

ARTIFICIAL INTELLIGENCE AND TEACHERS' WORK–LIFE BALANCE: THE DOUBLE-EDGED IMPACT IN SCHOOL CONTEXT

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Abstract

The increasing use of Artificial Intelligence (AI) in education is poised to reshape the professional landscape for teachers. Objective: This paper explores the two-pronged impact of AI tools on school teachers' work-life balance. It underscores AI's potential to ease administrative workloads and indicates the possible risk of intensified professional demands. Method: A qualitative method is used to collect data from 50 teachers employed in two private CBSC schools in Chennai. A descriptive research design was employed to collect data from respondents chosen through convenience sampling. Based on an analysis of the collected data, the study recommends integrating AI tools with a human-centred approach and promoting safeguards to prevent the blurring of boundaries between professional and personal life. Conclusion: It advocates policy frameworks prioritizing human-centric technology adoption to enhance teachers' work-life balance.

KEYWORDS: Teachers, Work-life Balance, Artificial Intelligence, and School.

Introduction

The engulfing presence of Artificial Intelligence (AI) is rapidly reshaping educational pedagogy today. The promoters of AI promise that the rapid changes brought about by its introduction will transform teachers' professional lives, ranging from automated grading and adaptive learning systems to generative tools that assist with lesson planning and enable quick, efficient communication. Policymakers and techno-promoters advocate AI as an effective means of addressing teacher workload and burnout. However, the reality is more complex than perceived. AI functions as a double-edged sword for teachers in schools. On the one hand, it can restructure routine tasks and enhance pedagogical capacity; on the other, it can intensify digital work and blur the boundaries between professional and personal time.

The paper first spells out its objectives and thereafter clarifies two key concepts: Teacher Work-Life Balance (WLB) and Artificial Intelligence (AI). The study aims to answer the following question: How far do AI tools serve as a facilitator or a hindrance to the work-life balance of school teachers? The paper further explains the methodology adopted for this study, and analytically discusses on the collected data. Finally, it presents the key findings and proposes a few pertinent recommendations.

OBJECTIVES OF THE STUDY

The objectives of the study are the following:

1. To examine the dual impact of AI tools on teachers in school settings.
2. To chisel out the implications of AI integration on teachers' work-life balance.
3. To promote human-centred policy and ethical safeguards for the use of AI tools in school pedagogy.

CLARIFICATION OF CONCEPTS

Teacher Work-Life Balance (WLB)

Teacher Work–Life Balance (WLB) refers to a state of equilibrium where a teacher effectively succeeds in meeting the demands and responsibilities of his or her professional role with the needs, demands, and obligations of his or her personal, family and social life, in a manner that promotes well-being, job satisfaction, and sustainable performance. In general, teacher WLB is often perceived as a multidimensional construct encompassing various aspects, including **Time balance** (allocation of hours across domains), **Psychological balance** (handling work-related strain and stress), **Boundary management** (control over work spillover), and **Well-being and sustainability** (long-term health and professional satisfaction).

Artificial intelligence (AI) is an attempt to produce human-like intelligence in a human-made machine. There are different kinds of AI: Weak AI, Strong AI, Generative AI, Agentic AI, Artificial General Intelligence (AGI), and Quantum Artificial Intelligence (QAI). Scientists are working on developing Artificial Super Intelligence (ASI) and Organoid Intelligence (OI). AI tools are used for a variety of purposes, including in the education sector.

REVIEW OF LITERATURE

Studies have been made separately on teachers' work-life balance in general, and on technical AI readiness and competence in education. Consequently, one can identify a significant research gap: the lack of large-scale studies that directly link AI to teachers' work-life balance. Therefore, this study attempts to bridge this gap by asking: Does AI competency enhance teachers' work-life balance through greater *efficiency*, or does it lead to higher stress through constant connectivity? From the available literature on the intersection of AI and Teachers' WLB over the last ten years, the following are selected as representative studies for review here.

Logeswari, et al. (2025) use AI and machine learning (ML) to study work-life balance (WLB) among female lecturers in Tamil Nadu. Using synthetic data, the authors identify workload, role conflict, and personal responsibilities as significant challenges. They establish that ML can effectively predict WLB outcomes, and suggest institutional reforms. Similarly, Bhuvaneswari et al. (2025) employ predictive modelling and point out time pressure and institutional demands as key stressors for women teachers in Tamil Nadu. This study authenticates ML's ability to identify individuals at risk. It promotes AI as a helpful tool for targeted interventions. The strength of this study is that it directly connects AI techniques with teacher WLB analysis in Tamil Nadu.

Karpagavalli et al. (2024) focus on the Tirupur region in Tamil Nadu. They underscore that AI applications—such as automated assessment and personalized learning—can enhance teaching efficiency. However, they point out inadequate infrastructure and digital competence in low-resource settings as barriers to realizing these benefits. They conclude that AI enhances teaching methods, administrative efficiency, personalized learning, and supports automated assessment and data management. The authors categorically affirm that AI has strong potential to transform education, but it requires proper implementation and teacher readiness.

Gokula Krishnan and Reddy (2025) focus on prospective teachers. Their study states that the prospective teachers have positive attitudes toward AI pedagogy and identifies inadequate training and a lack of awareness of AI ethics as significant concerns. The authors advocate integrating AI literacy into teacher education to bridge this gap. They appreciate the willingness and preparedness of future teachers to learn and adopt AI tools, which could influence their WLB in future when AI becomes routine.

The study by Radha and Rohith (2021) finds that ML models can accurately predict WLB based on factors such as workload and stress, thereby reinforcing AI's utility in designing optimized work schedules. Their study shows that AI is effective in understanding and improving work-life balance. Conversely, Alfredo et al. (2024) advocate a human-centered approach. They caution that excluding teachers from AI system design risks increasing technostress. They claim that prioritizing teacher involvement and well-being is essential for effective AI integration.

Collectively, these studies show that while WLB and AI adoption are well-researched separately, few link the two directly. The present study aims to bridge that gap by examining the impact of AI on school teachers' work-life balance.

METHODOLOGY

A quantitative method is used to collect data from 50 teachers working in two private CBSC schools in Chennai, Tamil Nadu, India. A descriptive research design is used to gather data from respondents selected through convenience sampling. The prime objective of the questionnaire was to examine the dual impact of AI tools on school teachers. The questionnaire consists of fifteen questions divided into the following five areas, with three questions in each: (a) Demographic Background, (b) AI and Work Load, (c) Stress and Well-being, (d) Work – Life Balance, and (e). Institutional and Ethical Dimensions.

The survey was conducted in the first week of March 2026. The questionnaires were sent to the teachers by email, and data were collected via a Google Form.

RESULTS AND DISCUSSION

The data collected from the survey are presented in the order of the questionnaire questions.

Demographic Background

The demographic background refers to data related to teachers' teaching experience. The majority of the respondents, 78 per cent (52+26%), have more than three years of teaching experience. Their many years of experience suggest that their views are reliable and well-informed. The respondents (22%) with less than three years of teaching experience are young and comfortable with AI Tools or have computer competency.

Figure 01: Years of Experience in Numbers

<Insert Figure 01 here>

Leveraging AI Tools for Pedagogy

Regarding the frequency of the use of AI in the pedagogy, 48 per cent of the respondents use it regularly, while 32 per cent occasionally. The remaining 20 per cent rated themselves as beginners and have attempted to use AI in their teaching a few times. Therefore, almost everyone (100%) has used AI in their teaching, and 48 per cent use it regularly. This indicates that their views stem from their hands-on experience with AI tools.

Figure 02: Leveraging AI Tools for Pedagogy

<Insert Figure 02 here>

Areas of Work Where AI Is Applied

The next set of data focuses on the specific areas where AI is being used increasingly in teaching. The majority of the respondents, 56 per cent, use AI for lesson planning and developing or organizing their resources, 20 per cent for administrative tasks and for communication with the students, while only 10 per cent use it for grading and assessment. Nearly 14 per cent of the respondents have not attempted to use AI tools in their pedagogy. The survey indicates that the majority (56%) use AI principally as a data source or development tool. While 20 per cent of them use it for administrative and communication purposes, only 12 per cent use AI for grading and assessment. In fact, using AI for the latter task would enable them to save more time.

Figure 03: Types of Tasks Wherein AI Is Used

<Insert Figure 03 here>

AI and Workload

The majority of respondents (56%) are aware of the benefits of using AI tools, particularly their time-saving capabilities. Specifically, 16 per cent strongly agree, and 40 per cent agree that AI tools enable them to perform tasks such as grading, report writing, and communication. 16 per cent of the respondents opine that AI tools don't help reduce the time spent on administrative tasks, while a sizeable 28 per cent remain uncommitted/neutral. Close to half of the respondents (44%) state that using AI tools doesn't help them prepare their work faster or save time. This implies that they may lack adequate training or the ability to use AI tools effectively. In Figure 4, the diagonal hatching indicates the respondents' awareness of the benefits of AI (Qn 04).

Ten per cent of the teachers strongly hold that there is no pressure from the school management to incorporate AI into pedagogy, while another 38 per cent mildly agree. Thus, a total of 48 per cent deny any pressure from school management to use AI in teaching. 30% of respondents remain neutral on this issue. While 22 per cent agree that there is pressure from the school leadership to use AI in pedagogy. Among these, a mere 4 per cent strongly voice their opinion about pressure from school management to incorporate AI into teaching. The word 'pressure' is used in the questionnaire. Since it carries a negative connotation, respondents were likely to be highly cautious in their responses. This could have been the reason that 30 per cent of the respondents chose the response, "neutral". Perhaps, instead of the noun 'pressure', the verb 'encourage' had been used, the responses might have been sharper and clearer. In Figure 04 below, the dotted (stippling) pattern represents the pressure from the school management to incorporate AI into teaching (Qn 05).

Half of the respondents (50%; 10% strongly agree; 40% agree) agree that the use of AI tools enables them to devote more time and energy to direct student interaction. Whereas only 10 per cent (4% disagree; 6% strongly disagree) disagree with the statement, 40 per cent of respondents remain neutral. Interestingly, on whether the use of AI tools enables them to devote more time to interacting with students, the respondents are evenly divided (50% each). This sharp divide among the respondents perhaps suggests that either the time saved through AI use was not used for the students' benefit or that respondents did not use the tools efficiently enough to save time. In Figure 04 below, the horizontal lines represent the extent to which teachers believe AI tools enable them to devote more time and energy to direct student interaction (Qn 06).

Figure 04: AI & Workload

<Insert Figure 04 here>

Research studies suggest that the use of Generative AI can reduce lesson preparation time (Luckin et al., 2016; Holmes, Bialik, and Fadel, 2019) and help create lesson plans, worksheets, quizzes, and differentiated materials. These gains by using AI effectively will definitely improve work–life balance. However, Neil Selwyn (2016) strongly opines that digital tools often redistribute rather than eliminate work. Consequently, if expectations rise alongside AI-driven productivity, teachers may face “intensification by efficiency,” in which saved time is quickly replaced by new demands.

Stress and Well-being

Among the respondents, 52 per cent (16% strongly agree and 36% agree) state that learning to use new AI tools does not cause them stress, while 26 per cent (18% agree; 8% strongly agree) think it does. The rest of them (22%) remain neutral. The underlying factor for the varying views could also be age and years of experience. The younger generation may find it easier to learn and use new AI tools than the older generation of teachers. In Figure 05, below, data regarding learning to use new AI tools as a stress factor are represented by diagonal hatching (Qn 07).

The majority of respondents, 66 per cent (58% feel and 8% strongly feel), hold the view that they are more professionally fulfilled since they started using AI tools in their work. Only 8 per cent disagree (4% strongly disagree and another 4% disagree) with the statement, while a sizeable 26 per cent remain neutral. The varying degrees of professional fulfilment when using AI tools may be due to some teachers either not using them or using them inadequately. This, obviously, results in a lack of confidence and a sense of being ill-equipped. In Figure 05 below, the dotted (stippling) pattern represents the use of AI tools and experience of fulfilment in work (Qn 08).

Among the respondents, 24 per cent are of the view that concerns such as accuracy, ethics and misuse of AI did not increase their mental load at work, while 34 per cent (28% agree and 6% strongly agree) feel that concerns related to AI ethics cause them discomfort. A higher percentage of the respondents (42%) remain neutral. A high percentage of respondents (76%) state that concerns related to AI ethics require greater attention. They either feel uncomfortable about it or are insufficiently aware of the implications of AI ethics. In Figure 05 below, the horizontal-line design represents the discomfort caused by AI ethics in teachers’ work (Qn 09).

Figure 05: Stress & Wellbeing

<Insert Figure 05 here>

Research has consistently shown substantial variation in technological self-efficacy across factors such as age, training background, and levels of available institutional support (OECD, 2021). Without differentiated and context-sensitive support, AI integration risks intensifying professional stress for certain groups of teachers while benefiting others.

Work-Life Balance

A majority of respondents, 68 per cent (52% agree and 16% strongly agree), are of the view that the use of AI tools enhances efficiency and provides more personal time. AI tools help them complete their work faster, thereby allowing them to reclaim personal time. A very small percentage (6%) of respondents state that the use of AI tools has not made any difference to their work-life balance, while 26 per cent remain neutral. While two-thirds of the respondents (68%) feel that the use of AI tools enables them to complete their work faster

and has given them more quality personal time, nearly one-third of the respondents (26+6%=32%) remain neutral. It could be perhaps due to their lack of AI competency. In Figure 06 below, the diagonal hatching represents the use of AI tools that enhance efficiency and provide more personal time (Qn 10).

Melissa Gregg deliberates on “Always-on” culture in her seminal 2011 work and explains how digital technologies blur the boundary between professional and personal life. Gregg underscores that this “boundary erosion” creates an “intimacy” with work that leads to “presence bleed,” a state where employees never truly feel “off the clock”.

Regarding “Always-on” culture, nearly one-third of respondents, 32 per cent (26% agree; 6% strongly agree) state that AI tools make it harder for them to disconnect from their work outside school hours, while 22 per cent feel free from work pressure outside school hours. Nearly half of the respondents (46%) remain neutral. For 32 per cent of respondents, the pervasive presence of AI tools makes it difficult to disconnect from work outside school hours. However, the majority of them (68%) seem apprehensive about the “Always-on” culture. In Figure 06 below, the dotted pattern depicts the data on the emergence of an “Always-on” culture due to the introduction of AI in teaching (Qn 11).

More than half of the respondents, 54 per cent (38% agree; 16% strongly agree), opine, while responding to question 12, that their school offers them adequate training and support to use AI effectively without added stress. On the other hand, 10 per cent of respondents feel that their school does not offer them adequate training and support to use AI effectively without added stress. More than one-third (36%) remain neutral. The reason for these contrasting views can be traced to the fact that the respondents come from two schools in Chennai. In Figure 06 below, the horizontal line pattern represents school management's role in providing teachers with training and support for using AI tools (Qn 12).

Figure 06: Work-Life Balance

<Insert Figure 06 here>

Institutional and Ethical Dimensions

More than half of the respondents, 54 per cent (40% agree and 14% strongly agree), opine that their school has a clear and fair policy on the use of AI by students and staff. However, 12 per cent of them respond negatively. One has to keep in mind that the respondents come from two CBSC schools. Whether this 12 per cent comes from one school or from both schools cannot be ascertained. One third of the respondents (34%) remain neutral. The differing opinions among the respondents may be due either to a lack of adequate awareness of such a policy or to its ineffective implementation. Moreover, as the respondents come from two schools, these two opinions may refer to two different schools with varying degrees of awareness or of their implementation. In Figure 07 below, the diagonal hatching represents the data on the awareness of a clear and fair policy on the use of AI by students and staff (Qn 13).

Regarding whether detecting AI-generated student work (e.g., essays) has added new and challenging responsibilities to their role, 16 per cent (4% strongly disagree; 12% disagree) of the respondents state that it is not a challenging task. On the other hand, 44 per cent (40% agree; 4% strongly agree) think that it is a new and challenging responsibility. The rest, 40 per cent, remain neutral. The differences in the subjects and classes taught by teachers could reasonably be the cause for the varying perceptions among the respondents. In Figure 07 below, the dotted design shows that AI Ethics is a stressful and challenging factor (Qn 14).

Regarding the overall impact of AI on the quality of teachers’ lives, 66 per cent responded positively (50% agreed; 16% strongly agreed). Only 6 per cent believe AI has not significantly improved their lives, while more than a quarter of participants (28%) remain neutral. These varying levels of perception may be due to a lack of

awareness of the advantages of AI tools or to their ineffective use. In Figure 07 below, the diagonal hatching represents the impact of AI on the quality of teachers' lives (Qn 15).

In the Algorithmic era, the role of a teacher is not replaced, but redefined. A teacher is no longer a broadcaster of information. A teacher is called to be a designer of learning experiences: a tutor of motivation, a guardian of projects, a protector of identity, a custodian of standards, and a creator of culture. This shift is significant because the challenge of education is no longer access to information, but the cultivation of sustained interest. Artificial Intelligence can never fulfil the deep human longing to be recognized, appreciated and challenged by someone REAL. The results of the survey related to Institutional and Ethical aspects of the use of AI are given below:

Figure 07: Institutional and Ethical Dimension

<Insert Figure 06 here>

KEY FINDINGS AND RECOMMENDATIONS

Since the number of respondents is only 50 and they come from just two schools in Chennai, the survey findings cannot be easily generalized. Moreover, it must be admitted that there are differences even between private schools regarding the available infra-structural facilities. All the same, the findings are significant insofar as they indicate certain trends in the use of AI tools in school settings, create space for socio-technological and ethical reflections, and guide the education sector toward framing clear and effective policies with a futuristic vision.

Major Findings

1. AI tools swiftly provide resources, enable speedy organization of the data, and assist effectively in communication and grading.
2. Through the use of AI tools efficiently, teachers are enabled to complete their tasks swiftly and use the reclaimed professional time to guide students more effectively.
3. The use of AI tools in teaching enhances teachers' professional confidence and can lead to effective outcomes.
4. Concerns such as AI ethics and unfair use of AI tools cause discomfort among teachers.
5. The introduction of AI tools in schools seems to cause anxiety about a likely shift toward an "Always-on" culture, which creates apprehension about their use.
6. Educational institutions should offer adequate training and support to staff and students on the effective use of AI tools, along with regular updates on new features.
7. Effectively disseminating and implementing clear and fair policies on the use of AI tools among all stakeholders in educational institutions should be mandatory.
8. The use of AI tools has an encouraging effect on teachers' work-life balance.

Recommendations

The study conducted in two schools in Chennai affirms that the use of AI tools enhances rather than undermines teachers' work-life balance. Moreover, the implementation of AI tools in the pedagogy must be guided by deliberate policy choices that are built on the following fundamental pillars:

1. AI adoption in the pedagogy must reduce or at least not increase overall teacher workload, and ensure efficiency gains are protected rather than absorbed into new expectations.
2. Ongoing, practice-embedded training rather than one-off workshops should be organized for teachers. Effective support from school management reduces cognitive burden, facilitates effective adoption, and guarantees participatory implementation, aligning AI use with classroom realities.
3. Clear norms for after-hours communication, platform monitoring, and data reporting should be mandatory in educational institutions. Safe-guarding off-duty time is vital for teachers' work-life balance.
4. Technical training must incorporate components on AI ethics, data stewardship, and responsible pedagogical use.

Conclusion

Artificial intelligence is reshaping the ecology of education in ways that are promising and precarious. AI is a double-edged tool. It can enhance teachers' work-life balance through efficiency. However, it may increase workload and stress in the absence of proper training, clear and effective policy, and human-centred design. Importantly, the decisive factor is not technology itself, but the institutional frameworks and policy choices that shape its use. Therefore, if AI is to enhance teachers' work-life balance, a human-centered approach—grounded in adequate training and upskilling, workload management and boundary protection, professional trust, and ethical responsibility—is indispensable.

Abbreviation

Qn - stands for the question number in the questionnaire used to elicit data.

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Figures:

Figure 01: Years of Experience in Numbers

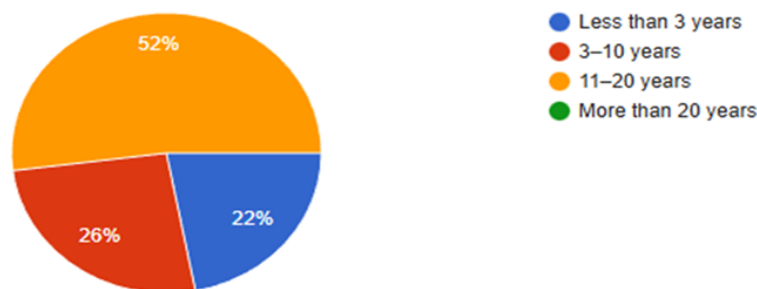


Figure 02: Leveraging AI Tools for Pedagogy

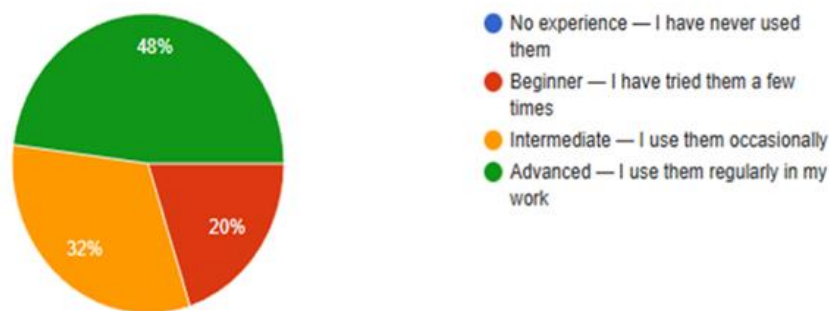


Figure 03: Types of Tasks Wherein AI Is Used

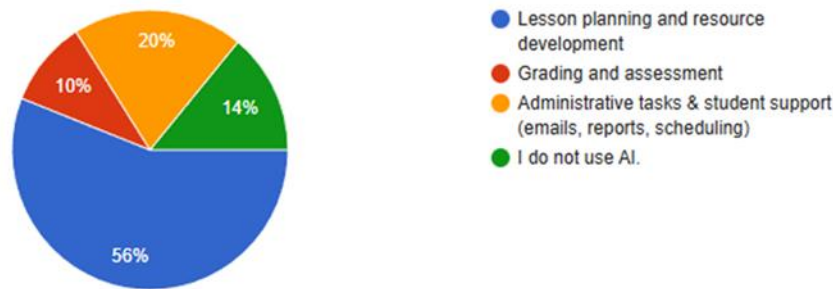
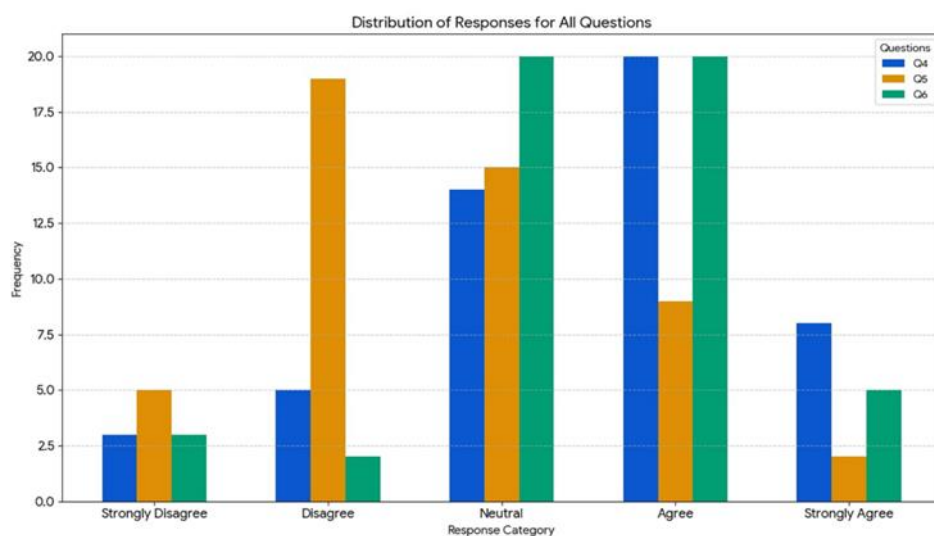


Figure 04: AI & Workload



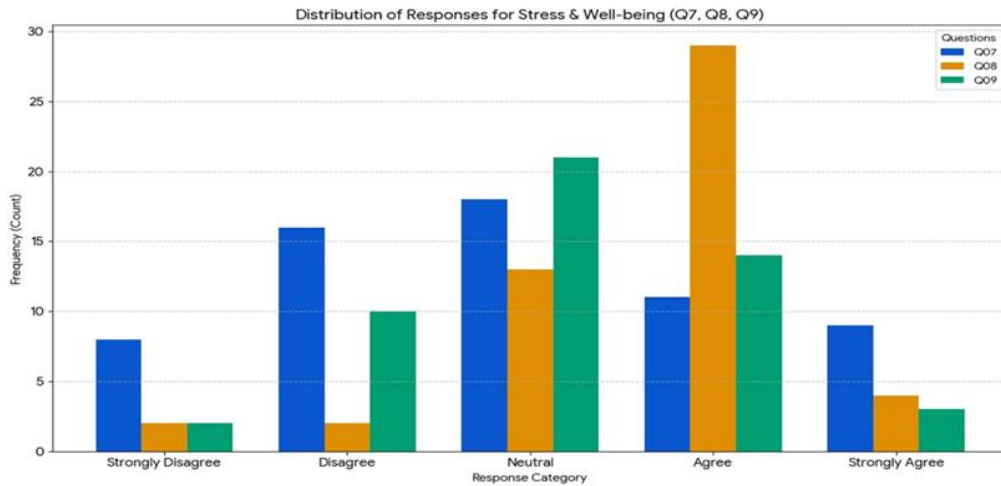
Decoding of Patterns:

Diagonal hatching: Teachers' Awareness of the benefits of AI

Dotted pattern: Pressure from the school management to incorporate AI into teaching

Horizontal line pattern: Use of AI tools enabling teachers to devote more time and energy to direct students

Figure 05: Stress & Wellbeing



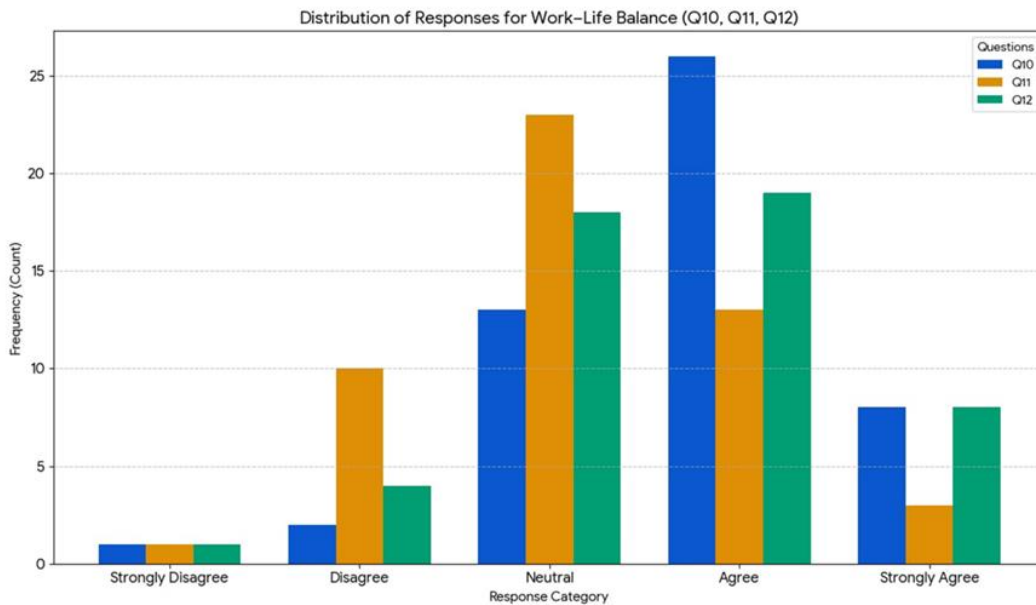
Decoding of Patterns:

Diagonal hatching: Learning to use new AI tools a stress factor

Dotted pattern: Use of AI tools and experience of fulfilment in work

Horizontal line pattern: AI ethics causes discomfort to teachers in their work

Figure 06: Work-Life Balance



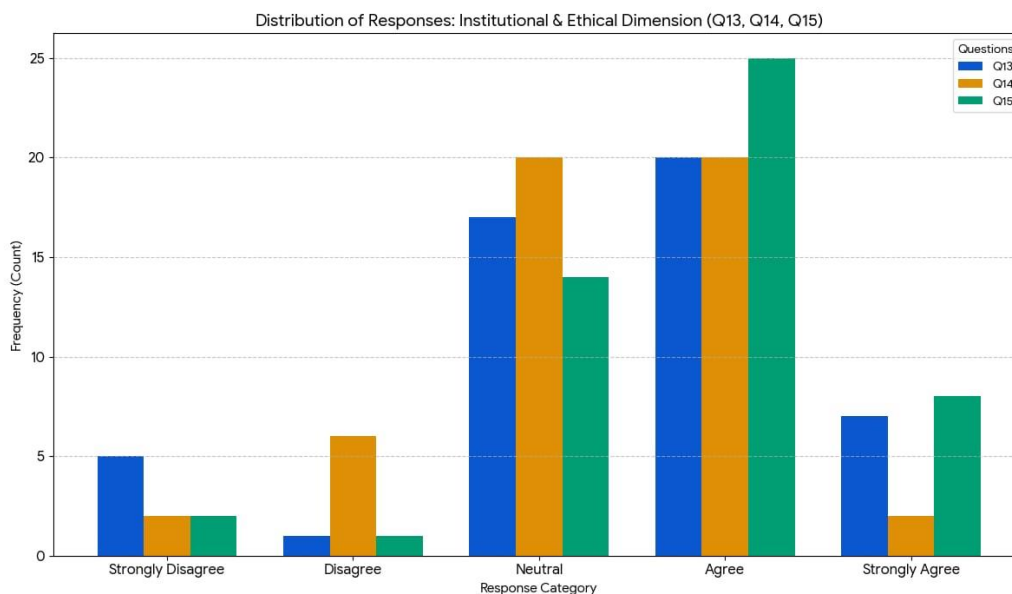
Decoding of Patterns:

Diagonal hatching: Use of AI tools enhances efficiency and provides more personal time

Dotted pattern: Inducement of AI towards an “Always-on” culture

Horizontal line pattern: Role of school management in providing training and support to teachers to use AI tools.

Figure 07: Institutional and Ethical Dimension



Decoding of Patterns:

Diagonal hatching: Awareness of the school's clear and fair policy on the use of AI Ethics

Dotted pattern: AI Ethics as a stressful and challenging factor

Horizontal line pattern: On the impact of AI on the quality of teachers' lives.

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