Journal of Inclusive Methodology and Technology in Learning and Teaching
ISSN 2785-5104
Anno 6 n.3 (2026)

EDIZIONI UNIVERSITARIE ROMANE
editoria scientifica dal 1952

A study on the impact and perception of teachers across school levels on the banning of smartphone use in Italian classes

Raffaele Di Fuccio[1,*], Andrea Tinterri[1], Marilena di Padova[1], Angelo Basta[2], Pierpaolo Limone[1] and Anna Dipace[1]

[1] Università Telematica Pegaso; raffaele.difuccio@unipegaso.it; andrea.tinterri@unipegaso.it ; marilena.dipadova@unipegaso.it ; pierpaolo.limone@unipegaso.it; anna.dipace@unipegaso.it
[2] Università degli Studi eCampus; angelo.basta@uniecampus.it
* Correspondence: raffaele.difuccio@unipegaso.it

Abstract: In September 2025, Italy extended the ban on smartphone use in classrooms to upper secondary schools, amid an international debate on such restrictions. This study investigated how in-service teachers perceive the ban and whether their perceptions differ by age, teaching experience and school type. A sample of 573 Italian in-service teachers enrolled in teacher-qualification courses completed a five-item Likert-scale questionnaire one month after the ban came into force. Data were analyzed through descriptive statistics, Welch's ANOVA and t-tests. Overall, attitudes were close to neutrality for the general perception of the ban, its effect on cyberbullying and support for its continuation. Teachers disagreed that student relationships had worsened, suggesting a mild perceived improvement, and reported limited use of smartphone-based homework methods after the ban. Age did not differentiate perceptions, whereas less experienced teachers were more inclined than experienced colleagues to keep using digital devices, namely smartphone-based homework methods, after the ban. Liceo teachers were less likely than teachers of other school types to perceive a relational improvement and showed a trend toward a less positive general perception. The findings suggest that the ban is accepted without strong enthusiasm and that restrictive measures should be complemented by media education and differentiated by school level.

Keywords: Smartphone ban; Digital media; Teacher education.

Copyright: © 2026 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

In recent years, Italian education policy has moved to restrict smartphone use in classrooms through a ministerial circular (Ministero dell'Istruzione e del Merito [MIM], 2025), extending to upper secondary schools a prohibition that was already in place at lower school levels (Kharazi et al., 2026; Pozsonyi et al., 2025). The circular is framed within an international debate on digital technologies in education, drawing on OECD references and growing concern about social media use among adolescents. This debate is inherently double-edged. On the one hand, the available evidence on school bans is limited and mixed: a rapid review found a small overall effect of smartphone bans, more evident for social well-being than for academic performance (Böttger & Zierer, 2024), and the mere presence of a smartphone on

the desk does not appear to reliably impair students' cognitive performance (le Roux et al., 2025). On the other hand, a parallel and growing literature highlights the problematic use of smartphones among students, associating unregulated access with negative academic and psychosocial outcomes (Benedetto et al., 2024; Bozzato et al., 2024). Families are also involved in this regulation and often rely on restrictions and penalties rather than on negotiated rules (Tirocchi et al., 2024). A further, less frequently studied, strand of research concerns teachers' own use of smartphones in the classroom (Lloret-Catala et al., 2025; Petrucco & Foschi, 2024), an issue also explored from an Italian perspective in relation to adolescents' connectivity at school (D'Agostini et al., 2024).

The Italian scholarly debate on smartphone and technology use in schools has been strongly shaped by the COVID-19 pandemic, which forced a rapid and widespread digitalization of teaching practices during lockdown. Several studies have investigated how this sudden shift accelerated digital and media education practices, affected teachers' well-being and reshaped pedagogical paradigms in Italian schools (Aiello, 2021; Bianchi & Caso, 2022; Chauhan et al., 2022; Lazzari, 2024; Santilli et al., 2025; Toto & Limone, 2021). Building on this context, and on comparative work examining smartphone policies across school grades internationally (Gath et al., 2024; Rahali et al., 2024), the present study addresses a gap in the Italian literature: while the impact of smartphone bans has been investigated in various national contexts, in-depth empirical evidence on how Italian in-service teachers perceive the new ministerial restriction is still lacking.

2. Materials and Methods

The international literature offers multiple studies evaluating the impact of smartphone restrictions in different national contexts, yet comparable in-depth investigations of Italian teachers' perceptions are scarce, particularly following the recent ministerial provision. The present study aims to fill this gap by assessing, through empirical evidence, how in-service teachers perceive the smartphone ban, examining the nuances of opinion across the teaching population. To this end, the sample was segmented by (a) age, (b) years of teaching experience, and (c) school level and type. Two overarching research questions were formulated:

- RQ1: What is the general perception of in-service teachers regarding the circular banning smartphone use in classrooms?
- RQ2: Does the perceived impact of the circular differ according to teachers':
- RQ2a – age;
- RQ2b – years of service, comparing teachers with three or more years of experience to those with fewer than three;
- RQ2c – school level and type of institution, comparing *liceo* (academic upper secondary school) teachers to teachers of all other school levels and types?

2.1. Participants

The study involved a sample of 573 in-service teachers (385 women, 184 men and 4 who preferred not to disclose their gender), recruited online during lessons of the teacher-qualification courses delivered by Università Telematica Pegaso in October 2025, one month after the smartphone ban came into force in Italian schools. All participants were attending the courses online. They came from 44

different teaching-qualification classes, spanning music, artistic, literary and STEM disciplines, ensuring considerable heterogeneity in the sample. The main characteristics of the sample are reported in Table 1.

Table 1. Characteristics of the sample (N = 573).

Characteristic	n	%
Gender		
Female	385	67.2
Male	184	32.1
Prefer not to say	4	0.7
Age band (years)		
Under 30	34	5.9
31–40	164	28.6
41–50	220	38.4
51–60	146	25.5
Over 60	9	1.6
Years of teaching experience		
Less than 1	62	10.8
1–2	72	12.6
3–5	154	26.9
6–10	150	26.2
11–15	57	9.9
16–20	36	6.3
More than 20	42	7.3
School level and type		
Pre-primary school	10	1.7
Primary school	65	11.3
Lower secondary school	216	37.7
Upper secondary school – vocational institute	108	18.8
Upper secondary school – technical institute	94	16.4
Upper secondary school – *liceo*	80	14.0

Note. Percentages may not sum to 100 because of rounding.

Participants' mean age was 44.62 years (SD = 8.58; median = 45; mode = 48), with low skewness (−0.022) and kurtosis (−0.46), indicating an approximately symmetrical distribution (Figure 1). Roughly one-third of teachers were 40 or younger (34.6%), while the largest age band was 41–50 years (38.4%). Regarding teaching experience, 53.1% of respondents had between 3 and 10 years of service, 23.4% had fewer than three years, and 7.3% had more than 20 years (Figure 2).

Figure 1. Distribution of participants' age (histogram with density curve).

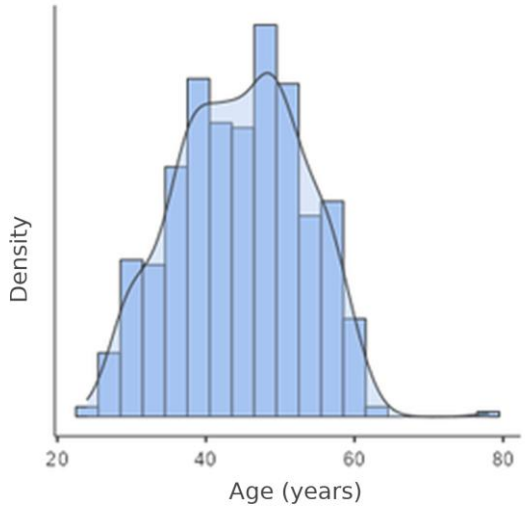
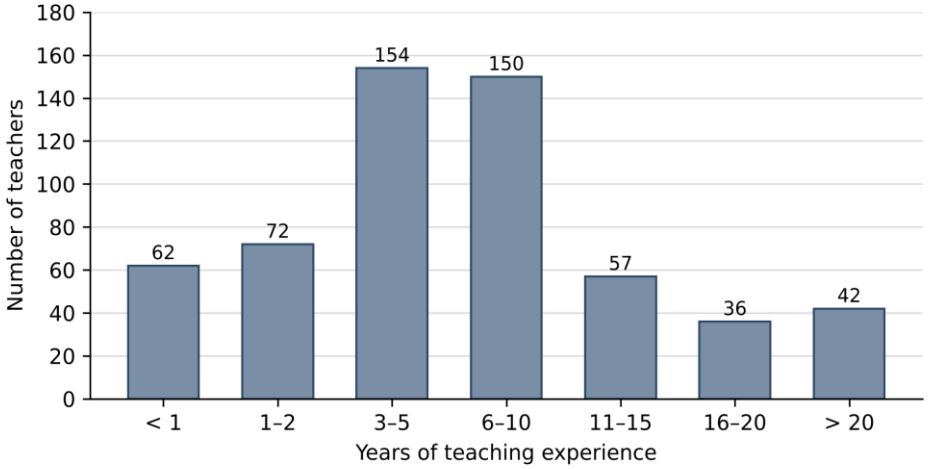


Figure 2. Distribution of participants by years of teaching experience.



By school level, the sample comprised 282 upper secondary school teachers, 216 lower secondary school teachers, 65 primary school teachers and 10 pre-primary school teachers; of the 282 upper secondary school teachers, 80 taught in a *liceo*, 94 in a technical institute and 108 in a vocational institute. Notably, only 15 respondents reported not being subject to a smartphone ban in their classroom, although the circular formally exempts only technical institutes linked to technology and telecommunications subjects, suggesting broad and prompt adoption of the ban across school types.

For the comparative analyses, two dichotomous groupings were used: (i) *liceo* teachers versus teachers of all other school types and levels, and (ii) "expert" teachers (three or more years of service, a threshold used as an admission criterion

in ministerial competitions) versus "novice" teachers (fewer than three years of service).

2.2. Instrument and procedure

After collecting demographic information, participants completed an ad hoc five-item questionnaire using a 5-point Likert scale to capture their opinions on the ministerial circular: (1) perceived worsening of relationships between students since the circular; (2) general perception of the ban, including its effect on didactic uses of smartphones; (3) perceived effectiveness of the ban in countering cyberbullying; (4) continued use of smartphone-based teaching methods for homework after the ban; and (5) the desire for the ban to continue in the future. The items were administered in Italian; their original wording, an English translation and the response anchors are reported in Table 2.

Table 2. Questionnaire items (original Italian wording and English translation) and response anchors.

Item	English translation	Original Italian wording	Anchors (1–5)
1. Relational worsening	Since the introduction of the circular, I have seen a worsening in relationships between students.	*Dall'introduzione della circolare ho visto un peggioramento nella relazione tra gli studenti.*	Strongly disagree – Strongly agree
2. General perception	What is your general perception of the introduction of the circular prohibiting the use of smartphones in schools, including for didactic purposes?	*Qual è la tua percezione generale dall'introduzione della circolare sull'impossibilità di utilizzo degli smartphone anche per finalità didattiche nelle scuole?*	Very negative – Very positive
3. Cyberbullying	I believe that the rule of not using mobile phones in class can help to counter cyberbullying in classrooms.	*Ritengo che la norma introdotta di non utilizzare il cellulare in classe possa aiutare a combattere il cyberbullismo nelle classi.*	Strongly disagree – Strongly agree
4. Smartphone-based homework	I use teaching methods involving smartphones for homework even after the introduction of the circular.	*Utilizzo metodologie didattiche che prevedono l'utilizzo di smartphone per i compiti a casa anche dopo l'introduzione della circolare.*	Strongly disagree – Strongly agree
5. Continuation	I would like this ban to continue in the future.	*Vorrei che questo divieto proseguisse in futuro.*	Strongly disagree – Strongly agree

Note. The Italian anchors were "Per niente d'accordo" – "Molto d'accordo" and, for item 2, "Molto negativa" – "Molto positiva".

The items were deliberately worded so that they were not all oriented in the same direction: agreement indicates a negative view of the ban for item 1 and a positive view for items 2, 3 and 5, whereas item 4 describes a teaching practice rather than an evaluation. For this reason, the items were analyzed individually and were not combined into a total score.

2.3. Data analysis

All analyses were performed with jamovi (The jamovi project, 2025). Means and standard deviations were computed for each item on the full sample (RQ1). Differences across the five age bands (RQ2a) were tested with Welch's one-way ANOVA, which does not assume homogeneity of variances across groups of

different size. Differences between novice and expert teachers (RQ2b) and between *liceo* teachers and teachers of other school types (RQ2c) were tested with independent-samples Student's t-tests, with Welch's correction where the assumption of equal variances was not met. Given the exploratory nature of the study, two-tailed p values are reported unless otherwise stated, with $\alpha = .05$. Cohen's d is reported as a measure of effect size and interpreted according to conventional thresholds (0.20 small, 0.50 medium, 0.80 large).

3. Results

3.1. General perception of the ban (RQ1)

This section reports the descriptive statistics of the five questionnaire items for the full sample of 573 teachers (Table 3). Overall, the responses were weak in magnitude and generally close to the neutral midpoint of the scale.

Table 3. Descriptive statistics of the questionnaire items for the full sample.

Item	N	M	SD
1. Relational worsening	573	2.08	1.15
2. General perception	573	3.30	1.20
3. Cyberbullying	573	3.34	1.36
4. Smartphone-based homework	573	2.47	1.34
5. Continuation	573	3.37	1.38

Note. 5-point Likert scale (1 = strongly disagree or very negative; 5 = strongly agree or very positive).

The clearest result concerned the item on relational worsening: teachers largely disagreed that relationships between students had deteriorated since the introduction of the ban (M = 2.08, SD = 1.15). Since the item was worded negatively, this score points to a perceived mild improvement in relationships rather than a decline, and it is the only evaluative item whose mean departs from the midpoint by almost one scale point. The general perception of the ban was close to neutral, with a slight positive leaning (M = 3.30, SD = 1.20). Comparable values emerged for the perceived effect of the ban on cyberbullying prevention (M = 3.34, SD = 1.36) and for support for its continuation in the future (M = 3.37, SD = 1.38). The standard deviations of these last two items, the highest in the questionnaire, indicate that the near-neutral means summarize a considerable variety of opinions rather than a uniformly neutral position.

A more marked result emerged for didactic practices. Agreement with the statement on continuing to use smartphone-based teaching methods for homework after the circular was below the midpoint (M = 2.47, SD = 1.34), indicating that most teachers do not report such practices after the introduction of the ban. Although the questionnaire did not measure these practices before the circular, and a reduction cannot therefore be inferred directly, this result suggests that the influence of the restriction may extend beyond the classroom and also affect the design of homework activities.

3.2. Perceptions by age (RQ2a)

Age did not affect the responses. A Welch one-way ANOVA across the five age bands showed no statistically significant differences on any of the five items (all $p > .16$; Table 4). The F statistics ranged from 0.33, for the desire for the ban to continue, to 1.70, for the use of smartphone-based homework methods, which was the item closest to the significance threshold ($p = .164$). Age therefore does not appear to meaningfully shape teachers' perceptions of the circular: younger and older teachers expressed similar, largely neutral evaluations and similar levels of perceived relational improvement. It should be noted that the extreme age bands were small (34 teachers under 30 and 9 over 60), which limits the power to detect differences involving these groups.

Table 4. Welch's one-way ANOVA of the questionnaire items across the five age bands.

Item	F	df1	df2	p
1. Relational worsening	0.714	4	52.5	.586
2. General perception	0.360	4	52.4	.836
3. Cyberbullying	0.970	4	51.1	.432
4. Smartphone-based homework	1.704	4	51.1	.164
5. Continuation	0.326	4	51.0	.859

Note. Age bands: under 30, 31–40, 41–50, 51–60, over 60 years.

3.3. Perceptions by teaching experience (RQ2b)

The sample was then divided into novice teachers, with fewer than three years of service ($n = 134$), and expert teachers, with three or more years of service ($n = 439$). Independent-samples t-tests revealed no significant differences between the two groups on most items (Table 5). The general perception of the ban (novices $M = 3.31$; experts $M = 3.29$), its perceived effect on cyberbullying (3.31 vs. 3.35) and the desire for it to continue (3.37 in both groups) were virtually identical. Novices showed slightly higher agreement with relational worsening ($M = 2.20$ vs. 2.04), but the difference was not significant.

Table 5. Comparison between novice and expert teachers.

Item	Novice (n = 134) M (SD)	Expert (n = 439) M (SD)	t(571)	p	d
1. Relational worsening	2.20 (1.14)	2.04 (1.16)	1.40	.161	0.14
2. General perception	3.31 (1.30)	3.29 (1.16)	0.17	.865	0.02
3. Cyberbullying	3.31 (1.38)	3.35 (1.36)	−0.30	.767	−0.03
4. Smartphone-based homework	2.67 (1.27)	2.40 (1.35)	2.05	.040	0.20
5. Continuation	3.37 (1.43)	3.37 (1.36)	0.00	1.000	0.00

Note. Novice = fewer than three years of service; expert = three or more years. Independent-samples Student's t-tests, two-tailed.

The exception concerned the use of smartphone-based homework methodologies, for which novices reported higher use ($M = 2.67$, $SD = 1.27$) than experts ($M = 2.40$, $SD = 1.35$), $t(571) = 2.05$, $p = .040$, $d = 0.20$, although both values remained below the neutral midpoint and the effect size was small. Since age did not differentiate this item (Section 3.2), the difference appears to be linked to

professional experience rather than to generational factors. Less experienced teachers, more recently trained and closer to university-based pedagogical models, seem somewhat more inclined to retain smartphone-based homework practices despite the restriction.

3.4. Perceptions by school level and type (RQ2c)

The most pronounced differences emerged when *liceo* teachers (n = 80) were compared with teachers of all other school levels and types (n = 493), a group that includes pre-primary, primary, lower secondary, technical and vocational school teachers (Table 6).

Table 6. Comparison between *liceo* teachers and teachers of other school levels and types.

Item	*Liceo* (n = 80) M (SD)	Others (n = 493) M (SD)	Mean diff.	t(571)	p	d
1. Relational worsening	2.41 (1.20)	2.03 (1.14)	0.386	2.791	.005	0.34
2. General perception	3.09 (1.25)	3.33 (1.18)	−0.243	−1.690	.092[1]	−0.20
3. Cyberbullying	3.19 (1.32)	3.37 (1.37)	−0.177	−1.083	.279	−0.13
4. Smartphone-based homework	2.52 (1.25)	2.46 (1.35)	0.068	0.425	.671	0.05
5. Continuation	3.24 (1.56)	3.39 (1.34)	−0.152	−0.916[2]	.360	−0.11

Note. Independent-samples Student's t-tests; two-tailed p values. [1] One-tailed p = .046 (H_a : μ liceo < μ others). [2] Levene's test indicated unequal variances; Welch's t(98.8) = −0.81, p = .418.

On the relational-worsening item, *liceo* teachers were less inclined to report an improvement (M = 2.41, SD = 1.20) than the other teachers (M = 2.03, SD = 1.14). The difference of 0.39 points was statistically significant, t(571) = 2.79, p = .005, d = 0.34, the largest effect observed in the study, although still small in magnitude. *Liceo* teachers therefore hold a comparatively more reserved view of the relational effects of the ban, while still disagreeing, on average, that relationships have worsened.

Liceo teachers also reported a less positive general perception of the ban (M = 3.09, SD = 1.25) than their colleagues (M = 3.33, SD = 1.18), with both groups close to neutrality. The 0.24-point difference reached significance under the one-tailed test of the directional hypothesis that *liceo* teachers would express lower scores, t(571) = −1.69, p = .046, but not under a two-tailed test (p = .092); it should therefore be interpreted as a trend toward lower enthusiasm for the new rules among *liceo* teachers.

No significant between-group differences emerged for the perceived effect on cyberbullying, which remained moderate and close to neutrality in both groups (*liceo* M = 3.19; others M = 3.37; p = .279), or for support for the continuation of the ban (*liceo* M = 3.24; others M = 3.39; p = .360). For the latter item, *liceo* teachers showed the largest dispersion in the questionnaire (SD = 1.56); the result did not change with Welch's correction for unequal variances, t(98.8) = −0.81, p = .418. Finally, the two groups converged in limiting the use of smartphones in homework practices, with values below the midpoint and a marginal difference of 0.06 points (*liceo* M = 2.52; others M = 2.46; p = .671).

4. Discussion

Overall, teachers' attitudes toward the smartphone ban introduced in Italian schools in September 2025 are modest in magnitude and largely clustered around neutrality, with the clearest and most consistent finding being that teachers do not perceive a worsening of student relationships since its introduction; if anything, a mild improvement is reported. Age does not differentiate perceptions, while years of experience play a limited role, mainly concerning the persistence of smartphone-based homework practices among less experienced teachers. The most robust differentiation emerges by school type: *liceo* teachers display a comparatively more cautious and less enthusiastic stance toward the ban than colleagues teaching in other school levels and tracks, even though neither group expresses strongly positive or negative views. The main findings discussed in this section, the possible reasons behind them and their implications are summarized in Table 7.

Table 7. Summary of the main findings discussed, possible explanations and implications.

Finding	Evidence	Possible explanations	Implications
Perceived mild improvement in relationships between students	Item 1: M = 2.08 (disagreement with worsening)	Fewer distractions during lessons and breaks favor face-to-face interaction; consistent with the larger effects of bans on social well-being (Böttger & Zierer, 2024)	Monitor the relational climate over time with objective indicators
Limited confidence in the effect on cyberbullying	Item 3: M = 3.34, close to neutral	Cyberbullying largely occurs outside school hours and depends on family regulation strategies (Tirocchi et al., 2024)	Complement the ban with media education involving students and families (Gui et al., 2023)
Ambivalent acceptance of the ban	Items 2 and 5: M = 3.30 and 3.37, with high SDs	Mixed evidence on the effects of bans (Rahali et al., 2024); educators' preference for school-level rules over blanket bans (Gath et al., 2024)	Allow school-level adaptation and communicate the rationale and evidence behind the rule
Limited smartphone-based homework after the ban	Item 4: M = 2.47, below the midpoint	The ban may be read as a general institutional signal against smartphones, with a spillover beyond the classroom	Provide guidance on legitimate didactic uses of digital devices outside class
Less experienced teachers more inclined to use smartphone-based methods	Novices vs. experts on item 4: d = 0.20; no age effect	Recent training on the critical integration of technologies (Santilli et al., 2025); digital self-efficacy (Zivi et al., 2025)	Draw on novice teachers' digital competences in professional development
More reserved stance of *liceo* teachers	Item 1: d = 0.34; item 2: trend (two-tailed p = .092)	Restriction new for upper secondary schools; older, more autonomous students; academic orientation valuing digital study resources	Differentiate implementation and evaluation by school level and type

The perceived relational improvement is consistent with the rapid review by Böttger and Zierer (2024), in which the effects of smartphone bans were small overall but more evident for social well-being, including bullying, than for academic performance. At the same time, teachers were only moderately convinced that the ban helps to counter cyberbullying (M = 3.34). This apparent gap may reflect the different scope of the two items: the relational climate is observed directly at school, whereas cyberbullying largely takes place outside school hours and beyond the reach

of a classroom rule. A ban regulating the presence of devices at school can plausibly favor face-to-face interaction during lessons and breaks, but teachers seem aware that online aggression between students follows different dynamics, which also involve families and the strategies they adopt to regulate smartphone use at home (Tirocchi et al., 2024).

The near-neutral means for the general perception of the ban and for its continuation should not be read as indifference. The relatively high standard deviations point to a heterogeneous teaching population, consistent with the double-edged nature of the international debate and with the mixed evidence summarized in policy reviews (Rahali et al., 2024). Studies of educators' views in other national contexts have similarly found a preference for school-level rules over blanket bans (Gath et al., 2024), and comparative analyses show that restrictions vary widely in scope across countries and are framed in different ways in public discourse (Kharazi et al., 2026; Pozsonyi et al., 2025). Italian teachers seem to share this ambivalence: they acknowledge some benefits of the ban but do not express strong support for its continuation.

The result on homework practices deserves particular attention. The circular concerns the use of smartphones in class, yet most teachers reported that they do not use smartphone-based methods for homework either. Although a pre-ban baseline is not available, this suggests that a restriction designed for the classroom may have a broader inhibiting effect on the didactic use of mobile devices, possibly because teachers interpret it as a general institutional signal against these tools. This possible spillover is relevant because the evidence does not indicate that the mere presence of smartphones necessarily impairs cognition (le Roux et al., 2025), and because the digital practices developed during and after the pandemic represented an important, if uneven, resource for Italian schools (Aiello, 2021; Lazzari, 2024; Toto & Limone, 2021). Teachers' own relationship with smartphones, which shapes both their professional work and their perception of students' use (Lloret-Catala et al., 2025; Petrucco & Foschi, 2024), may also contribute to these choices.

The greater persistence of smartphone-based homework among novice teachers, independent of age, may reflect their more recent exposure to training programs that emphasize the critical integration of educational technologies (Santilli et al., 2025). It may also be related to digital self-efficacy, which has been identified as a protective factor against technostress in secondary school teachers (Zivi et al., 2025). During the pandemic, attitudes toward ICT and computer anxiety varied with teachers' age (Bianchi & Caso, 2022); in the present sample, by contrast, it was professional experience rather than age that made a difference, suggesting that recent training may matter more than generational familiarity with technology.

The more reserved position of *liceo* teachers is the most distinctive result of the study. Several interpretations are possible. First, for most teachers in the comparison group, who work in primary and lower secondary schools, restrictions on smartphone use were already in place before the 2025 circular, which extended them to upper secondary schools; their evaluations may therefore reflect a consolidated practice rather than a recent change, although the comparison group also includes technical and vocational teachers, for whom the restriction was equally new. Second, *liceo* students are older and may be considered more capable of self-regulation, and their teachers may have integrated smartphones into study activities more extensively before the ban. Third, the academic orientation of the *liceo* may lead

teachers to weigh the possible loss of digital resources for study more heavily than the benefits for the relational climate. These hypotheses cannot be tested with the present data, but they indicate that the same national rule may be perceived differently depending on students' age and on the educational culture of each school type, an aspect that remains under-researched, since most studies on school phone policies concern secondary students and rarely compare school levels (Rahali et al., 2024).

These findings resonate with broader research on media education and its potential protective role against problematic smartphone use among students, suggesting that a purely restrictive policy may need to be complemented by structured media-literacy interventions rather than treated as a self-sufficient solution. In a randomized impact evaluation, a teacher-delivered mobile media education course produced a modest but significant reduction in problematic smartphone use among Italian upper secondary students (Gui et al., 2023), and programs such as the smartphone license for preadolescents point in the same direction (Bozzato et al., 2024). Combining clear rules with educational measures and regular evaluation is also the main recommendation emerging from reviews of smartphone bans (Böttger & Zierer, 2024).

This study has some limitations. First, the sample consisted of in-service teachers enrolled in teacher-qualification courses offered by a single online university and participating on a voluntary basis, which limits the generalizability of the results to the Italian teaching population. Second, the data were collected one month after the introduction of the ban, so perceptions may reflect initial reactions rather than stable evaluations. Third, the questionnaire consisted of five ad hoc single items, which were not psychometrically validated and capture self-reported perceptions rather than observed behavior; in particular, the absence of a pre-ban measure does not allow changes in didactic practices to be estimated directly. Fourth, the groups compared in RQ2c were unbalanced in size (80 vs. 493), and several comparisons were carried out without correction for multiple testing, so the significant differences should be considered exploratory.

Despite these limitations, the study contributes original empirical evidence to the still-underdeveloped Italian literature on teacher perceptions of smartphone bans, offering a differentiated picture across teaching experience and school tracks that can inform future refinements of the policy. Future research should follow the same teachers over time, include the perspectives of students and families, and combine perception data with objective indicators of relational climate, cyberbullying episodes and learning outcomes, in order to assess the long-term didactic and relational effects of the ban.

References

Aiello, A. (2021). Integrare il digitale nella scuola italiana. Nuovi bisogni di formazione [Integrating digital teaching in the Italian school: New training needs]. *Formazione & Insegnamento*, *19*(1 Tome II), 555–569. https://doi.org/10.7346/-fei-XIX-01-21_49

Benedetto, L., Rollo, S., Cafeo, A., Di Rosa, G., Pino, R., Gagliano, A., Germanò, E., & Ingrassia, M. (2024). Emotional and behavioural factors predisposing to internet addiction: The smartphone distraction

among Italian high school students. *International Journal of Environmental Research and Public Health*, *21*(4), Article 386. https://doi.org/10.3390/ijerph21040386

Bianchi, M., & Caso, D. (2022). Distance learning during Covid-19 pandemic: Italian teachers' well-being and the role of age on ICT adoption. *Statistica Applicata – Italian Journal of Applied Statistics*, *33*(2), 177–198. https://doi.org/10.26398/IJAS.0033-010

Böttger, T., & Zierer, K. (2024). To ban or not to ban? A rapid review on the impact of smartphone bans in schools on social well-being and academic performance. *Education Sciences*, *14*(8), Article 906. https://doi.org/10.3390/educsci14080906

Bozzato, P., Croce, M., & Leanza, N. (2024). Preventing problematic smartphone use: Effectiveness evaluation of the smartphone license program for Italian preadolescents. *Journal of Psychological and Educational Research*, *32*(2), 34–51.

Chauhan, S., Goyal, S., Bhardwaj, A. K., & Sergi, B. S. (2022). Examining continuance intention in business schools with digital classroom methods during COVID-19: A comparative study of India and Italy. *Behaviour & Information Technology*, *41*(8), 1596–1619. https://doi.org/10.1080/0144929X.2021.1892191

D'Agostini, M., Cantone, D., Pascut, S., Zanon, F., & Feruglio, S. (2024). Connected at school: Smartphone and Internet use among adolescents. *Form@re – Open Journal per la Formazione in Rete*, *24*(1), 262–270. https://doi.org/10.36253/form-15707

Gath, M. E., Monk, L., Scott, A., & Gillon, G. T. (2024). Smartphones at school: A mixed-methods analysis of educators' and students' perspectives on mobile phone use at school. *Education Sciences*, *14*(4), Article 351. https://doi.org/10.3390/educsci14040351

Gui, M., Gerosa, T., Argentin, G., & Losi, L. (2023). Mobile media education as a tool to reduce problematic smartphone use: Results of a randomised impact evaluation. *Computers & Education*, *194*, Article 104705. https://doi.org/10.1016/j.compedu.2022.104705

The jamovi project. (2025). *jamovi* [Computer software]. https://www.jamovi.org

Kharazi, S., Sala, A., Bostelmann, G., & Kotseva, B. (2026). *Banning mobile phones in schools: A comprehensive analysis of media coverage across countries* (EUR 40636). Publications Office of the European Union. https://doi.org/10.2760/4493100

Lazzari, M. (2024). Tecnologie digitali prima e dopo il COVID-19: Rischi di digital divide, long Covid educativo e povertà educativa nella scuola primaria [Digital technologies before and after COVID-19: Risks of digital divide, educational long Covid and educational poverty in primary school]. In P. Malavasi, T. Grange, G. Nuti, & A. Bobbio (Eds.), *La pedagogia nella città che cambia* [Pedagogy in the changing city] (pp. 89–94). Pensa MultiMedia.

le Roux, D. B., Parry, D. A., & Feldman, J. (2025). Does the mere presence of smartphones impact cognition in the high school classroom? *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *19*(4), Article 1. https://doi.org/10.5817/CP2025-4-1

Lloret-Catala, C., Suárez-Guerrero, C., & Mateu-Luján, B. (2025). Teachers' view of the educational relationship between teenagers and smartphones in Spain. *Interactive Learning Environments*, *33*(4), 2914–2927. https://doi.org/10.1080/10494820.2024.2425959

Ministero dell'Istruzione e del Merito. (2025, June 16). *Circolare prot. n. 3392* [Ministerial circular no. 3392 on the use of smartphones in schools].

Petrucco, C., & Foschi, L. C. (2024). Teachers and smartphones: Usage patterns, perceptions, and impact on professional work and personal well-being. *Italian Journal of Educational Research*, (33), 175–184. https://doi.org/10.7346/sird-022024-p175

Pozsonyi, E., Lengyelné Molnár, T., & Racsko, R. (2025). To ban or not to ban – Domestic and international experiences of restricting mobile phone use in schools. *Educational Media International*, *62*(4), 433–449. https://doi.org/10.1080/09523987.2025.2588529

Rahali, M., Kidron, B., & Livingstone, S. (2024). *Smartphone policies in schools: What does the evidence say?* Digital Futures for Children centre, London School of Economics and Political Science and 5Rights Foundation. https://eprints.lse.ac.uk/125554/

Santilli, T., Ceccacci, S., Del Bianco, N., D'Angelo, I., & Giaconi, C. (2025). Integrating educational technologies: Critical analysis and perspectives from teacher training students. *Journal of e-Learning and Knowledge Society*, *21*(1), 256–266. https://doi.org/10.20368/1971-8829/1136022

Tirocchi, S., Crescenti, M., & Catozzella, D. (2024). Parental perspectives on smartphone usage: A qualitative study of the "Smartphone Usage Agreement" and other control strategies. *Italian Journal of Sociology of Education*, *16*(1), 153–180. https://doi.org/10.14658/PUPJ-IJSE-2024-1-8

Toto, G. A., & Limone, P. (2021). Motivation, stress and impact of online teaching on Italian teachers during COVID-19. *Computers*, *10*(6), Article 75. https://doi.org/10.3390/computers10060075

Zivi, P., Malatesta, G., Mascia, M. L., Diana, M. G., Di Domenico, A., Penna, M. P., & Palmiero, M. (2025). Protective factors against technostress in secondary school teachers. *Scientific Reports*, *15*, Article 35554. https://doi.org/10.1038/s41598-025-19604-4