurdles include insufficient facilities, high equipment costs and time constraints, such as time required for changing into kendo gear (Kitamura, 2013; Sakurai, 2013; Kitamura et al., 2017; Ehara, 2017). Instructional quality is another significant issue; schools struggle to secure qualified external instructors, and many physical education teachers lack the necessary expertise and confidence to conduct these lessons (Kitamura, 2013; Ehara, 2017; Seki et al., 2023). Furthermore, safety concerns remain critical, particularly regarding the risk of accidents in judo (Uchida, 2010).

Despite these difficulties, research highlights the educational value of budo. Studies report that it promotes cultural understanding (Kitamura, 2019; Kitamura et al., 2021; Kawamura, 2021) and enhances empathy (Shima et al., 2021), contributing significantly to students’ social and emotional development.

In response to these tensions between policy and practice, the present study aims to empirically clarify the current conditions and educational challenges of budo instruction in Japanese junior high schools. Specifically, the study addresses three research objectives:

1. To identify the actual implementation status of budo classes (e.g., disciplines, class formats, instructional hours, and use of external instructors).
2. To examine teachers’ professional expertise and their subjective teaching competence—that is, how they perceive their own instructional ability in budo lessons.
3. To explore the challenges and requests expressed by teachers through open-ended responses, using text-mining to extract underlying themes.

These three perspectives were integrated to provide a comprehensive understanding of how institutional ideals and classroom realities interact within budo education.

The concept of subjective teaching competence was adopted with reference to Bandura’s (1997) theory of self-efficacy, which posits that teachers’ self-perceptions of ability strongly influence their instructional behavior. While dan grades serve as an objective indicator of professional expertise, teachers’ self-perceived competence reflects a more affective and contextual dimension of teaching confidence. By analyzing both dimensions in parallel, this study seeks to reveal the relationship between teachers’ expertise, instructional confidence, and perceived educational challenges.

By employing a mixed-methods approach that integrates quantitative survey data with qualitative text analysis, this study offers a comprehensive lens through which to examine how budo—as both a physical and cultural practice—can be meaningfully implemented within contemporary educational systems.

This study contributes new empirical insights by integrating teachers’ subjective instructional competence with their dan qualifications and open-ended perceptions of instructional challenges. Unlike previous research that focused primarily on implementation status or safety concerns, this study reveals how teachers’ perceived competence mediates their pedagogical orientation, particularly in resource-constrained environments. This perspective offers a novel interpretation of budo education as a site of symbolic negotiation between technical expertise and cultural legitimacy.

### METHODS

#### 1. Research Design

This study employed a cross-sectional mixed-method design to investigate the implementation and challenges of budo education in Japanese junior high schools. The research aimed to clarify how budo lessons are conducted, how teachers perceive their

competence, and what instructional issues they encounter. Three analytical dimensions were established accordingly.

The first dimension addressed the implementation status of budo lessons, examining the types of disciplines taught (judo, kendo, others), instructional formats (mixed- or single-gender classes), number of annual lessons, teachers' budo experience, and employment of external instructors.

The second dimension focused on teachers' professional expertise and subjective teaching competence. Professional expertise was objectively operationalized as the possession of dan grades in judo or kendo. Subjective competence was measured using the question:

"When teaching budo in physical education classes, how would you rate your own skill level compared to other teachers?"

Responses were recorded on a six-point scale ranging from "no experience" to "excellent". Here, "no experience" referred specifically to teachers who had no experience in teaching budo in a school setting, rather than those lacking general budo experience. We acknowledge that this relative evaluation is contingent upon the proficiency levels of colleagues within the respondent's specific school environment. Furthermore, considering the cultural tendency in Japan to downplay one's abilities (*kenjo* or humility) (Heine et al., 1999), the overall scores may be conservative compared to objective skill levels. However, within the framework of self-efficacy (Bandura, 1997), it is this subjective perception of capability—rather than objective ranking—that primarily influences a teacher's choice of activities and persistence. Thus, this single-item measure served as a valid proxy for the psychological confidence that shapes instructional behavior. Nevertheless, teacher efficacy in physical education is recognized as a multidimensional construct encompassing instructional, motivational, and classroom-management domains (Tschannen-Moran & Hoy, 2001). Therefore, while the present study provides exploratory insight into the affective dimension of instructional confidence, future research should adopt validated multi-item scales to capture the domain-specific facets of self-efficacy and ensure greater measurement validity.

The third dimension examined teachers' perceived instructional challenges and requests, based on qualitative analysis of open-ended responses. This dimension sought to identify structural and practical barriers to effective budo instruction, as perceived by practitioners themselves.

## 2. Participants and Sampling

The study targeted public junior high schools across Japan. Using the National School Data 2023 (Educational Solutions Co., Ltd.) as a population list ( $N = 9,079$  schools), 1,000 schools were selected via stratified random sampling based on the distribution of municipalities (urban and rural) across Japan's 47 prefectures. The sampling process was conducted using the case selection function in SPSS 26 to ensure proportional representation while minimizing regional bias.

Questionnaires were sent to principals and heads of physical education departments, requesting one teacher involved in budo instruction to complete the survey. Data were collected between October 2023 and February 2024 through both postal and online responses.

A total of 444 responses were returned, with 386 valid cases (effective response rate = 38.6%). The regional distribution of valid responses corresponded closely to the national population, indicating adequate representativeness. Urban and rural ratios were also consistent (urban = 83.2%, rural = 16.8%).

Respondents comprised 77.7% males, 21.0% females, and 1.3% unspecified, with a mean age of 37.9 years ( $SD = 10.5$ ). Regarding dan qualifications (equivalent to black belt status), 83.4% ( $n = 171$ ) held ranks in judo, 27.8% ( $n = 57$ ) in kendo, and 6.8% ( $n = 14$ ) in other martial arts.

## 3. Survey Items and Variables

The questionnaire included the following components:

1. Basic attributes (gender, age, school location, etc.)
2. Implementation details (discipline, class format, lesson frequency, teaching experience, use of external instructors)
3. Professional expertise (possession of dan qualifications)
4. Subjective teaching competence (self-assessed instructional ability)
5. Perceived educational effects (optional item on cultural understanding)
6. Open-ended responses concerning instructional challenges and improvement requests

For clarity, the analysis of "subjective teaching competence" focused on its association with dan qualification and implementation variables, whereas the item on "cultural understanding" was analyzed exploratorily to contextualize teachers' perceptions of budo's educational value.

## 4. Analysis of Open-ended Responses

Participants were explicitly asked to describe "challenges and requests for improvement" regarding their budo classes. Consequently, the qualitative data predominantly reflect perceived difficulties rather than positive experiences. Qualitative data were analyzed using KH Coder 3.02c (Higuchi, n.d.). Morphological analysis was performed to extract word frequencies and visualize co-occurrence relationships among terms. Before analysis, responses such as "none", "no comment", or those containing fewer than five characters were excluded. Orthographic variations (e.g., "equipment" and "tools") were standardized, and functional or low-semantic words (e.g., "do", "think", "feel") were treated as stop words.

A co-occurrence network was then generated, where terms with strong relationships were connected by thicker lines. Subgraphs representing clusters of related terms were identified and grouped

into thematic categories. Each term could belong to multiple categories if it appeared in several contexts.

To examine associations between coded categories and quantitative attributes (discipline, dan qualification, and subjective competence), cross-tabulations and chi-square tests were conducted. In addition, a supplementary analysis compared co-occurrence structures by teacher expertise.

### 5. Data Analysis Procedures

Quantitative data were analyzed using descriptive statistics (means, standard deviations, percentages) and chi-square tests to determine relationships among categorical variables. Qualitative and quantitative results were then integrated in the discussion to provide a holistic interpretation of the findings.

Table 1. Implementation status of budo classes (n = 386).

Discipline taught	N	%
Judo	244	63.5
Kendo	149	38.8
Others	35	9.1
Teacher's budo experience	N	%
Judo	229	59.3
Kendo	136	35.2
Others	63	16.3
None	87	22.5
Use of external instructors	N	%
None	348	90.2
Yes	38	9.8
Average number of classes per grade	Mean	SD
Year 1	8.20	2.03
Year 2	8.14	1.94
Year 3	8.29	2.21

### 6. Ethical Considerations

This study was approved by the Ethics Review Subcommittee of the National Institute of Fitness and Sports in Kanoya (Approval No. 23-2-11, dated 27 July 2023). Participants were informed of the study's purpose, confidentiality, and voluntary participation. Completion and return of the questionnaire were considered to imply informed consent. All data were anonymized, and no identifying information about individuals or schools was retained.

## RESULTS

### 1. Implementation of budo classes

The implementation status of budo classes in the surveyed junior high schools is summarized in Table 1.

The most commonly taught discipline was judo (63.5%), followed by kendo (38.8%) and other martial arts (9.1%) such as sumo, naginata, karate, and aikido. Forty-two schools reported implementing multiple disciplines. On average, each budo unit comprised approximately eight class hours across grades, consistent with national curriculum guidelines and previous findings (Yoshikawa, 2021). Teachers' personal budo experience showed a similar trend: 59.3% had judo experience, 35.2% in kendo, 16.3% in other martial arts, while 22.5% reported no experience in martial arts. Regarding external instructors, 90.2%

of schools reported none, and only 9.8% reported their employment.

The distribution of class formats is shown in Table 2. Mixed-gender lessons predominated (79.3%), followed by single-gender (13.7%) and combined formats (7.0%). In mixed-gender lessons, 80.4% were taught by male teachers, and 28.8% by female teachers; 18.0% of classes used a team-teaching (TT) approach. These results indicate that the budo teaching format is closely related to teacher gender distribution, particularly where staffing constraints limit flexibility.

Table 2. Teaching formats of budo classes (n = 386).

Format	%	Main features
Mixed-gender	79.3	Predominantly taught by male teachers (80.4%); TT 18.0
Single-gender	13.7	Male teacher for boys (90.6%), female teachers for girls (73.6%)
Combined (mixed + single)	7.0	Balanced gender distribution; TT 14.8%

## 2. Teachers' subjective teaching competence

In judo, 40.3% rated themselves as "average", while 22.2% rated themselves as "somewhat superior" or "superior". In contrast, 37.6% evaluated themselves as "somewhat inferior", "inferior", or having "no experience". In kendo, self-evaluations were generally lower: 62.5% indicated "somewhat inferior", "inferior", or "no

experience", while only 20.7% considered themselves "average". These findings suggest that teachers' confidence levels differ considerably between judo and kendo, with lower confidence in the latter. Teachers' self-assessments of instructional competence are presented in Table 3.

Table 3. Teachers' self-rated instructional competence by discipline.

Evaluation	Judo (n = 375)		Kendo (n = 343)	
	n	%	n	%
No experience	28	7.5	62	18.1
Inferior	59	15.7	88	25.7
Somewhat inferior	54	14.4	64	18.7
Average	151	40.3	71	20.7
Somewhat superior	61	16.3	33	9.6
Superior	22	5.9	25	7.3

\*\*\*  $p < .001$

A cross-tabulation of dan qualification and self-assessed competence (Table 4) revealed a clear association. In judo, 81.9% of dan holders rated themselves as “average” or higher, compared with 50.0% of non-holders. In kendo, 63.2% of dan holders rated themselves as “superior”, while 48.2% of non-holders considered themselves “inferior”. Chi-square tests confirmed significant relationships ( $p < .001$ ).

Table 4. Relationship between dan qualification and self-rated instructional competence.

Discipline	Dan	No exp.		Inferior		Average		Superior		$\chi^2$
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Judo	None	20	15.4	45	34.6	47	36.2	18	13.8	46.7***
	Yes	1	0.6	30	17.5	80	46.8	60	35.1	
Kendo	None	39	22.9	82	48.2	34	20.0	15	8.8	83.0***
	Yes	1	1.8	6	10.5	14	24.6	36	63.2	

\*\*\*  $p < .001$

### 3. Analysis of open-ended responses

A total of 311 open-ended responses (568 sentences) were analyzed after excluding entries such as “none” and “no comment”. The average response length was 53.8 characters (SD = 46.1). Morphological analysis using KH Coder yielded 10,212 total words (1,330 unique). Frequent words included “instruction”, “class”, “equipment”, “safety”, “teacher”, and “time”, indicating concerns with operational and safety aspects of teaching. Based on the co-occurrence network generated from the morphological analysis, thematic clusters were identified and grouped into categories.

Table 5 presents the frequency and proportion of responses associated with each emergent category. These categories were not

predefined but derived inductively from the structure of term relationships observed in the network. Since the survey question specifically inquired about “challenges,” the extracted categories naturally center on structural and instructional difficulties.

The most frequently cited category was “Physical conditions and safety management” (43.1%), followed by “Professional expertise and Instructional structure” (34.9%), and “Class implementation and fixed discipline structure” (33.1%). Positive responses, such as “Enjoyment and positive learning experiences” (4.4%), were rare, indicating that most teachers focused on challenges rather than successes.

Table 5. Thematic categories from co-occurrence analysis of teachers' comments ( $n = 568$ ).

Category	Description	<i>n</i>	%
Professional expertise and	Challenges related to teachers' technical skills, need for professional	198	34.9
Physical conditions and safety	Issues concerning inadequate facilities, lack of equipment, and safety	245	43.1
Learning process of skill	Difficulties in teaching basic budo techniques and facilitating students'	51	9.0
Class implementation and fixed	Constraints due to rigid curricula and overreliance on specific disciplines	188	33.1
Perceived risk during	Concerns about injuries and safety management during sparring or	63	11.1

Preparation and time burden	Burdens related to lesson preparation, equipment setup and removal, and	136	23.9
Institutional and organizational	Limitations stemming from school management policies, staffing	72	12.7
Enjoyment and positive learning	Observations of students' motivation, enjoyment, and engagement in	25	4.4
Flexibility and institutional	Difficulties in diversifying budo disciplines due to institutional	27	4.8
Uncategorized	Responses that did not fit into any of the predefined thematic categories.	45	7.2

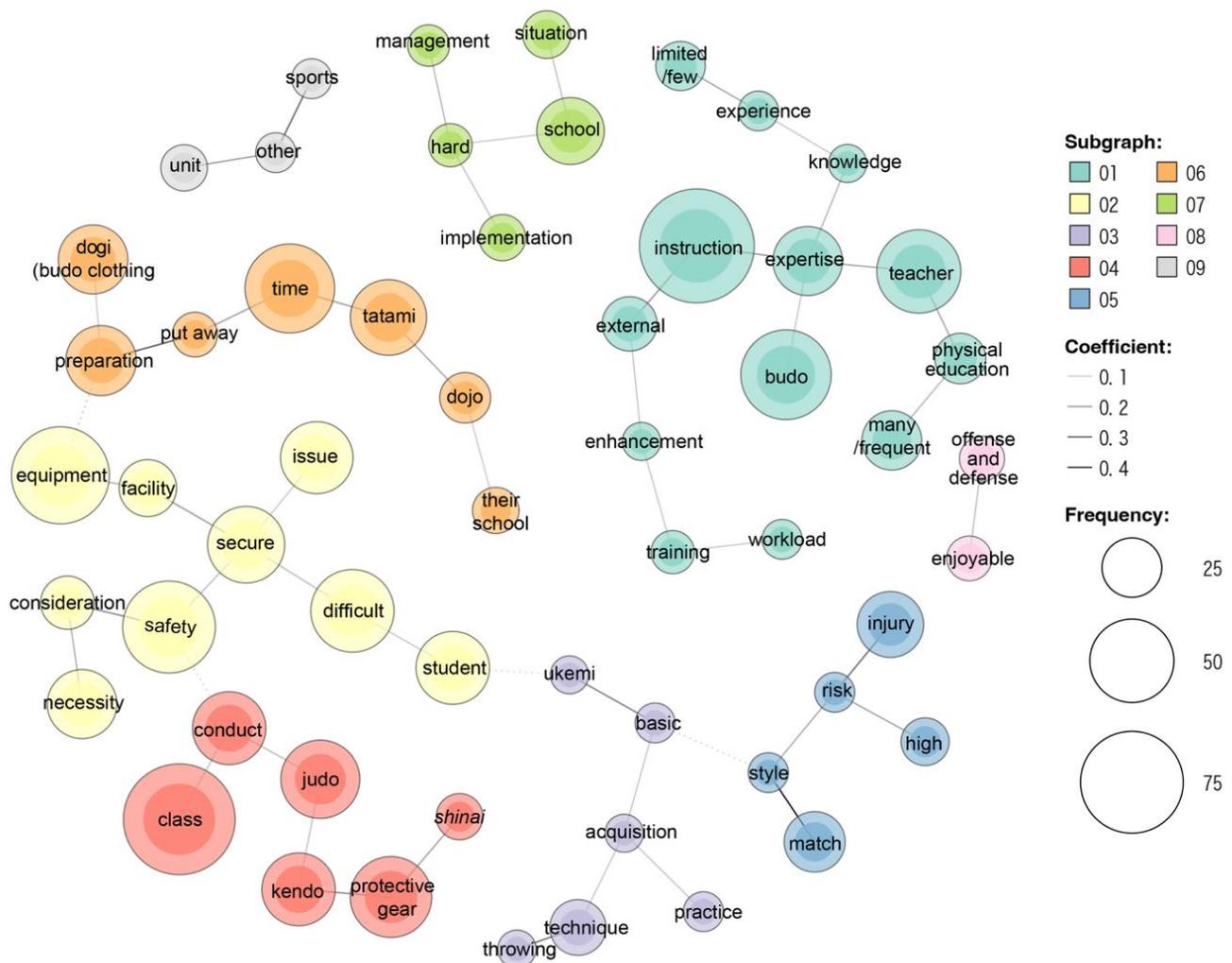


Figure 1. Co-occurrence network of teachers' open-ended responses.

To enhance interpretative validity, additional comparisons were conducted by discipline, dan qualification, and self-rated competence (see Tables 6 and 7). Overall, these analyses indicate that teachers with lower expertise or self-assessed competence tend to experience greater structural and instructional constraints. Conversely, such teachers also expressed a stronger focus on students' enjoyment, suggesting a compensatory emphasis on affective educational outcomes.

To strengthen interpretive validity, representative quotations from teachers' open-ended responses were added to illustrate key categories. For instance, the category "Physical conditions and

safety management" included remarks such as "Students are highly motivated, but it is difficult to fully provide the necessary space, equipment, and safety" and "Due to issues with facilities such as lacking tatami mats and equipment like protective gear, the types of martial arts and the duration of classes are limited", while "Preparation and time burden" was exemplified by "Because tatami mats are used, a significant amount of time is spent on preparation and cleanup, making it difficult to secure sufficient class time." These excerpts contextualize the quantitative frequency data and reveal the lived realities underlying the categories identified through KH Coder analysis.

Table 6. Category occurrence by discipline taught.

Category	Judo	Kendo	Multiple	Others	$\chi^2$
Professional expertise and instructional structure	110 (35.1%)	58 (31.2%)	15 (38.5%)	12 (44.4%)	2.42
Physical conditions and safety management	138 (44.1%)	80 (43.0%)	13 (33.3%)	12 (44.4%)	1.66
Learning process of skill acquisition	39 (12.5%)	9 (4.8%)	2 (5.1%)	1 (3.7%)	10.12**
Class implementation and fixed discipline structure	86 (27.5%)	79 (42.5%)	14 (35.9%)	7 (25.9%)	12.64***
Perceived risk during competition	41 (13.1%)	19 (10.2%)	1 (2.6%)	2 (7.4%)	4.65
Preparation and time burden	89 (28.4%)	32 (17.2%)	10 (25.6%)	5 (18.5%)	8.57**
Institutional and organizational constraints	32 (10.2%)	27 (14.5%)	7 (19.0%)	5 (18.5%)	4.11
Enjoyment and positive learning experiences	14 (4.5%)	8 (4.3%)	2 (5.1%)	1 (3.7%)	0.09
Flexibility and institutional limitation in discipline selection	10 (3.2%)	15 (8.1%)	1 (2.6%)	1 (3.7%)	6.63*

\*  $p < 0.05$  \*\*  $p < 0.01$  \*\*\*  $p < 0.001$

Table 7. Category occurrence by self-rated teaching competence.

Discipline	Category	No exp.	Inferior	Average	Superior	$\chi^2$
Judo	Professional expertise and instructional structure	17 (33.3%)	64 (40.0%)	65 (31.1%)	48 (35.6%)	3.24
	Physical conditions and safety management	22 (43.1%)	71 (44.4%)	88 (42.1%)	58 (43.0%)	0.19
	Learning process of skill acquisition	2 (3.9%)	17 (10.6%)	15 (7.2%)	15 (11.1%)	3.75
	Class implementation and fixed discipline structure	21 (41.2%)	57 (35.6%)	58 (27.8%)	49 (36.3%)	5.25
	Perceived risk during competition	4 (7.8%)	19 (11.9%)	27 (12.9%)	11 (8.2%)	2.55
	Preparation and time burden	10 (19.6%)	33 (20.6%)	59 (28.2%)	34 (25.2%)	3.56
	Institutional and organizational constraints	7 (13.7%)	18 (11.3%)	25 (12.0%)	21 (15.6%)	1.43
	Enjoyment and positive learning experiences	6 (11.8%)	9 (5.6%)	8 (3.8%)	2 (1.5%)	9.81**
	Flexibility and institutional limitation in discipline selection	6 (11.8%)	8 (5.0%)	6 (2.9%)	5 (3.7%)	7.84**
Kendo	Professional expertise and instructional structure	36 (37.5%)	69 (34.7%)	37 (35.6%)	37 (31.9%)	0.77
	Physical conditions and safety management	45 (46.9%)	92 (46.2%)	42 (40.4%)	50 (43.1%)	1.27
	Learning process of skill acquisition	8 (8.3%)	15 (7.5%)	7 (6.7%)	9 (7.8%)	0.19
	Class implementation and fixed discipline structure	25 (26.0%)	61 (30.7%)	38 (36.5%)	50 (43.1%)	8.30**
	Perceived risk during competition	9 (9.4%)	27 (13.6%)	8 (7.7%)	9 (7.8%)	3.97
	Preparation and time burden	25 (26.0%)	43 (21.6%)	29 (27.9%)	25 (21.6%)	2.08
	Institutional and organizational constraints	13 (13.5%)	18 (9.1%)	12 (11.5%)	23 (19.8%)	7.83**
	Enjoyment and positive learning experiences	4 (4.2%)	16 (8.0%)	1 (1.0%)	3 (2.6%)	9.50**
	Flexibility and institutional limitation in discipline selection	2 (2.1%)	11 (5.5%)	7 (6.7%)	5 (4.3%)	2.66

\* $p < 0.05$  \*\* $p < 0.01$  \*\*\* $p < 0.001$

## DISCUSSION

This study examined the current conditions and instructional challenges of budo education in Japanese junior high schools, using nationwide survey data from 386 teachers. By integrating quantitative and qualitative analyses, the research clarified how institutional policy, teacher expertise, and classroom realities interact within budo instruction.

The following discussion interprets these findings in relation to the study's three objectives: (1) implementation status, (2) teacher expertise and subjective competence, and (3) perceived instructional challenges and their implications for budo's educational value.

### 1. Institutional and physical challenges: persistent structural constraints

The results demonstrate that schools continue to face substantial institutional and physical limitations when conducting budo classes. The most frequent categories in the open-ended responses—"Physical conditions and safety management" (43.1%) and "Preparation and time burden" (23.9%)—highlighted issues of inadequate space, lack of equipment, time constraints, and safety concerns. Despite over a decade since budo became compulsory, many schools have not yet secured sufficient resources to ensure effective implementation. The frequent mention of "Institutional and organizational constraints" (12.7%) suggests that such challenges extend beyond classroom-level issues to structural features of school administration and policy design. These systemic limitations increase teachers' workload and restrict pedagogical innovation.

The predominance of mixed-gender instruction (79.3%) reflects the institutional expansion of coeducational budo practice, yet also implies staffing-related necessity rather than pedagogical choice. As Sakurai (2013) noted, the shortage of female physical education teachers, particularly in rural areas, restricts flexibility in class organization. This study's findings reaffirm that personnel and facility conditions are decisive factors shaping how budo lessons are realized in practice (Kitamura, 2013; Ehara, 2017).

### 2. Expertise, subjective competence, and their influence on teachers' perceptions

The second aim of this study concerned the relationship between teachers' dan qualifications (objective expertise) and subjective teaching competence. The analysis revealed significant associations: teachers with dan ranks tended to report higher self-confidence, whereas those without ranks—particularly in kendo—reported lower perceived competence and greater awareness of external constraints.

This tendency in kendo can be attributed not only to differences in technical expertise but also to the structural characteristics of the subject itself. Kendo instruction requires specialized facilities, expensive protective equipment, and considerable time for putting on and taking off gear, all of which increase the practical

burden on teachers and constrain lesson flexibility (Kitamura, 2013; Ehara, 2017). These material and temporal constraints may undermine teachers' sense of instructional efficacy and reinforce rigid lesson formats observed in the qualitative data. Furthermore, the seemingly low self-evaluation among dan holders may reflect the cultural value of *kenjo* (humility) which is deeply rooted in the spirit of *rei* (etiquette) (Ueno et al., 1977; Sato, 2018), prevalent in the Japanese budo community, where practitioners often compare themselves to high-ranking masters. It is also important to note that the "competence" assessed here refers to pedagogical efficacy—specifically safety management and large-group instruction—rather than personal competitive skill. Thus, a teacher may be a skilled practitioner yet feel anxious about managing safety risks in a compulsory school setting. In contrast, judo—often conducted on mats within multipurpose gymnasiums—poses fewer logistical barriers, which may help explain the relatively higher confidence levels among judo teachers.

This pattern underscores the dual nature of instructional competence. Possession of dan qualifications provides technical credibility, but teachers' self-efficacy (Bandura, 1997) influences how they interpret and respond to teaching challenges. Teachers with lower self-evaluations tended to focus more on external difficulties, such as limited time and resources, while also highlighting students' enjoyment and engagement. This compensatory focus on affective outcomes suggests that self-perception of competence mediates how teachers balance practical limitations with educational ideals.

This finding resonates with research in physical education indicating that teachers' efficacy beliefs strongly shape their pedagogical approaches and students' experiences (Cloes et al., 2012). The single-item measure of subjective instructional competence was adopted as a proxy for teachers' self-efficacy. While it offers indicative value, it lacks the psychometric robustness of multi-item scales. Future studies should incorporate validated instruments to assess instructional confidence more comprehensively. The present results reinforce that quality of instruction—not only technical expertise—is critical to achieving the educational goals of budo classes. Although the single-item measure offered a parsimonious indicator, its limited scope underscores the importance of developing and validating comprehensive instruments for assessing teachers' self-efficacy in budo instruction. Such instruments could incorporate dimensions such as instructional design, technical confidence, safety management, and affective engagement.

### 3. Educational meaning and interpretive limits of budo instruction

Approximately 70% of respondents agreed that budo lessons contribute to students' understanding of traditional culture, demonstrating a partial realization of the subject's cultural objectives. However, qualitative data revealed that explicit references to educational value were limited (4.4%), suggesting a gap between ideal and practice.

## Budo Education in Japanese Junior High Schools: An Empirical Analysis of Teachers' Competence, Instructional Practice, and Open-ended Responses

Takahiro Kitamura, Shigeki Maesaka and Isamu Nakamura

Building on Bourdieu's (1990) notions of technical habitus and cultural capital, this study interprets the tendency of non-dan-holding teachers to emphasize etiquette (*rei*), moral education, and enjoyment as a strategy for constructing pedagogical legitimacy. Rather than a mere compensatory mechanism, such emphasis represents a process through which teachers reproduce cultural capital within institutional constraints. In this sense, budo education can be viewed as a microcosm of how embodied cultural practices are recontextualized and legitimized in modern schooling. Further theorization could examine how this symbolic negotiation shapes teachers' self-perception and the transmission of moral values in contemporary education. While this interpretation remains exploratory, it highlights how teachers navigate instructional legitimacy in resource-constrained environments. Rather than asserting a deficit, the findings suggest a recontextualization of budo's educational meaning, shaped by institutional realities and individual perceptions.

These persistent implementation constraints underscore the urgent need for greater curricular flexibility and systemic support. The All Japan Judo Federation (2010) explicitly recommends that teachers adapt lesson content according to conditions such as class size, facilities, and available time. Nevertheless, the present data indicate that rigid lesson structures and limited innovation remain prevalent, potentially due to declining in-service training opportunities—especially after the COVID-19 pandemic. Teachers' comments referring to "training," "external support," and "burden" demonstrate that professional development remains both necessary and underprovided.

Accordingly, enhancing budo education requires the establishment of sustainable support systems that connect teacher training, school administration, and community resources. Continuous professional learning and external collaboration can mitigate disparities in teacher expertise and promote safer, more effective instruction.

### 4. International and cultural implications

The comparison with studies on Chinese martial arts (Deng, 2020; Zhang, 2024) reveals parallel tensions between ideological aspirations and classroom realities. In both contexts, educators navigate the contradictions between cultural preservation and pragmatic constraints. For Japan, issues such as safety management, limited facilities, and time allocation exemplify how structural limitations mediate these ideals. Situating budo education within this broader East Asian framework underscores the shared challenge of sustaining embodied cultural knowledge under institutional and policy pressures.

Zhang (2024) identified how Chinese martial arts education struggles with isolation from contemporary cultural systems, while Deng (2020) argued that ideological aspirations often exceed classroom realities. These parallels reinforce the interpretation that budo education, too, must continually reconcile its cultural heritage with modern pedagogical frameworks.

Sasaki (2006) and Shpak and Vasques (2023) further suggest that budo's educational potential extends beyond cultural preservation to fostering holistic learning and sustainability values. From this broader view, the current study contributes empirically to understanding how traditional disciplines can be modernized and localized within national education systems.

### 5. Implications and future directions

This study highlights that the realization of budo's educational ideals depends not only on teachers' expertise but also on systemic support for safe, flexible, and resource-sufficient instruction.

Practical implications include:

1. Revising curriculum frameworks to allow flexible lesson structures tailored to teachers' competence and school conditions.
2. Providing targeted in-service training programs and certification pathways for teachers without dan ranks.
3. Establishing financial and institutional mechanisms to facilitate the systematic use of external instructors.

Given that 90.2% of schools currently do not employ external instructors, these findings point to significant institutional and financial barriers. In practical terms, effective policy implementation would require not only the appointment of regional budo coordinators and the creation of formal certification and compensation systems for community instructors, but also measures that directly reduce the teachers' workload. Such measures could include administrative support for scheduling and safety management, shared lesson planning resources, and subsidies for protective equipment. By framing the use of external instructors as a means of teacher workload reduction and instructional safety—rather than an additional administrative task—these reforms would enhance both feasibility and sustainability. This teacher-centered perspective strengthens the rationale for external collaboration as a realistic and equitable component of national budo education policy.

At the policy level, strengthening collaboration between educators, policymakers, and researchers is essential. Developing an evidence-based feedback system linking teacher education, in-service training, and classroom practice will ensure continual improvement in both teaching quality and cultural transmission.

Future research should address several limitations of this study. First, the response rate (38.6%) may limit generalizability. Second, the study relied on self-reported data, which may reflect perception rather than performance. Third, qualitative data were limited to teachers' perspectives; incorporating students' viewpoints or observational data would enrich understanding. Finally, further investigation into how teachers' cultural interpretations of budo influence lesson design would deepen the theoretical contribution of this research.

## Budo Education in Japanese Junior High Schools: An Empirical Analysis of Teachers' Competence, Instructional Practice, and Open-ended Responses

Takahiro Kitamura, Shigeki Maesaka and Isamu Nakamura

### CONCLUSION

This study demonstrated that institutional, physical, and professional conditions critically influence the implementation and pedagogical quality of budo education in Japanese junior high schools. Persistent constraints—limited time, insufficient facilities, and safety management burdens—hinder the full realization of budo's moral and cultural aims.

Teachers' subjective teaching competence emerged as a meaningful yet context-dependent factor influencing both confidence and pedagogical orientation.

Addressing these challenges requires a closer alignment between policy and practice, particularly through flexible curricula, ongoing teacher development, and active collaboration with external expertise.

Through these measures, budo education can evolve beyond its role as physical training to serve as a culturally embedded, holistic educational practice. Such transformation not only advances national educational objectives but also enriches international discourse on the integration of embodied cultural knowledge into contemporary schooling, positioning budo as a model for culturally responsive physical education.

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The authors affirm that they had no competing interests relevant to the work underpinning this manuscript.

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The authors affirm that no artificial intelligence applications were used in the preparation of this manuscript.

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