



Workload demands, unpaid hours, and concerns about time with children: a survey of Australian early childhood educators

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Abstract

Given the importance of quality early childhood education and care (ECEC) and growing demand for ECEC, the widely reported, but less frequently researched workforce issues across international ECEC services are a substantial social, political, and economic problem. In an effort to build our understanding of educators' experiences of work in ECEC, this online questionnaire study (N = 570) gathered basic foundational data on Australian educators' workload. We focused specifically on educators' work hours (working with and away from children, paid and unpaid hours, distracted and interrupted time at work, and breaks) and workload demands [using Spector and Jex's (1998) Quantitative Workload Inventory]. This study makes a novel theoretical contribution, combining demand theory from occupational stress literature with theory on ECEC quality, by additionally gathering educators' perspectives on the relationship between workload and quality, including quality interactions with children. Many educators in this study reported spending a significant amount of time working away from children, experiencing frequent distractions and interruptions. Most agreed that they are concerned that children are not receiving enough of their time. A substantial majority of educators also agree that their workload hinders ECEC quality, with insufficient time for all their work tasks, which often spread into unpaid hours. Our study is the first to quantify and report on educators' unpaid hours, which appear to constitute a sizeable component of educator workload. Our study establishes workload as a significant demand for ECEC educators, confirming that there may be a relationship between educator.

Keywords Early childhood education · Workload · Work hours · Demands

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The work of educators in Early Childhood Education and Care (ECEC) services is of increasing international interest, with good reason, given the important role they play in the lives of young children in prior-to-school settings. Much of the prior research on work in ECEC aligns with common workforce issues evident in Australia, Canada, New Zealand, United Kingdom, and United States. Issues include educator shortages, low levels of job satisfaction and wellbeing, high turnover rates and widespread burnout (Australian Institute for Teaching and School Leadership [AITSL], 2021; Cumming et al., 2021; Early Childhood Education Directorate, 2017; The Organization for Economic Cooperation and Development [OECD], 2020a; United Workers Union [UWU], 2022; Wells, 2015). This article reports on measures of Australian ECEC educators' workload (contact and non-contact hours, paid and unpaid, distracted and interrupted time), breaks, and workload demands to provide a preliminary exploration of how workload relates to interactions with children and conceptions of service quality. Workload is defined here as the amount of work to be done (Spector & Jex, 1998), represented by hours worked (as in OECD, 2020b). Demands are features of work that have the potential to contribute to worker strain, by requiring high levels of sustained effort (Demerouti & Bakker, 2011). Drawing on perspectives from degree-qualified Early Childhood Teachers (ECTs) and other vocationally-trained early childhood educators, this study also considers the potential for educator workload to become so demanding that it diminishes ECEC quality.

Theoretical and conceptual framework

This article makes a novel theoretical contribution to the literature on ECEC work, by combining Job Demands-Resources theory (JD-R) with ECEC quality theory, positioning ECEC quality as an organisational outcome (see Fig. 1). In JD-R, workload is considered a job demand as it can contribute to worker strain (Bakker et al., 2023). Job resources, including breaks, autonomy, wages, and supervisor support contribute to worker motivation but can also buffer the straining effect of demands (Demerouti & Bakker, 2011). JD-R is used across a broad range of sectors and professions to understand the interplay of demands and resources on employee outcomes and subsequently, organisational outcomes (Bakker et al., 2023).

ECEC quality is widely understood through two complementary domains, process and structural quality (OECD, 2020a; Slot, 2018), with a third, more recent

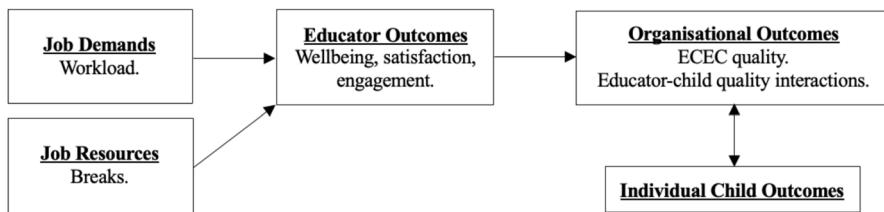


Fig. 1 Conceptual framework for this ECEC workload study, combining JD-R and ECEC quality theory

domain known as system quality (Torii et al., 2017). Process quality elements, mainly educator–child interactions, are the foundation of ECEC quality, with significant contributions to individual child outcomes (Siraj-Blatchford et al., 2002; Slot, 2018; Torii et al., 2017). Structural quality (educator qualification, group size, physical environment, educator working conditions and wages) and system quality (regulations and funding) are significant mostly because they are known to promote quality interactions (Slot, 2018; Torri et al., 2017).

There are different kinds of quality interactions that can occur during caregiving routines such as mealtimes and toileting, during structured group activities, and during free play. However, evidence indicates that ‘Sustained Shared Thinking’ (SST) is the most significant kind of quality interaction, with direct evidence-based links to cognitive outcomes for children (Sylva et al., 2004; Torri et al., 2017). SST involves two or more people ‘work[ing] together in an intellectual way’, for example solving problems, clarifying concepts, and evaluating experiences (Sylva et al., 2004, p. 36). SST typically involves an intentional instructional component and is most likely to occur when educators spend uninterrupted, focused time working directly with children (Meade et al., 2013; Sylva et al., 2004; Torri et al., 2017). Despite the significance of quality interactions, there remain significant challenges in ensuring they occur frequently and consistently. The Australian Children’s Education and Care Quality Authority e-newsletter resource on SST recognises:

In the busyness of the average day, it can be hard to find the time for such interactions to occur. For many educators, the question is not so much about whether such conversations and interactions are important but rather how we can ensure that they happen on a regular basis? (Touhill, 2012, p. 1)

Our study makes an initial effort to quantify educator’s workload and ‘busyness’, an approach that is often overlooked in JD-R research, where there is a tendency to focus on correlations between demands, resources, and worker outcomes (Demerouti & Bakker, 2011). While correlation studies are certainly useful, demands are not necessarily problematic, unless they require high levels of sustained effort (Demerouti & Bakker, 2011). Thus, it is important to understand how great a risk workload currently poses to both educator and organisational outcomes. We also consider the potential for workload to directly or indirectly influence ECEC quality, by physically removing educators from working directly with children, and diminishing their mental capacity for quality interactions, including SST.

Literature review

Contact and non-contact hours

Educator workload typically involves both contact (working directly with children) and non-contact hours (working away from children) (Harper et al., 2024; Harrison et al., 2019, 2024; Kusma et al., 2011). Contact hours involve interacting with children, including episodes of SST, but also passive supervision, for example

during sleep time, and serving meals (Harrison et al., 2019; Kusma et al., 2011). It is unclear what proportion of contact work is spent actively interacting with children, however, some research indicates that less than 10% of educator–child interactions are likely to involve SST (Meade et al., 2013; Siraj-Blatchford et al., 2002).

Recent research indicates that up to 40% of educators' paid hours may be spent in non-contact work (AITSL, 2021; Harrison et al., 2019, 2024; Kusma et al., 2011; OECD, 2020b), including professional development, administration, paperwork, cleaning, communicating with families, and staff meetings (Harper et al., 2024; Harrison et al., 2019, 2024; Kusma et al., 2011; OECD, 2020b; UWU, 2022). Concerningly, some educators perceive their non-contact workload as mostly low value administrative work (Bullough et al., 2014; Harper et al., 2024; Harrison et al., 2019) and there are reports of growing non-contact workloads (Bullough et al., 2014; Harper et al., 2024; Irvine et al., 2016). Further, there are indications that non-contact workloads may be heaviest for ECTs (degree-qualified, early childhood teachers) (OECD, 2020b), despite evidence that ECTs provide higher quality interactions than vocationally-trained educators, including more frequent episodes of SST (Manning et al., 2017; Meade et al., 2013; Siraj-Blatchford, 2010; Sylva et al., 2004). Our study contributes baseline data for understanding contact and non-contact hours for ECTs and vocationally-trained educators, while also probing for potential effects of non-contact workload on ECEC quality.

Paid and unpaid hours

Literature from disciplines such as gender equity, feminism, and employment relations shows that the more that paid work resembles the unpaid, domestic work historically undertaken by women, including 'childcare', the poorer paid and less respected that work tends to be (High-Level Panel on the Teaching Profession, 2024). This is certainly the case in Australia, where ECEC educators have the thirteenth lowest paid job, between restaurant hosts (12th place) and beauty therapists (14th) (Indeed, 2023), and ECTs do not experience pay parity with primary school teachers (World Bank, n.d.). Given the low pay of ECEC work, any unpaid hours are likely to be a significant concern for educators.

There is a distinction between 'salary paid' and 'wage paid' employees. In Australia, ECTs are commonly perceived to be salaried, similar to primary and secondary schoolteachers, which includes working beyond regular work hours. Vocationally-trained educators are commonly perceived as 'waged' and paid hourly, working only their paid hours unless eligible for 'overtime'. However, remuneration in the Australian ECEC sector is complex, with industry- or occupation-wide rates of pay and employment conditions (known as 'Modern Awards') intersecting with an array of enterprise- or workplace-specific terms and conditions (known as 'enterprise agreements') and individual employer-employee agreements (known as 'individual flexibility arrangements').

Under the Educational Services (Teachers) Modern Award (2020), salaried ECTs working in preschools (with school holidays) do not qualify for overtime, but those in long day care do. Additionally, both the ECT and non-ECT (Children's Services

Award, 2010) Awards include hourly, weekly, and annual pay rates, as well as half day rates in some instances. However, not all educators (ECT and non-ECT) are under these Modern Awards, there being an array of other agreements, due to the very mixed market and many different employers. In Australia, 'modern awards' and 'enterprise agreements' are governed by Fair Work Australia, a federal government body.

Previous qualitative studies indicate that ECEC educators regularly work unpaid hours in Australia (Harper et al., 2024; Irvine et al., 2016) and New Zealand (Jena-Crottet, 2017). In Cumming et al.'s (2021) survey of 73 Australian educators, 91.5% reported working unpaid overtime in a typical week; however, there appears to be no large-scale quantitative data documenting how many educators engage in unpaid work, or how frequently. Interestingly, previous research on unpaid work in ECEC appears to be predominantly Australian. Perhaps unpaid work is an issue specific to the Australian ECEC sector. Given the small amount of research available, however, it is possible that this is due to unpaid work being an emerging focus of research.

AITSL's (2021) survey of Australian teachers indicates that 95% of full-time teachers report working unpaid hours in a typical week, however, this data combines ECTs with primary school teachers. In this same study, full-time ECTs reported working an average of 50.6 h per week, but the proportions that were paid and unpaid is unclear (AITSL, 2021). In the most targeted investigation of Australian ECEC educators' unpaid hours thus far, 26% reported spending 5–10 unpaid hours per month on programming and curriculum development, with 24% reporting 5–10 h unpaid hours per month on 'other important tasks' including cleaning and setting up the learning environment (UWU, 2022). The UWU (2022) survey represents a significant step towards acknowledging educators' unpaid hours. However, there may be additional unpaid hours stemming from other roles and responsibilities including, as indicated in Jena-Crottet (2017), cleaning, setting up learning environments, documentation, and administration, that were not explored by UWU (2022).

Interestingly, there are also reports of educators intentionally completing non-contact work during unpaid hours, to prioritise time with children (Bullough et al., 2014; Cumming et al., 2022; Cumming et al., 2021; Harper et al., 2024; Irvine et al., 2016). This suggests a link between workload and quality interactions, with some educators attempting to moderate that relationship by sacrificing their personal time. Substantial additional research is needed to quantify educators' unpaid hours, to understand how contact and non-contact workload contributes to unpaid hours, and to probe for an association between unpaid hours and quality interactions (Harper et al., 2024).

Distractions and interruptions at work

Across several small sample qualitative studies from Germany, New Zealand, and, primarily, Australia, educators identify distractions and interruptions as a regular and frequent part of their workload. This includes high levels of task rotation (switching between tasks) (Harrison et al., 2019; Wong et al., 2022), with 50–60% of

their time involving multi-tasking (attending to two or more tasks at the same time) (Cumming et al., 2022; Kusma et al., 2011; Mitchell et al., 2019). Some educators report that these demanding workload features hinder their ‘ability to adequately meet children’s needs’ (Cumming et al., 2022, p. 11; Harper et al., 2024). Given the need for both educator and child attentiveness in quality interactions and especially SST (sustained shared thinking), there is a need to quantify how much of educators’ time, particularly their contact time, is affected by distractions and interruptions.

Breaks

In the context of Job Demands-Resources theory (JD-R), breaks can be effective resources, buffering the effects of some demands and enhancing outcomes for ECEC educators (Gu & Wang, 2021; Gu et al., 2020). In Australia, break entitlements for ECTs and vocationally-trained educators are set out in their respective Modern Awards, the Educational Services (Teachers) Modern Award (2020) and Children’s Services Award 2010. As an indication, educators working an 8-h day are entitled to a 30-min uninterrupted break (6.3% of an 8-h day), as a minimum entitlement. Studies indicate that ECEC educators spend 6–13.5% of their working day on ‘break’ or in ‘personal time’ (Harrison et al., 2019, 2024; Kusma et al., 2011), however, there are indications that educators’ work may extend into their breaks (Jena-Crottet, 2017). While there is little else known about breaks in ECEC, a recent survey of Australian primary and secondary school teachers found that less than 20% usually or always receive uninterrupted breaks (McGrath-Champ et al., 2018).

Workload demands

How demanding educators perceive their workload to be depends on a range of factors including the size of the workload, time constraints, available resources, and individual capacity, for example, qualification level, experience, and social supports (Harper & Wilson, 2024; Spector & Jex, 1998). In our study, workload demands are understood as the quantity and pace of work relative to individual capacity. Previous research identifies high demands for ECEC educators (Doody, 2014; Gu & Wang, 2021; UWU, 2022), higher than the national workforce (Farewell et al., 2021), and especially for those in leadership roles (Wells, 2015). However, some of these were small sample studies (such as Doody, 2014), and some used scales without scientifically established reliability and validity (such as UWU, 2022). When scales with rigorously established reliability and validity were included, studies tended to focus on correlation analyses, sometimes using only a single item on workload demands (Farewell et al., 2021; Wells, 2015) or combining multiple demand scales and reporting a single amalgamated score (such as Doody, 2014; Farewell et al., 2021). Additionally, research is needed to follow up on a recent UWU (2022) survey where 82% of Australian educators reported that ‘in the past month they “always” or “often” felt rushed when performing key caring and/or educational tasks’ (p. 3).

The present study

This exploratory study contributes to numerous evidence gaps outlined above, by addressing the following research question: How do Australian ECEC educators (both degree-qualified ECTs and vocationally-trained educators) report on and perceive their workload, including:

- (i) work hours (contact and non-contact, paid and unpaid, distracted and interrupted time), and breaks
- (ii) workload demands
- (iii) potential relationships with perceived and externally assessed ECEC quality?

Methods

Research design

This article reports on Phase III of the *Early Learning Work Matters* project, which was informed by the Phase I international systematic review of work in ECEC (Harper & Wilson, 2024), and Phase II in-depth interview survey of ECTs work and workload in New South Wales (Harper et al., 2024). Phase III was an exploratory survey study that was conducted using a cross-sectional observational design. An online questionnaire captured educators' self-reported data and perspectives on their workload (work hours and workload demands) and potential relationships with ECEC quality. The questionnaire and methodology for this study was approved by the Human Research Ethics committee of the University of Sydney (Ethics approval number: 2020/807).

Participants

There were 570 responses from ECTs and vocationally-trained educators. Sample and population characteristics are shown in Table 1, indicating sample representativeness. As an exploratory study focusing on descriptive analysis, power calculations were deemed unnecessary (Haile, 2023).

Measures

Measures, including scale items, were collected using Qualtrics; measures are listed in Fig. 2 and expanded in detail here.

Work hours and breaks

Participants were asked to report on the quantity of contact and non-contact hours, paid and unpaid (in a typical week), distracted and interrupted hours, and breaks (in

Table 1 Sample and population characteristics (Social Research Centre, 2022; ACECQA, 2023)

	Sample (n = 570)	Population (N = 12,088)
Gender		
Woman	98.40%	95.9%*
Man	0.80%	3.9%*
Prefer not to say	0.80%	0.2%*
Age (years)		
Mean	42.6	–
< 20	0.80%	4.4%*
20–29	12.50%	30.6%*
30–39	28.80%	28.8%*
40–49	26.50%	19.8%*
> 49	31.40%	16.4%*
Highest ECEC-related qualification or training level		
Degree qualified (ECT)	45.90%	7.1%*
Vocationally-trained (non-ECT)	51.50%	80.6%*
Untrained and unqualified	2.60%	12.4%*
Hours worked per week (employment type)		
< 35 h per week (Casual or part-time*)	52.60%	55.9%*
≥ 35 h per week (Full-time*)	47.40%	44.1%*
ECEC work experience (in years)		
Mean	14.2	–
< 1	3.90%	7.2%*
1–3	12.70%	26.7%*
4–6	12.40%	21.9%*
7–9	11.30%	12.6%*
> 9	59.80%	31.6%*
Current tenure (years)		
Mean	10	–
< 1	9.20%	11.4%*
1–3	38.60%	27.5%*
4–6	19.90%	20.4%*
7–9	10.50%	11.6%*
> 9	21.80%	29.1%*
Service type		
LDC	69.60%	70.4%#
PSK	25.70%	25.4%#
FDC	4.60%	4.2%#
Maximum total places\$		
< 25	9.80%	8.4%#
25–59	39.40%	44.7%#
60–80	21.70%	21.5%#
> 80	28.80%	25.4%#
Service location		

Table 1 (continued)

	Sample (n = 570)	Population (N = 12,088)
ACT	2.50%	2.2%#
NSW	50.60%	35.3%#
NT	0.20%	1.4%#
QLD	15.00%	19.6%#
SA	4.90%	7.1%#
TAS	2.00%	1.2%#
VIC	18.90%	26.3%#
WA	5.90%	6.8%#

*Full-time and part-time classifications are determined based on definitions in the Australian Educational Services (Teachers) Modern Award. Part-time is defined as less than 35 h per week. Full-time is defined as equal to or greater than 35 h per work

*(Population) Source: 2021 Early Childhood Education and Care National Workforce Census (Social Research Centre, 2022)

#Source: ACECQA NQS Snapshot (2023, Q2)

\$Categories for maximum total places were determined based on the Regulatory requirements for services to employ an ECT (Education and Care Services National Regulations, 2017)

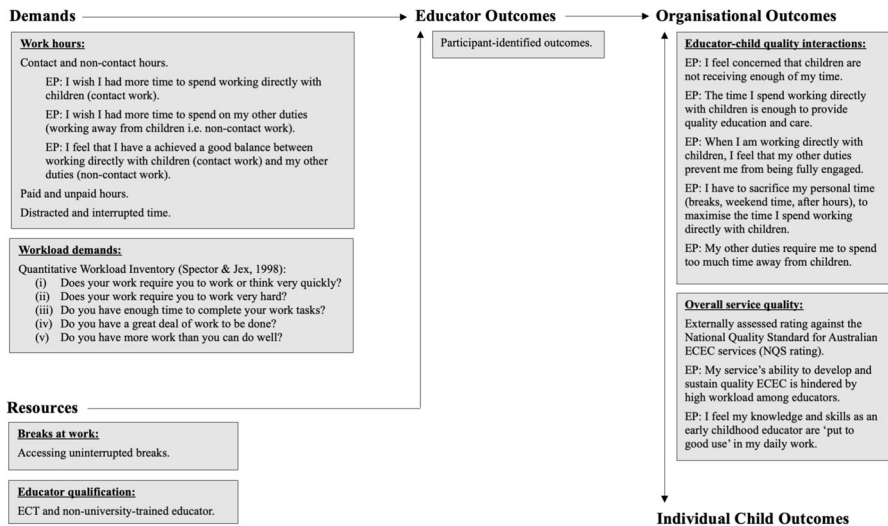


Fig. 2 Empirical framework for this ECEC workload study, including measures and educators' perspectives (EP)

a typical day). Distractions and interruptions included multi-tasking and task rotation, while undistracted and uninterrupted time was described as continuous focused time, where educators felt that they were 'completely present and "in the moment"'. Additionally, three items on a 7-point Likert scale, from strongly disagree to strongly agree, were designed by the authors to capture educators' perspectives on

their contact and non-contact workload. Open-ended questions were designed to give voice to educators and lend a richness to the data, allowing participants to elaborate on their quantitative responses, for example, 'If you wish to add a comment or explanation about your paid/unpaid hours, you may do so here'. Finally, educators reported on the nature of and reason/s for any additional employment.

Workload demands

Workload demands were measured through the Quantitative Workload Inventory which considers the amount and pace of work relative to individual effort (Spector & Jex, 1998). Reliability and validity of the Quantitative Workload Inventory are previously established (Spector & Jex, 1998). Minor changes to this 5-item scale were made to ensure comparability of results between part-time and full-time participants. For example, instead of asking respondents to report on frequency using days and months, such as 'less than once per month' or 'several times per day', participants were asked to rate frequency from 'never' (1) to 'always' (5).

ECEC quality

Perceptions were sought on the relationship between work hours and ECEC quality. Seven items were developed for a 7-point Likert scale, from strongly disagree to strongly agree, drawing on Phases I and II of the *Early Learning Work Matters* project (Harper & Wilson, 2024; Harper et al., 2024) and previous research on primary and secondary school teacher workload (McGrath-Champ et al., 2018). An additional five items inquired about the relationship between workload and quality interactions, and two items inquired about the relationship between workload and overall service quality.

Externally assessed ratings against the Australian National Quality Standard (NQS) for ECEC services were used to represent overall service quality. The NQS assessment and rating method is not an internationally recognised measure of ECEC quality, and the current version has not been rigorously assessed for scientific reliability or validity, with only one study evaluating inter-rater reliability and factorial and face validity (Rothman et al., 2012). Nevertheless, it is based on a wealth of educational research and theory and, as the nationally approved and mandated/legislated quality assessment and rating tool for Australian ECEC services, was deemed suitable for this exploratory study.

Procedure

Pilot study

A pilot study was conducted with a convenience sample of five educators from a researcher-affiliated ECEC service in NSW, representing varying levels of English, qualifications, experience, and age. One participant took part in a 'think aloud' with the first author, where they talked out loud while completing the questionnaire,

sharing their thought process as a form of real-time feedback (Jaspers et al., 2004). The four remaining participants made written notes and/or gave verbal feedback on the questionnaire's relevance, validity, and clarity; some minor changes to the questionnaire wording were made based on this feedback.

Data collection

An online Qualtrics questionnaire was distributed by peak body organisations, including Early Childhood Australia, Community Early Learning Australia, the United Workers Union, and the NSW Teachers Federation, through email lists, social media, e-newsletters, and blogs. Eligible participants were those currently working in a registered prior-to-school ECEC service. Participants were informed they could withdraw at any time, without consequence, and responses were anonymised. Most participants ($n=281$) chose to identify the name of their service, in which case the first author looked up the service name to identify the NQS rating on the publicly accessible ACECQA website. Participants who declined to identify their service ($n=222$) were asked to identify their service's current NQS rating. The remaining 67 respondents did not respond to this item.

Quantitative analytic strategy

Data was exported from Qualtrics and analysed using Microsoft Excel. Descriptive statistics (mean and standard deviation) are reported for all measures of work hours (contact and non-contact hours, paid and unpaid, interrupted and distracted time, and breaks) and workload demands. Inferential two sample z-tests were conducted, looking for statistically significant differences between ECTs and vocationally-trained educators' reporting of work hours and demands.

Both the Spearman's rank and biserial correlations were calculated to explore the potential association between NQS ratings and self-reported work hours (non/contact and un/paid hours as a percentage of total hours worked). Australia's NQS rating system has six rating categories, including: Provisional (newly established services that have not yet been rated), Significant Improvement Required, Working Towards the NQS, Meeting the NQS, Exceeding the NQS, and Excellent. No service in this sample was rated as 'significant improvement required', and 'Provisional' was removed as it is not indicative of service quality. Thus, only four unevenly sized categories remained: Working Towards the NQS ($n=41$), Meeting the NQS ($n=200$), Exceeding the NQS ($n=158$), and Excellent ($n=5$). This ordinal categorical data was encoded using the values of 1 (Working towards), 2 (Meeting), 3 (Exceeding), or 4 (Excellent) to enable the rank average calculations required for Spearman's rank correlation.

Given the uneven group sizes and limited number of categories (which can threaten the power of Spearman's rank correlations), biserial correlations were also calculated to estimate correlations between work hours and NQS ratings. To calculate biserial correlations, 'Working Towards' and 'Meeting' services were collapsed into a single category and given the reference of '0', while 'Exceeding' and 'Excellent' services

were given a reference of '1', resulting in more evenly sized groups, more suited for comparative analysis.

More detailed statistical modelling was considered outside the scope of this exploratory study, which aimed to provide baseline evidence on working hours and demands in Australian ECEC services, while also making preliminary inquiry into the relationship between ECEC quality and educator workload.

Qualitative analytic strategy

Thematic analysis was conducted manually by the first author, following the procedures laid out by Braun and Clarke (2006). The process began with data familiarisation, where qualitative responses were read multiples times and initial notes were taken, focusing on educators' experiences and perceptions of un/paid hours, non/contact hours, and workload. During data familiarisation, it was noted that participants often used open-ended questions as opportunities to convey perceived reasons for unpaid hours, the impact of workload on their personal and professional lives, and perceptions around the value of non-contact tasks. Due to the substantial number of detailed open-ended responses regarding unpaid hours, the authors conducted an in-depth analysis of this data, identifying a range of themes related to perceived reasons for unpaid hours, which are reported in this article.

Initial codes were developed through open coding; these were then reviewed and grouped into broader themes, with the intention to represent perspectives on what seemed most significant to educators. Themes were checked for validity against quantitative responses and were continuously refined through regular discussions with the second and third authors. Qualitative themes and verbatim quotes are presented to lend richness to the quantitative data, providing in-depth understanding and giving voice to educators.

Results

Results are presented here, firstly on work hours (contact and non-contact, paid and unpaid, distracted and interrupted time, and breaks), then workload demands, and finally, potential relationships between workload and ECEC quality. Of 570 respondents, 176 responses were only partially complete, with participants completing some questionnaire items but not all. Only items that were fully complete were analysed and reported on, allowing us to capture valuable insights from all available data; this explains why the number of participants seems to vary across the study.

Work hours

Contact and non-contact work hours

In our sample, ECTs reported spending substantially less time in contact work than vocationally-trained educators (see Table 2), with 5% of all respondents (5.9% for

Table 2 Paid, unpaid, contact, and non-contact hours as a percentage of total hours worked in a typical week, for ECTs and vocationally-trained (non-ECT) educators

	ECT (n = 211)			Non-ECT (n = 226)			Total educators (n = 437)		
	Paid (%)	Unpaid (%)	Combined (%)	Paid (%)	Unpaid (%)	Combined (%)	Paid (%)	Unpaid (%)	Combined (%)
	Contact hours	56*	1	57*	67*	2	69*	62	2
Non-contact hours	28*	15*	43*	20*	11*	31*	24	13	37
Total hours worked	84*	16*	100	87*	13*	100	86	15	100

*Indicates a statistically significant difference between ECTs and non-ECTs (vocationally-trained educators) calculated through two-sample z-test with a 95% confidence level

ECTs, 4.4% for vocationally-trained educators) reportedly receiving no paid contact time. While ECTs were more likely to undertake non-contact work in a typical week (98% from 211 ECT responses, 85% from 226 vocationally-trained educator responses), they were also more likely to be in leadership positions, which typically come with additional non-contact roles and responsibilities. While 29% of educators reported having achieved a good balance between their contact and non-contact workload (see Table 3), there seems to be no obvious solution, with around three quarters wishing for more time to spend on both contact *and* non-contact work. These perspectives suggest that both contact and non-contact workloads currently exceed educators' capacity.

Paid and unpaid work hours

From a total of 439 responses, educators reported working an average (mean) of 6.87 (SD=8.26) unpaid hours in a typical week, with ECTs reporting more unpaid hours (M=7.81, SD=8.66) than vocationally-trained educators (M=6.00, SD=7.80). Of those 439 educators, 24% reported working zero unpaid hours in a typical week. In total, 80% of ECTs and 73% of vocationally-trained educators report working unpaid hours in a typical week, with more unpaid hours reported by ECTs (M=9.45 h/week, SD=7.16) than vocationally-trained educators (M=6.78 h/week, SD=6.93), and a total combined average of 9.02 (SD=8.38) hours per week. The 270 full-time equivalent (35+paid hours per week) educators in this study reported working an average of 47.10 h per week (SD=9.99), 47.42 for ECTs (SD=9.80), and 46.80 for vocationally-trained educators (SD=10.20). The more senior their role in the workplace or the higher their qualification, the more likely participants were to report working unpaid hours (see Fig. 3). Educators working for larger service providers (operating six or more services) reported working more unpaid hours in a typical week (M=7.29, SD=8.30) than medium service providers (two to five sites) (M=6.54, SD=8.26) and small (single site) providers (M=6.52, SD=8.41). Notably, several educators commented that their 'typical week' calculations did not include less regular events, such as staff meetings, workshops, and service-arranged family events.

While five participants reported that their service 'has a policy' of not allowing educators to work unpaid hours or take work home, others report working a regular pattern of unpaid hours, sometimes every day, for example:

I arrive at[pre]school approximately an hour before my paid time to prepare for the day. I stay back [at the preschool] for at least 2 hours each day, either attending and running meetings, attending to administrative tasks and preparing my class for the next day. At home each night I again continue working to check internal messages, emails and continue with curriculum planning or more admin tasks. This is also continued Sunday afternoon/evening. (P457, full-time, ECT working directly work children, Assistant Director)

Some participants commented that their excessive unpaid hours prevent them from working more, e.g. 'I would be happy to work standard full-time hours, if

Table 3 Educator perspectives (EP) on their contact and non-contact work hours

	ECTs (n=199)	Non-ECTs (n=199)	Meeting or working towards NQS (n=218)	Exceeding NQS or excellent (n=151)	Total educators (n=398)
EP: I feel that I have achieved a good balance between working directly with children (contact work) and my other duties (non-contact work)					
Somewhat agree, agree, or strongly agree	32%	26%	31%	28%	29%
Somewhat disagree, disagree, or strongly disagree	51%	56%	52%	54%	54%
EP: I wish I had more time to spend working directly with children (contact work)					
Somewhat agree, agree, or strongly agree	70%*	80%*	74%	77%	75%
Somewhat disagree, disagree, or strongly disagree	15%*	7%*	11%	12%	11%
EP: I wish I had more time to spend on my other duties (non-contact work)					
Somewhat agree, agree, or strongly agree	76%	70%	73%	72%	73%
Somewhat disagree, disagree, or strongly disagree	13%	19%	17%	15%	16%

*Indicates a statistically significant difference between ECTs and non-ECT (vocationally-trained) educators calculated through two-sample z-test with a 95% confidence level; or a statistically significant difference between services rated as meeting or working towards NQS and services rated as exceeding or excellent

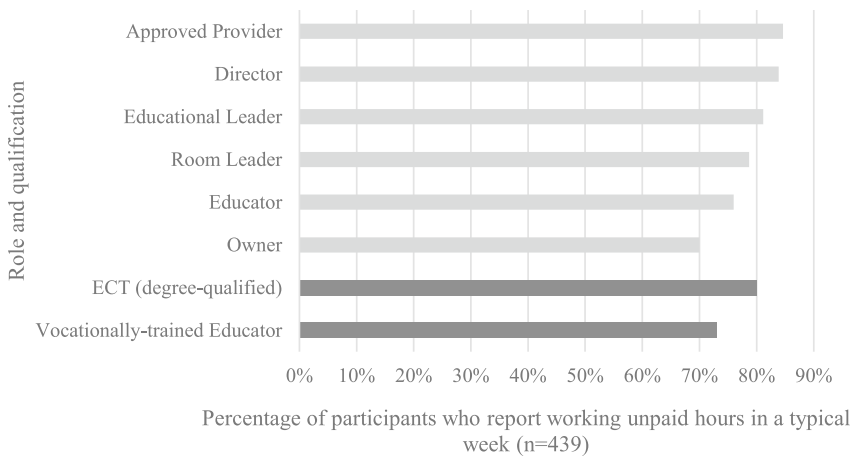


Fig. 3 Percentage of participants by role and qualification (not mutually exclusive) who report working unpaid hours in a typical week (roles indicated in light grey, qualifications indicated in dark grey)

I was able to reduce the number of unpaid hours I work' (P42, part-time ECT). Some described an imbalance between their workload and income e.g. 'My pay does not match my workload' (P300, full-time vocationally-trained contact educator and Director).

Unpaid hours were reported to include a wide range of tasks, mostly non-contact work, and often to do with 'catching up' or completing tasks that were not able to be completed during paid time. This was evident through quantitative responses (see Table 2 for descriptive statistics) and optional qualitative comments on unpaid hours (summarised in Fig. 4) which were submitted by 230 participants (40% of the total sample); this large qualitative response rate alone indicates the significance of unpaid workload for these educators.

When given the opportunity to comment on any aspect of their paid and unpaid work, participant responses ($n = 230$) revealed numerous perceived reasons for working unpaid hours. While the response frequencies below seem small, they need to be understood within the context of the survey question, which was very open-ended, providing scope for motivated respondents to comment on *any* aspect of their paid and unpaid work.

1. Heavy workload with insufficient time (60 participants, 26% of qualitative respondents) e.g. 'There is always something that needs to be done and just isn't enough time in our day' (P167, full-time vocationally-trained educator, Room Leader).
2. Staffing shortage, absence, or illness (26 participants, 11%) e.g. 'Non-contact time is scarce at the moment with staff illness and shortage' (P17, full-time ECT, Room Leader, Educational Leader, Responsible Person).
3. Their employer 'requires' or 'expects' unpaid hours (11 participants, 5%) e.g. 'Told it's part of the job to attend unpaid events' (P58, full-time vocationally-

Participants in leadership positions perceived two additional unique reasons for unpaid work:

9. Required to be ‘on call’ (5 participants) e.g. ‘Being an educational leader and nominated supervisor, you are always accessible’ (P422, full-time vocationally-trained educator, Educational Leader, Nominated Supervisor, Assistant Director or 2nd in Charge).
10. Prioritising the needs of co-workers (3 participants, all in leadership roles) e.g. ‘As Director of the service, I feel responsible that other staff are able to leave on time, however, this does not happen for myself’ (P275, full-time vocationally-trained educator, Nominated Supervisor, Director).

Distracted and interrupted time

Educators report that most of their contact time is affected by distractions or interruptions (see Table 4), while ECTs reported spending only 30% of a typical paid day in undistracted and uninterrupted contact time with children (28% for vocationally-trained educators).

Breaks

Overall, participants reported spending an average of 6% of their typical paid day on break (see Table 4). However, only 63% of educators report receiving their breaks always or most of the time. Additionally, 56% report that when they do receive their break, it is interrupted by work matters (e.g. completing work tasks while on break or being interrupted by co-workers, children, or parents) about half or more than half the time (see Fig. 5).

Table 4 Distracted and interrupted contact and non-contact time as a percentage of paid hours in a typical day, including breaks

	ECTs (n = 131)	Non-ECTs (n = 131)	Total educators (n = 262)
Undistracted and uninterrupted time—contact hours	30%	28%	29%
Distracted and interrupted time—contact hours	37%	41%	39%
Undistracted and uninterrupted time—non-contact hours	10%	9%	10%
Distracted and interrupted time—non-contact hours	17%	14%	15%
Break*	6%*	8%*	7%
Total	100%	100%	100%

*Statistically significant difference between ECTs and non-ECT (vocationally-trained) educators calculated through two-sample z-test with a 95% confidence level

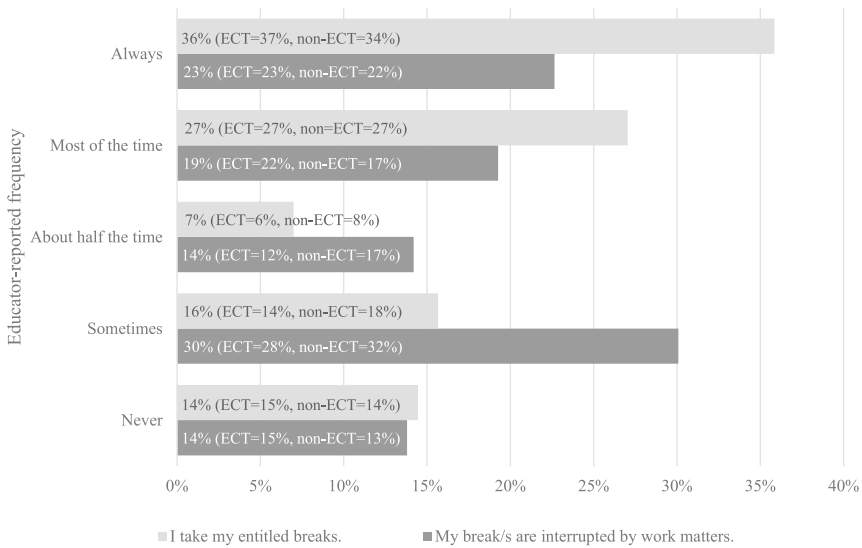


Fig. 5 Educators’ self-reported frequency of taking entitled breaks and break interruptions due to work matters, including figures for ECTs (degree-qualified) and non-ECT (vocationally-trained) educators

Workload demands

Responses to Spector and Jex’s (1998) Quantitative Workload Inventory indicate that educators perceive their workload to be very demanding: substantial in size, with insufficient time to complete their work, and requiring a significant amount of effort (see Table 5). Some participants also reported on workload demands in their open-ended responses, describing ‘heavy workloads’ and ‘unrealistic expectations’. Some participants describe their work as both mentally and physically exhausting, sometimes preventing them from working more hours or driving them to seek additional employment elsewhere, for example, ‘I feel exhausted mentally and physically with the demands of the ECEC’ (P424, part-time vocationally-trained educator, Educational Leader, Nominated Supervisor, Director), ‘I would work more hours if the job was less taxing and stressful’ (P229, part-time ECT), ‘More than 2 days in [ECEC] is too mentally and physically draining, so the other days [worked in my additional job] are required financially and mentally’ (P358, part-time vocationally-trained educator). From 541 complete responses to questions on additional employment, 66 educators (34 ECTs, 32 vocationally-trained) reported working an additional job, including, cleaner, hairdresser, Uber driver, butcher, babysitter, university tutor, and seamstress. The most frequently cited reason for working an additional job was because ‘I don’t earn enough money in ECEC’ (reported by 39 out of 66 educators).

Table 5 Average quantitative workload inventory scores for ECTs and vocationally-trained (non-ECT) educators (5-point Likert scale from never to always)

	ECTs (n = 198)		Non-ECTs (n = 193)		Total educators (n = 391)	
	Mean	% 'often' or 'always'	Mean	% 'often' or 'always'	Mean	% 'often' or 'always'
Does your work require you to work or think very quickly?	4.41	88%	4.34	84%	4.38	86%
Does your work require you to work very hard?*	4.47*	92%	4.45*	91%	4.46	92%
Do you have enough time to complete your work tasks?	2.27	11%	2.45	15%	2.36	13%
Do you have a great deal of work to be done?	4.47	91%	4.35	83%	4.41	88%
Do you have more work than you can do well?	3.91	66%	3.80	61%	3.86	63%
Total sum score#	21.00	—	20.49	—	20.75	—

*Statistically significant difference between ECTs and non-ECT (vocationally-trained) educators calculated through two-sample z-test with a 95% confidence level

#For the total sum score calculation, scores for the third item (Do you have enough time to complete your work tasks?) were inverted

Table 6 Educator perspectives on the relationship between their workload and their quality interactions with children

	ECTs (n = 199)	Non-ECTs (n = 199)	Meeting or working towards NQS (n = 218)	Exceeding NQS or excellent (n = 151)	Total (n = 398)
I feel concerned that children are not receiving enough of my time					
Somewhat agree, agree or strongly agree	72%*	80%*	78%	72%	76%
Somewhat disagree, disagree or strongly disagree	20%*	11%*	15%	17%	16%
The time I spend working directly with children (contact work) is enough to provide quality education and care					
Somewhat agree, agree or strongly agree	53%*	38%*	43%	50%	45%
Somewhat disagree, disagree or strongly disagree	40%*	54%*	49%	42%	47%
My other (non-contact) duties require me to spend too much time away from children					
Somewhat agree, agree or strongly agree	69%	73%	74%	68%	71%
Somewhat disagree, disagree or strongly disagree	18%	14%	16%	15%	16%
When I am working directly with children, I feel that my other duties (non-contact work) prevent me from being fully engaged					
Usually, often, or always	54%	55%	55%	56%	56%
Occasionally, rarely, or never	31%	39%	30%	30%	29%
I have to sacrifice my personal time (breaks, weekend time, after hours), to maximise the time I spend working directly with children (contact work)					
Usually, often, or always	63%*	55%*	57%	60%	59%
Occasionally, rarely, or never	32%*	39%*	39%	30%	35%

*Indicates a statistically significant difference between ECTs and non-ECT (vocationally-trained) educators calculated through two-sample z-test with a 95% confidence level; or a statistically significant difference between services rated as meeting or working towards NQS and services rated as exceeding or excellent

Exploring the dynamic between workload and quality

More than half the educators in our study (71%) agreed that their other (non-contact) duties require them to spend too much time away from children (see Table 6), while open-ended responses indicate that educators perceive some non-contact work to be low value, too time consuming and not worthy of their time, for example, ‘Teachers should only be doing the teaching. All services should have to have a minimum of one administrative worker full-time per week to cover the other operational commitments of the service’ (P468, part-time ECT, Educational Leader). Some participants raised specific concerns around the impact of current regulations on educator work, for example, ‘The shift from children to regulations has increased, and although I agree with the regulations, there are some elements that take up unnecessary time’ (P152, part-time vocationally-trained educator, Educational Leader, Nominated Supervisor).

Descriptive statistical analysis revealed that higher NQS ratings typically coincided with higher proportions of non-contact work and unpaid work, particularly for ECTs (see Table 7). While our initial correlation analysis (both Spearman’s rank and biserial) suggests only weak associations between NQS ratings and ECT work hours (non/contact and un/paid) (see Table 7), this relationship is further supported by the substantial finding that 73% of educators agreed that their service’s ability to develop and sustain quality ECEC is hindered by high workloads among educators (see Table 8). Interestingly, while 72% of ECTs (80% of vocationally-trained educators) reported being concerned that children are not receiving enough of their time, somewhat incongruous was the result that 53% of ECTs (38% of vocationally-trained educators) agreed that the time they spend working directly with children (contact work) *is* enough to provide quality education and care (see Table 6).

Discussion

Heavy non-contact workloads

Our finding that non-contact work accounts for 24% of educators’ paid time is congruent with prior research, which range between 19 and 42% (AITSL, 2021; Harrison et al., 2019; Kusma et al., 2011; OECD, 2020b). However, when incorporating educators’ unpaid hours, we saw an increase from 24% (of paid hours) to 37% (of total hours worked), indicating that non-contact workloads for educators may be larger than previously thought. In our study, as previously noted in some international contexts (OECD, 2020b), Australian ECTs’ non-contact workload appears to be significantly larger than vocationally-trained educators. While research indicates that heavy non-contact workloads may be detrimental to educator wellbeing (Irvine et al., 2016; OECD, 2020b), our study finds that educators wish for both more contact time and more non-contact time, indicating that there is simply too much work to be done, both with and away from children. It is concerning that more educators reported undertaking non-contact work in a typical week, than those who reported receiving paid time for non-contact work. This indicates that some educators are

Table 7 Percentage of self-reported hours worked by externally assessed quality rating

	ECTs (n = 197)	Non-ECTs (n = 207)	Combined (n = 404)
Contact hours			
Services rated as 'Working towards the NQS' (n = 41)	69%	65%	66%
Services rated as 'Meeting the NQS' (n = 200)	60%	71%	67%
Services rated as 'Exceeding the NQS' or 'Excellent' (n = 163)	53%	67%	58%
Biserial correlation (Meeting and Working towards NQS v Exceeding NQS and Excellent)*	-0.19	-0.05	-0.18
Spearman's rank correlation	-0.18	-0.01	-0.16
Non-contact hours			
Services rated as 'Working towards the NQS' (n = 41)	31%	35%	34%
Services rated as 'Meeting the NQS' (n = 200)	40%	29%	33%
Services rated as 'Exceeding the NQS' or 'Excellent' (n = 163)	47%	33%	42%
Biserial correlation (Meeting and Working towards NQS v Exceeding NQS and Excellent)*	0.19	0.05	0.18
Spearman's rank correlation	0.18	0.01	0.16
Paid			
Services rated as 'Working towards the NQS' (n = 41)	85%	86%	85%
Services rated as 'Meeting the NQS' (n = 200)	85%	88%	87%
Services rated as 'Exceeding the NQS' or 'Excellent' (n = 163)	82%	87%	83%
Biserial correlation (Meeting and Working towards NQS v Exceeding NQS and Excellent)*	-0.17	-0.04	-0.15
Spearman's rank correlation	-0.13	-0.02	-0.10
Unpaid			
Services rated as 'Working towards the NQS' (n = 41)	15%	14%	15%
Services rated as 'Meeting the NQS' (n = 200)	15%	12%	13%
Services rated as 'Exceeding the NQS' or 'Excellent' (n = 163)	18%	13%	17%
Biserial correlation (Meeting and Working towards NQS v Exceeding NQS and Excellent)*	0.17	0.04	0.15

Table 7 (continued)

	ECTs (n = 197)	Non-ECTs (n = 207)	Combined (n = 404)
Spearman's rank correlation	0.13	0.02	0.10

*For the biserial correlation, the working towards and meeting ratings were collapsed into a single category, and exceeding and excellent were collapsed into a single category

Table 8 Educator perspectives on the relationship between workload and overall ECEC quality

	ECTs (n = 199)	Non-ECTs (n = 199)	Meeting or working towards NQS (n = 218)	Exceeding NQS or excellent (n = 151)	Total (n = 398)
EP: My service's ability to develop and sustain quality ECEC is hindered by high workloads among educators					
Somewhat agree, agree or strongly agree	75%	71%	75%	71%	73%
Somewhat disagree, disagree or strongly disagree	16%	16%	13%	21%	16%
EP: I feel my knowledge and skills as an early childhood educator are 'put to good use' in my daily work					
Somewhat agree, agree or strongly agree	76%*	67%*	73%	73%	71%
Somewhat disagree, disagree or strongly disagree	14%*	16%*	15%	13%	15%

*Indicates a statistically significant difference between ECTs and non-ECT (vocationally-trained) educators calculated through two-sample z-test with a 95% confidence level; or a statistically significant difference between services rated as meeting or working towards NQS and services rated as exceeding or excellent

either not receiving paid time to undertake their non-contact duties or perhaps they are not contracted to undertake non-contact work but take on that workload anyway.

Excessive unpaid hours

While previous studies have indicated that educators engage in unpaid hours (AITSL, 2021; Irvine et al., 2016; UWU, 2022), ours is the first targeted quantitative study, providing evidence that ECEC work in Australia often entails regular unpaid hours. Our sample of full-time educators reported slightly lower total work hours than reported by ECTs in AITSL (2021) (47 h per week compared with 50.6), but substantially more unpaid hours than indicated in UWU (2022). However, it is important to note that the data from UWU (2022) was collected using categorical variables and focused only on specific kinds of unpaid tasks, rather than all unpaid hours. Therefore, a direct comparison in terms of percentage or quantity of hours is not feasible. Although unpaid hours may be typical and even expected in many jobs, particularly salaried positions, ECEC educators are among the lowest paid workers in Australia (Indeed, 2023). Further, qualitative responses indicate that unpaid hours may be contributing to low job satisfaction, turnover intention, and worker shortages, which are widely documented workforce issues in Australian and other international ECEC sectors (Department of Education, 2017; OECD, 2020a; UWU, 2022; Wells, 2015).

The widespread nature of unpaid hours indicated in our study, where over three quarters of participants reported working an average of nine unpaid hours in a typical week plus the additional less regular unpaid work alluded to in some qualitative responses, points to a complex systemic issue in the Australian ECEC sector. This is further supported by the wide variety of participant-identified reasons for their unpaid work. Finally, the small qualitative finding that some services have a policy of not allowing educators to work unpaid hours or take work home, suggests that the issue of unpaid hours is not only known to employers, but is a prominent issue that has, in some cases, prompted service-level policy.

Frequently interrupted and distracted time

The high rates of distracted and interrupted time reported in our study (54% of a typical working day, reported in full in Table 4) are similar to previously reported ‘high levels’ of task rotation (Harrison et al., 2019) and multi-tasking (50–60% of time worked, reported in Cumming et al., 2022, Kusma et al., 2011, and Mitchell et al., 2019). The high rates of distracted and interrupted time reported in this article are especially significant in the context of documented concerns around educator wellbeing. The additional finding that interruptions and distractions are frequent across both contact and non-contact hours indicates that the quality and efficiency of educators’ contact and non-contact work is likely to be hampered.

Limited access and interruptions to breaks

Our findings on the percentage of time educators report spending in breaks are similar to those of previous reports (in Harrison et al., 2019; Kusma et al., 2011). However, our study extends on these findings by identifying limited access to and frequently interrupted breaks, preventing many Australian educators from experiencing the potential buffering effects of regular breaks (as in Gu & Wang, 2021; Gu et al., 2020). It is concerning that so many Australian educators are reportedly not receiving the uninterrupted breaks they are legally entitled to under their respective Modern Awards, the Educational Services (Teachers Award) (2020) and the Children's Services Award (2010). While breaks were the only resource captured in our survey, our results around educators' limited access to breaks, and interruption to breaks, suggest a potential need to investigate educators' access to other job resources and opportunities for recovery.

Heavy and unacknowledged workload demands

It is unsurprising that burnout and educator shortages are rife in the Australian ECEC sector (UWU, 2022), given our finding that many educators perceive excessive workload demands. Although many other professions entail highly demanding work such as medical care and financial management, these demanding high-stakes professions tend to command respect, occupying a higher status in society and receiving higher earnings. For example, Australian primary school teachers, whose work is most closely aligned with ECTs, earn significantly more and are more widely respected (World Bank, n.d.), and their demands are more broadly known, perhaps partly due to their highly visible and coordinated union activity.

The heavy workload demands reported in this article are especially concerning, given the lack of consistent resources to buffer effects on both educator and organisational outcomes. While job resources are known to moderate the negative effect of heavy demands (Demerouti & Bakker, 2011), prior research indicates that many ECEC educators have poor experiences of key job resources, including low wages, and low levels of respect and appreciation (Cumming et al., 2021; OECD, 2020a; UWU, 2022). Additionally, other potential resources, such as organisational climate, financial, and human resources, are reported to be inconsistent (Harper & Wilson, 2024; Harper et al., 2024).

Insufficient opportunity for quality care

Our exploratory analysis confirms the potential for educators' non-contact workload to interfere with quality interactions. High quality interactions, particularly SST (sustained shared thinking), require a physical, mental, and emotional presence from both children and educators (Siraj-Blatchford et al., 2002). Thus, our finding that only 30% of ECTs' paid hours are spent in undistracted and uninterrupted contact time is especially concerning. Considering prior evidence that ECTs provide the

highest quality interactions for children (Manning et al., 2017; Siraj-Blatchford et al., 2002), our finding that Australian ECTs spend less contact time with children than vocationally-trained educators is concerning. Additionally, the larger non-contact workloads experienced by ECTs suggests that there may be wasted potential in the way our ECEC workforce is being utilised. It is important to acknowledge the value of some kinds of non-contact work, and perhaps the need for some of that work to be done by a degree-qualified ECT. However, qualitative responses in our study, alongside previous research, have identified that educators consider a lot of their non-contact workload to be low value administrative work and not necessarily adding value to the curriculum or program (Bullough et al., 2014; Harper et al., 2024; Harrison et al., 2019). Additionally, as indicated in previous studies (Bullough et al., 2014; Irvine et al., 2016), almost three quarters of the educators in our study agreed that their non-contact workload requires them to spend too much time away from children.

In our study, 73% of educators reported that their service's ability to develop and sustain quality ECEC is hindered by high workloads among educators. This is less than the 89% reported in McGrath-Champ et al.'s (2018) primary and secondary school teacher survey but is certainly high enough to trigger significant political and social concern. Like previous research (Cumming et al., 2022; Irvine et al., 2016), our study also found evidence of educators' self-sacrificing, with 63% of ECTs and 55% of vocationally-trained educators reporting that they usually, often, or always have to sacrifice their personal time to maximise the time they spend working directly with children. Given the importance of quality ECEC and seeing this reflected in growing international investment, the extent to which educators in our study reported the need to sacrifice their personal time for the benefit of children is of grave concern. This self-sacrificing behaviour is also another indication that unpaid hours are a regular part of ECEC work, and that non-contact workloads are not only excessive, but also have the potential to interfere with ECEC quality.

Somewhat perplexing, was the finding that 76% of educators reported feeling concerned that children are not receiving enough of their time, and yet almost 45% still agree that the time they spend working directly with children *is* enough to provide quality education and care. Also surprising was the finding that ECTs were less likely (72%) than vocationally-trained educators (80%) to report feeling concerned that children are not receiving enough of their time; further, ECTs were more likely (53%) than vocationally-trained educators (38%) to report that the time they spend working directly with children *is* enough to provide quality education and care. This disparity between ECTs and vocationally-trained educators may be explained by the increased likelihood for ECTs to sacrifice their personal time to maximise the time they spend working directly with children, therefore buffering the negative effects of heavy non-contact workloads. However, this was not a focus area for this study and, thus, is not a strong claim.

Finally, our initial exploratory analysis suggests that ECTs' non-contact workload and unpaid hours may be directly or indirectly related to Australia's current assessment and rating system. Considering the significant role that ECTs play in quality interactions with children (Manning et al., 2017; Siraj-Blatchford et al., 2002; Slot, 2018), an association between ECTs increased non-contact time and higher quality

ratings would be concerning. It is important to establish whether these exploratory findings are replicable with observational data.

Limitations and future directions

Our study is based on the premise that it is through educators' work that individual child outcomes are achieved. This study represents a small step towards developing a foundation for understanding the potential relationship between educator workload and ECEC quality. Educator workload, particularly their self-reported diminishing capacity for quality interactions due to distracted and interrupted contact hours and heavy workload demands, is a critical issue for future research in the field. One limitation of this study is its exploratory observational design. More detailed and nuanced understanding of educators', especially ECTs', non-contact workload is needed, together with thorough critical investigations into how those different components contribute to overall ECEC quality and individual child outcomes. Future policy and ECEC service operators should consider ways to minimise all educators' non-contact workloads, and in particular to maximise the time that ECTs (degree-qualified educators) spend working directly with children.

Urgent policy action is needed to eliminate or reallocate workload contributing to unpaid hours. Those demands that cannot be minimised should be acknowledged through structured efforts to increase supports, including higher professional status and higher wages (as suggested in OECD, 2020b). More research is needed to understand what drives the excessive unpaid hours and heavy demands identified in our study, to enable the combined strategic efforts required to minimise these demands.

While this study relied on self-reported data, more targeted quality data measuring workload, quality interactions, and overall service quality is needed. For example, external observations (also suggested in Bakker et al., 2023) of workload, including hours and associated demands, along with internationally recognised reliable and valid scales to measure interaction quality and overall service quality, such as the Classroom Assessment Scoring System (Pianta et al., 2008) and Environmental Rating Scales (Harms et al., 2005). This would enable more targeted and sophisticated inferential statistical analysis of the relationship between educator workload and ECEC quality, to follow up on our exploratory findings on the potential relationship between NQS ratings and ECT contact and non-contact hours, and the potential relationship between NQS ratings and paid and unpaid hours. Finally, our study indicates a need for thorough investigation of Australia's government-operated assessment and rating system, and potential influences on the quantity of educators' and ECTs' contact time and quality interactions with children.

Conclusion

The work of ECEC educators is demanding and, given that they are among the lowest paid workers in many jurisdictions, including Australia (Indeed, 2023), the frequency and quantity of unpaid hours reported here is alarming. Our study

also indicates that there may be substantial components of educators' non-contact workload that are not related to the provision of quality ECEC, and that, according to educators, detract from their ability to provide quality care. Further, Australia's NQS rating system needs more investigation, as there are indications in this data and the broader literature (Bullough et al., 2014; Harper et al., 2024) that work associated with such regulatory systems may be contributing to subverting educators' focus on quality interactions with children. This exploratory research project indicates a need for further research into this issue, and for policy and practice to attend to protecting educators', especially ECTs' contact time with children. This is important in optimising the quantum of high-quality interactions, including episodes of SST (sustained shared thinking), that are known to be fundamental to ECEC quality and individual child outcomes (Sylva et al., 2004).

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Declarations

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