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To cite this article: Bernardita Tornero, Mario De Caro, Claudia Navarini, Claudia Tarud & Maria Silvia Vaccarezza (24 Apr 2026): Phronesis as unitary ethical expertise: Educational implications for early moral development, *Journal of Moral Education*, DOI: [10.1080/03057240.2026.2652028](https://doi.org/10.1080/03057240.2026.2652028)

To link to this article: <https://doi.org/10.1080/03057240.2026.2652028>



Published online: 24 Apr 2026.



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Phronesis as unitary ethical expertise: Educational implications for early moral development

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ABSTRACT

This article examines whether the foundations of practical wisdom (phronesis) can be cultivated from early childhood, challenging the assumption that it cannot be trained until it fully emerges in adulthood. Drawing on the monistic Aretai model, which defines phronesis as a unified form of ethical expertise composed of moral perception, deliberation, emotion regulation, and moral motivation, we argue that these skills can and should be gradually developed from the earliest stages of moral growth. Integrating philosophical analysis with empirical evidence from psychology, neuroscience, and education, we show that children possess early mental capacities—such as theory of mind, empathy and prosocial motivation—that align with the building blocks of practical wisdom. We also outline how developmental principles support its gradual formation through age-appropriate experiences. This approach reframes character education, shifting emphasis from the sequential training of discrete virtues to fostering ethical expertise as the foundation of moral character from the start of development.

ARTICLE HISTORY

Received 14 August 2025
Accepted 23 March 2026

KEYWORDS

Practical wisdom (phronesis); ethical expertise; character education; early childhood; moral development

1. Introduction

Phronesis, in Aristotle's ethics, is the intellectual virtue of practical wisdom, i.e., the capacity to deliberate well about what is good and beneficial for a human life (Nicomachean Ethics, VI.5, 1140a25–b30). It involves moral insight, experience, and the ability to choose the right means toward virtuous ends. Unlike theoretical wisdom (*sophia*), phronesis is action-guiding and context-sensitive. All contemporary Aristotelians agree that practical wisdom is crucial to the development of a virtuous character, for it can guide and rationally inform the other virtuous habits. However, up until recently, interdisciplinary works on its nature and functioning were lacking: while psychologists and pedagogists were elaborating models of wisdom in their own terms (Brienza et al., 2018; Jeste & Lee, 2019; Monika, 2004), and philosophers kept on

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discussing the nature and importance of phronesis (Annas, 2011; MacIntyre, 1981; Russell, 2009), their research remained confined to their respective fields.

Over the last few years, however, a renewed interest in practical wisdom has been fuelled by the rise of the so-called 'science of virtue' (Fowers et al., 2024; Wright et al., 2020). After decades of focusing on the moral psychology of individual virtues, this scientific approach to character now appears to have turned its attention to practical wisdom as a distinct topic worthy of investigation (De Caro et al., 2021). This resurgence has been linked to the growing importance of navigating multifaceted moral dilemmas. Today's world is marked by increasing polarization and sociocultural division, trends that were only intensified by the COVID-19 pandemic (Kristjánsson & Fowers, 2022). More than ever, there is a pressing need for complex moral frameworks that support context-sensitive approaches to ethical decision-making (Kristjánsson et al., 2021).

Thanks to this renewed attention, practical wisdom is no longer a topic confined to scholars of Aristotelian thought (Curzer, 2012; Kristjánsson, 2023; Russell, 2009), but also to other philosophers (Dancy, 2004; Herman, 1993; O'Neill, 1996), psychologists (Darnell et al., 2019; Fowers et al., 2021), and educators (Bohlin, 2022; Huo et al., 2025). Underlying this recent multidisciplinary work is the conviction that character education requires practical wisdom, essential for navigating the moral landscape, coordinating and guiding character, bringing unity to the diverse traits that comprise it, adjudicating between conflicting moral demands, and discerning the relative salience of each (De Caro et al., 2024; Niccoli et al., 2024; Vaccarezza et al., 2023). Many of these efforts have focused on reconceptualising, operationalising and investigating the nature of practical wisdom, as well as assessing its empirical validity (Lapsley, 2021; Miller, 2023), and testing its teachability (Huo et al., 2025). In this context, two main models have emerged in recent philosophical and educational debates: the so-called 'Aristotelian Phronesis Model' (from now on, APM), championed by members of the Jubilee Centre for Character and Virtues at the University of Birmingham, and the 'monistic approach', i.e., the so-called Aretai model (De Caro et al., 2025).

What remains unclear, among other things, is whether - and if so, how - practical wisdom can be the object of specific educational practices. Many commentaries on the *Nicomachean Ethics*, as well as academic work on practical wisdom, often maintain that its developmental trajectory emerges primarily through accumulated practice and experience (Kemmis, 2012; Kristjánsson et al., 2021). According to McLoughlin et al. (2025), 'In Aristotle's ethical system, phronesis is nothing less than the lynchpin of a flourishing life, actualizing the virtues and representing good character. According to Aristotelian character developmental theory, young people who have acquired the right moral habits through good upbringing need to gradually develop this intellectual virtue to guide their decision-making' (p. 4).

This remark is particularly relevant because, although it doesn't provide an account of how to develop phronesis, it clearly suggests that the latter can emerge as a deliberative excellence only once virtuous habits have been properly cultivated and become a stable part of one's character. A conclusion that, as we will see, is perfectly compatible with APM, but would be at odds with the central tenet of the monistic Aretai model. As we will show more extensively in the next section, according to the latter, and contrary to a literal interpretation of the Aristotelian texts, phronesis is the only genuine virtue, and, therefore, it should be cultivated directly from the beginning of the character developmental

path. Which leads us to the central question of this paper: is it realistic to start teaching phronesis to young children, or is this a too cognitively demanding endeavour? In this paper, we aim to provide preliminary evidence in support of the idea that (i) practical wisdom can be trained from early childhood (0 to 6 years old), and (ii) its development doesn't necessarily require a previous possession of habituated virtuous traits. This, as it will be clear, is not intended to rule out the plausibility of the Jubilee model; rather, it aims at defending the educational credibility of the monistic Aretai model, while at the same time highlighting aspects that the Jubilee or other neo-Aristotelian phronesis models could profitably incorporate. In what follows, therefore, we will present the Aretai model (sect. 2) and briefly discuss two important preliminary objections to the model (sect. 3). We will then turn to the educational challenges at the core of this paper and present preliminary evidence in response to those challenges (sect. 4). Finally, we will discuss the implications of the reviewed empirical evidence in that respect (sect. 5).

2. Practical wisdom as ethical expertise: The Aretai model

As noted in the Introduction, two main philosophical models of practical wisdom have emerged in recent years: the standard Aristotelian Jubilee Centre model (APM) and the monistic Aretai Center model. Despite substantial common ground, the two models diverge on a fundamental aspect. The multi-component, empirically informed neo-Aristotelian model developed by members of the Jubilee Centre preserves the classical Aristotelian thesis that practical wisdom is a distinct virtue requiring specific cultivation. Specifically, this approach maintains that early habituated, pre-reflective dispositions – sometimes described as virtue-adjacent or non-phronetically informed – provide a developmental foundation upon which practical wisdom and more fully integrated, phronetically informed virtue co-develop over time through habituation, emulation, and moral reasoning across domains (Carr, 2023; Carr et al., 2016; K. Kristjánsson, 2015).

The monistic approach developed by the Aretai Center maintains instead that virtue consists entirely in practical wisdom, understood as a form of generalizable ethical expertise. This model rejects the notion of independent virtues, viewing them instead as context-specific manifestations of a unified moral competence, organized in clusters – a view sometimes referred to as *virtue molecularism*. As the APM proponents put it, 'According to the Aretai (Center) Model, all ethical virtues are ultimately unified within phronesis itself, understood as overall moral expertise. According to the APM and the neoAPM, in contrast, discrete individual moral (and civic) virtues provide the initial motivation for virtuous actions in children; and they continue to drive virtuous action even after phronesis has (if all goes well) latched itself onto the individual habituated virtues, in adolescence and early adulthood' (McLoughlin et al., 2025, pp. 39–40).

The Aretai model draws upon a skill-based conception of virtue (Annas, 2011; Stichter, 2018) and wisdom (Swartwood, 2013; Tsai, 2022), proposing that virtues – especially practical wisdom – can be understood within the framework of expert skill acquisition. This perspective enriches philosophical accounts of virtue by aligning them with psychological research on how expertise is developed and performed (Ericsson et al., 2018; Kahneman & Klein, 2009; Phillips et al., 2004). It also renders virtue-based accounts of moral psychology more compelling than alternative models of moral decision-making (Greene, 2014; Haidt, 2001), by emphasizing the multidimensional,

context-sensitive, and dynamic nature of moral reasoning (Alfano, 2013; De Caro et al., 2018; Sauer, 2012).

The monistic approach shares the central premise that practical wisdom should be understood as a form of expertise – a high-order skillset that enables ethical decision-making. However, whereas virtue-as-skill theorists typically conceive of individual virtues as context-specific abilities that are cultivated prior to the development of practical wisdom, the Aretai model challenges this developmental sequence. Stichter (2015, 2018) also contends that practical wisdom cannot be accurately characterized as a skill, since skills are typically means-oriented, whereas practical wisdom is concerned with deliberation about valuable ends.

While acknowledging this important distinction between technical skills and practical wisdom, the Aretai model argues that individuals can nevertheless display varying levels of competence in value-based reflection, deliberation, and ethical action. In contrast to other expertise-based models of virtue (Swartwood, 2013; Tsai, 2022), the Aretai approach affirms the ontological priority of practical wisdom over individual virtues and emphasizes its distinct educational relevance – particularly in morally complex professional contexts such as healthcare or teaching (De Caro et al., 2021, 2025).

Expertise implies a level of excellence that some individuals demonstrate more consistently than others. While defining moral boundaries remains a persistent challenge (Gert, 2020; Machery & Stich, 2022), morality involves a non-instrumental concern for harm, benefit, and fairness in social interactions (Brink, 1989; Railton, 2017). Although many moral decisions have clear-cut answers, in complex cases where values conflict, individuals with greater practical wisdom tend to exhibit superior moral judgment, decision-making competence, and consequent moral actions.

The Aretai model maintains that practical wisdom, conceived as ethical expertise, enables individuals to reduce biases, refine deliberation, and pursue clearer goals in morally complex situations. While no fixed moral rules suffice for every context, enhanced ethical skills support superior decision-making by integrating rational analysis with emotional awareness. This integration may foster moral clarity and sensitivity, particularly in cases where emotions strongly influence judgment. Drawing on literature on expertise in complex domains, De Caro et al. (2025) have developed a conceptual analysis of *phronesis* as ethical expertise identifying four characteristic skills:

Moral Perception. The ability to recognize morally relevant factors and conflicts within a given context (Kagan, 1998). Like experts in other domains, morally wise individuals rely on intuitive pattern recognition to process ethical dilemmas efficiently (Darnell et al., 2019; Dreyfus & Dreyfus, 1991).

Moral Deliberation. The capacity to weigh competing values, outcomes, and arguments in a goal-oriented manner (Hacker-Wright, 2024; Stichter, 2015). Moral experts develop rich complex mental models that enable them to navigate complexity, akin to professionals operating in high-stakes environments (Hoffman, 1998; Klein et al., 2010).

Emotion Regulation. The skill of integrating emotions into ethical reasoning without succumbing to bias or impulsivity (Greene et al., 2004; Helion & Ochsner, 2018). Effective moral agents neither suppress emotions nor allow them to override rational deliberation (De Caro & Marraffa, 2016; Greene et al., 2004; Navarini, 2023).

Moral Motivation. The intrinsic commitment to prioritize ethical considerations and act in accordance with one's best judgments (Nichols, 2004). Unlike akratic agents,

morally wise individuals consistently translate moral insight into action (De Caro et al., 2021).¹

These skills, taken together, can also be understood as enabling conditions for the development of practical wisdom, namely, as skills that foster phronesis acquisition and constitute its core features once acquired.

3. Practical wisdom as ethical expertise: Two preliminary objections

Let us now turn to two preliminary objections to the credibility of the Aretai model, which we need to discuss briefly before assessing the feasibility of cultivating practical wisdom as ethical expertise since early childhood.

The first is a psychometric objection. A recent empirical study used exploratory factor analysis (EFA) and subsequent confirmatory factor analysis (CFA) to empirically determine the factor structure of practical wisdom. The analysis yielded a 10-factor structure, expanding the previous four-component theoretical model of the Jubilee Centre. This new model comprises the following factors: virtue identification, situational moral relevance, situational moral irrelevance, moral self-relevance, aspired moral identity, emotional regulation, positive moral emotion, negative moral emotion, moral deliberation, moral integration. Based on those results, the authors claim that the central components of the neo-Aristotelian practical wisdom model (e.g., aspired moral identity) are difficult to conceptualize as expertise (McLoughlin et al., 2025).

From our perspective, if the empirical findings suggest that practical wisdom can be understood as an articulation of competencies that contribute to wise moral decision-making, then the Aretai model's vision of phronesis as a unitary, cross-situational expertise is better supported than the idea of it being a collection of fragmented traits. Indeed, practical wisdom appears to manifest across diverse moral contexts – from interpersonal relationships to institutional decision-making – indicating its potential transferability across situations (De Caro et al., 2021; Swartwood, 2020).

Two recently conducted studies (Kerusauskaiste et al., manuscript; courtesy of the authors) have reached some encouraging empirical conclusions regarding the plausibility of the Aretai model. In Study 1, practical wisdom was empirically modelled as a multidimensional construct and tested in a sample of 50 Italian adults. The construct sought to partially operationalize the four skills of the Aretai model into testable variables and included: *moral sensitivity* (recognizing moral salience) and *moral intuitiveness* (rapid detection of moral relevance), as two significant psychological correlates of moral perception; *moral conceptualization* (accurate identification of morally significant factors), *moral deliberation* (reasoned, impartial, and flexible moral reasoning), and *moral identity* (personal identification with moral values), which can be connected with moral motivation at a psychological level. These constructs, therefore, appear to capture the psychological component of phronesis' four essential features – alongside their irreducibly normative dimension – and to coalesce into a single higher-order factor, 'ethical expertise,' with moral conceptualization emerging as a potentially central integrative skill. Emotional regulation, operationalized as balanced emotion integration into decision-making, also seemed to play an indispensable role in practical wisdom. Taken together, ethical expertise and emotional integration were associated with self-reported

moral behaviour, which may be viewed as preliminary support for the idea that phronesis involves both cognitive and affective competencies.

Study 2, in turn, followed up on the previous research by testing the cross-situational transferability of practical wisdom. Findings suggested that individuals identified as high in ethical expertise in Study 1 tended to outperform those lower in expertise in moral conceptualization across diverse contexts (e.g., friendship, work, civic issues, justice).

While acknowledging that we cannot rely on still unpublished work, we believe these results, were they confirmed and validated by the scientific community, would be crucial to support the central intuition of the Aretai model that practical wisdom may be understood as a form of expertise. Moreover, the evidence concerning cross-situationality would support the idea that phronesis can function as an adaptive expertise, distinguished from narrow domain expertise thanks to its capacity of transferability across varied life contexts. If so, this opens promising avenues for developing moral expertise through experience and reflective practice, with possible educational and applied implications.

Before turning to these implications, however, a second objection warrants consideration: the challenge raised by neuroscientific evidence. Numerous neuroimaging studies (Han, 2017, 2024; Han et al., 2016; Prehn et al., 2008; Reniers et al., 2012) conducted during moral dilemma tasks have reported notable interactions among regions linked to moral reasoning, emotional processing, and motivation. Some authors (McLoughlin et al., 2025) have taken this evidence of significant activation and interaction across brain regions during moral decision-making as a counterargument to the Aretai model's assumption of phronesis as a unitary expertise.

However, this conclusion is not as straightforward as it may initially seem. The researchers who produced this neuroscientific evidence themselves suggest that it can be interpreted as compatible with both the postulates of the APM and those of the Aretai model. Indeed, they explicitly note: 'This point raised from neuroscientific evidence is consistent with what has been proposed by the standard models of phronesis, i.e., the Jubilee and Aretai Centre Models' (Han et al., 2024). Therefore, a rigorous examination of the 'brain challenge' does not necessitate a wholesale repudiation of phronesis as a cohesive ethical framework. Conversely, the concept of phronesis may be posited as a potential activator of multiple brain circuits while preserving global coherence. Consequently, our model of phronesis is not incompatible with their results, as they merely demonstrate the occurrence of brain activation in response to different virtuous behaviours (in our terms, manifestations of phronesis). Instead, these neurological findings may serve to reinforce our perspective by demonstrating that virtuousness is a sophisticated and articulated expertise comprising multiple traits and skills. The Aretai model is based on two central premises: one is the monistic view of virtue, the other – the one relevant here – is that practical wisdom can be understood as a form of expertise – a higher-order skill set enabling ethical decision-making. As with other complex or higher-order skills, such as problem solving (Goel & Grafman, 2000; Kwon et al., 2016), the linguistic production of complex texts (Fujii et al., 2016; Tremblay & Dick, 2016), creativity (Beaty et al., 2018; Gao et al., 2017), or divergent thinking (Razoumnikova, 2000; Wong & Chapman, 2024; Wong et al., 2013), it is to be expected that practical wisdom would involve the coordinated activation of multiple neural circuits or brain areas (H. Han, 2017, 2024; H. Han et al., 2016). Note that brain

activations, even those associated with virtuous behaviours, may not have true moral significance. There may be multiple reasons for this brain activation besides morality. Conversely, morality could activate specific brain regions as a result of a sophisticated psychological process that goes beyond the ‘one activation-one virtue’ concept. In Han’s (2024) article, the brain circuits responsible for mirror neurons seem to be correlated with compassion and the reward system with honesty. However, these activations could have multiple explanations. On a causal (moral) level, for example, these brain activations could emanate from phronesis itself. As previously mentioned in our model, we suggest that phronesis is cross-situational and consists of a kind of outstanding ethical expertise that elicits diverse virtuous behaviours according to circumstances. For example, being virtuous in the face of danger and fear can involve activating brain circuits related to fear, unlike when being virtuous in different situations. We expect each virtuous manifestation to entail psychological reactions related to moral perception, deliberation, emotion regulation, and moral motivation. This could be consistent with Han’s data, although biases and limitations of this type of inquiry, especially when moral matters are concerned, should be considered.

In summary, neither the psychometric objection, which challenges the interpretation of phronesis as expertise, nor the neural objection, which challenges the monistic stance, appears to undermine the Aretai model or its educational applications.

Having briefly addressed the two main preliminary objections to the model, the next section turns to the central argument of this paper: whether practical wisdom can be taught from early childhood.

4. Practical wisdom as ethical expertise: Educational challenges

From an educational perspective, some scholars have argued that adopting a monistic approach to practical wisdom offers several advantages for character education. Niccoli et al. (2024), for example, suggest the following. First, teaching practical wisdom as the single overarching virtue is considerably more feasible than attempting to teach a set of them. Second, the Aretai model may help students in navigating complex moral situations where no single correct answer exists— and where no individual virtue on its own can adequately guide action. Third, this approach may cultivate a more flexible and adaptive form of moral reasoning, thereby contributing to the development of cross-situational competence, that is, the capacity to respond appropriately across diverse ethical contexts.

However, others have questioned whether the monistic Aretai model can serve as a viable foundation for character education (K. Kristjánsson & Fowers, 2024). While individual ethical virtues appear to emerge through habituation and role modelling (Bernal Martínez de Soria & Naval, 2023; Carr, 2023; Huo et al., 2025), the development of practical wisdom as a higher-order trait is more difficult to explain and account for. Critics argue that the sophisticated skills required by practical wisdom, as conceived in the Aretai model, cannot realistically be taught to young children (Han, 2024). In this sense, advocates of the standard model claim:

One important difference between the APM/neo-APM models and the Aretai Model is developmental (and, by implication, educational) and can only be arbitrated through

longitudinal studies of phronesis development and cultivation: Do the individual virtues develop separately first and not come together until children begin to realize that the same situation can call for conflicting virtues, perhaps not until middle childhood, or does ethical expertise develop as a unitary capacity and then later diversify into different virtue streams? (McLoughlin et al., 2025, p. 40).

As a result, traditional educational strategies focused on cultivating discrete virtues are often regarded as more developmentally appropriate (Kristjánsson & Fowers, 2022).

Nevertheless, other scholars invite a reconsideration of this assumption by suggesting that the foundational capacities underlying practical wisdom may be present far earlier than is commonly assumed. Henderson (2025a, 2025b), for example, argues that the seeds of *phronesis*—understood as the core capacities constitutive of ethical expertise—are planted in infancy and can be actively nurtured through processes of emulation and role modelling. On this view, early moral development is not merely a matter of passive habituation, but involves affective and cognitive engagement with exemplars whose actions implicitly communicate standards of good judgment and conduct. In a similar vein, Sherman (1989) and K. Kristjánsson (2021) argue that habituation is not a purely pre-rational process, but one guided by reason and argument even in early childhood. This position aligns with the Aretai model's developmental optimism regarding the early cultivation of practical wisdom. Moreover, because the Aretai model conceives practical wisdom not as an abstract or fully mature faculty, but as an ethical expertise composed of interrelated skills that can be progressively acquired from the early stages of ontogenesis, it appears both feasible and pedagogically appropriate to begin cultivating phronesis in early childhood, without waiting for the sequential acquisition of individual virtues to be completed first.

This emphasis on role modelling finds robust theoretical grounding in Linda Zagzebski's exemplarist moral theory, which offers one of the most comprehensive accounts of how exemplars contribute to both moral and intellectual development. According to this framework, the emotion of admiration plays a central motivational and epistemic role in moral learning: by admiring exemplars, individuals form their understanding of what counts as virtuous behavior and are moved to emulate it (Croce & Silvia Vaccarezza, 2017; Zagzebski, 2010, 2017). From this perspective, moral growth is guided less by the explicit transmission of rules or traits and more by sustained engagement with admired figures—a process that aligns closely with developmental accounts emphasizing the early cultivation of practical wisdom through lived examples.

Similarly, Athanassoulis and Han (2023) conceptualize character education as a process of self-cultivation and autonomy-supported learning through moral exemplars. Rather than treating role modelling as indoctrination or passive imitation, they emphasize the importance of learners' agency in identifying, evaluating, and selectively emulating exemplars. Effective character education, on this account, must support students' autonomy and relatedness through pedagogical strategies such as dialogue, reflection, and guided discussion. Moreover, exemplars need not be morally flawless: imperfect models who visibly struggle to act well may be more relatable and motivating than idealized moral saints.

Concrete illustrations of how exemplar-based, integrative approaches to character education can support the early cultivation of practical wisdom are provided by recent literature-based interventions developed by the Jubilee Centre for

Character and Virtues, most notably the *Knightly Virtues* project (Arthur et al., 2014) and the *Narnian Virtues Programme* (Francis et al., 2018). These initiatives employ morally rich narratives to engage students in reflective encounters with exemplars who face complex ethical challenges. Through structured activities—including virtue analysis, guided discussion, reflective journaling, and personal action planning—students are encouraged not only to identify virtues and vices, but also to deliberate about competing moral considerations and translate their judgments into concrete patterns of action. In doing so, these programmes operationalize character education as an integrated process involving cognition, emotion, motivation, and agency—what is often described as engaging the ‘head, heart, and hand’.

Additional recent research suggests that education plays a vital role in laying the foundations of phronesis by providing a structured environment where students can move beyond uncritical habituation toward autonomous, critical thinking. For example, in the context of Chinese primary schools, the ‘Morality-and-Law’ curriculum serves as a primary venue for this development, specifically through the implementation of moral dilemma discussions. This educational method encourages students to engage in moral adjudication—the ability to reason about and prioritize conflicting virtues in complex situations—which is a core component of practical wisdom. By exposing young learners to both hypothetical and real-life dilemmas, such as the tension between being loyal to a friend or following school rules, education creates a ‘critical space’ for students to reflect on the best possible rationales and solutions. Furthermore, the sources suggest that the cultivation of these capacities throughout the entire educational process helps bridge the ‘knowledge-action gap,’ ensuring that children learn to use their intellect wisely to inform their moral actions as they mature (Huo et al., 2025).

To better understand this, you might think of education as a moral flight simulator, where students can practice navigating difficult ethical storms in a safe environment before they have to pilot the much more complex and high-stakes plane of adulthood. This early intervention is considered essential because if students are never provided with opportunities to resolve virtue conflicts during their early education, it is unrealistic to expect them to handle more challenging quandaries in their later professional or adult lives (Huo et al., 2025).

Taken together, these educational practices lend empirical and pedagogical support to the claim that the foundational capacities constitutive of practical wisdom can be meaningfully cultivated during childhood and early adolescence. By enabling students to admire, critically assess, and emulate holistic moral exemplars within supportive educational environments, such programmes illustrate how ethical expertise may begin to emerge prior to the full maturation or sequential acquisition of discrete virtues, thereby reinforcing the plausibility of the Aretai model as a viable framework for character education. Clearly, training phronesis as ethical expertise - through its four foundational capacities - from early childhood does not result in ‘wise kids’ when they are too young to possess the necessary cognitive and moral abilities (Dahl & Killen, 2018). However, it does initiate the process of virtue acquisition by directly focusing on the development of phronesis.

5. Practical wisdom as ethical expertise: Reconsidering its developmental sequence

In the remainder of this article, we draw on evidence-based principles concerning how young children develop and learn across cognitive, social, emotional, and moral domains. Based on this body of evidence, we find no compelling reason to assume that introducing practical wisdom in early childhood is implausible.

The development of children's higher-order thinking skills, such as moral and critical reasoning, is inextricably linked to the environments in which they grow. In this sense, this developmental process does not occur in isolation; it is deeply shaped by the quality and character of the educational context, including the teacher's capacity for judgment and creativity (Niccoli et al., 2024). For this reason, it is reasonable to assert that although moral thinking is a form of abstract thought that may be fully realized only in adolescence, as Aristotle suggests (1985), early childhood environments should nonetheless provide opportunities to cultivate foundational forms of reasoning. Doing so equips children with a solid basis for acquiring more complex forms of thinking later on.

This perspective on the early development of higher-order cognition directly informs the debate over practical wisdom. McLoughlin et al. (2025) note that a central point of divergence between the APM/neo-APM frameworks and the Aretai model concerns whether early habituated or proto-virtuous dispositions initially emerge in relatively domain-specific ways and are only later integrated – once children become capable of recognizing that the same situation may call for competing moral considerations, a capacity that may not appear until middle childhood – or whether ethical expertise arises as a more unified capacity that subsequently differentiates into distinct virtue domains.

To address this question, we turn to research in developmental science, which emphasizes that children do not develop passively but actively engage with their environments (Applegate et al., 2024), constructing meaning through social interaction and experience (Siraj & Mayo, 2014). Although early childhood is typically characterized by concrete thinking, the environments in which children grow can nonetheless foster the foundational skills that later support more complex forms of reasoning, including moral and critical thought (Niccoli et al., 2024). In this sense, while Aristotle held that mature forms of moral reasoning are realized in adolescence, empirical evidence suggests that early experiences may lay crucial groundwork for such capacities.

Research in developmental psychology further shows that growth across cognitive, social, emotional, and moral domains is shaped by a dynamic interplay between biological inheritance and environmental opportunity (Houmark et al., 2024). By 'biological inheritance,' we refer not only to genetic factors but also to the potential embedded in human nature. A frequently cited example in developmental and learning psychology is language acquisition, which illustrates how innate predispositions and environmental input jointly shape a child's developmental trajectory. Humans may be inherently linguistic beings, but language acquisition depends critically on rich and supportive contexts. The case of Genie, a feral child discovered in Los Angeles, tragically demonstrates this interaction: after being deprived of meaningful human contact during her formative years, she displayed severe impairments across multiple developmental domains (Curtiss et al., 1974; Moñivas Lázaro et al., 2002).

Given this, there seems little reason to assume that the developmental trajectory of practical wisdom differs radically from that of other complex human capacities. In a manner like language, ethical expertise may plausibly emerge from the interaction between innate predispositions and social environments. While the full maturation of practical wisdom is likely to require extended time and practice, its foundational components could begin to take shape in early childhood, provided that children are offered opportunities for moral engagement, dialogue, and exposure to good exemplars (K. Kristjánsson, 2022). From this perspective, the cultivation of practical wisdom appears not as an exceptional or uniquely demanding process, but as one instance of the broader principles that guide human development.

Although empirical studies have not established the presence of practical wisdom in early childhood, there is a growing body of research addressing the four skills that the Aretai model identifies as constitutive of it. Building on this emerging evidence, we suggest that children may, from an early age, begin to recognize the morally relevant situations and issues, as well as how the same situation can involve a conflict between values (moral perception), while also showing early signs of the other three capacities. Taken together, these findings lend preliminary support to the view that cultivating the foundations of practical wisdom from early childhood may be feasible. To the best of our knowledge, no existing empirical evidence contradicts the Aretai model's proposal that practical wisdom functions as a unitary capacity or challenges the educational implications associated with this view. Let us therefore reconsider these four skills from a developmental perspective.

Moral perception. Contrary to previous views of children's egocentric thought (Carpendale, 2000), later experiments demonstrated that as early as 15 to 18 months, children possess a theory of mind – the ability to understand that others can hold preferences, beliefs, or perspectives different from their own (Misailidi & Tsiara, 2021). Similarly, recent evidence has shown that self-conscious emotions, such as shame and guilt, emerge early in human development (Hepach et al., 2017; Nikolić et al., 2023; Vaish & Grossmann, 2022) challenging the notion that young children's thought is purely egocentric and driven only by the pursuit of pleasure and avoidance of pain.

Self-conscious emotions typically arise in contexts involving mistakes or violations of social norms. While shame and guilt often arise from similar situations, they differ significantly in their psychological outcomes. Guilt is generally associated with the recognition that one's behaviour was wrong and often motivates reparative actions such as apologizing, explaining one's mistake, or attempting to make amends. Based on this evidence, some scholars (Costa Martins et al., 2021; Myyry et al., 2021) have claimed that guilt is the primary moral emotion.

According to Bybee (1997), guilt directs children toward moral behaviour by positively promoting actions grounded in interpersonal considerations (Scaffidi Abbate et al., 2022; Van Kleef & Lelieveld, 2022). These responses have been observed in young children and even in toddlers, indicating an early capacity for guilt (Hepach et al., 2017; Nikolić et al., 2023; Vaish & Grossmann, 2022).

Moral deliberation. Early developments in theory of mind may also serve as a crucial social-cognitive foundation for children's ability to distinguish between moral issues and those related to social conventions or personal preferences. By the age of three to four, children begin to perceive moral transgressions (Schuetz & Koglin, 2023; Söldner &

Paulus, 2025) as more serious and less contingent on authority than violations of conventional or personal rules (Kassecker et al., 2023; Langenhoff et al., 2022; Yoo & Smetana, 2022). Their justifications often centre on concepts such as unfairness and the harm caused to others (Boosaliki, 2024; Goldstein & Michaels, 2021). At this stage, children also demonstrate an emerging understanding of the relationship between desires and emotions, enabling them to recognize how actions that thwart another person's goals can elicit negative emotional responses (Kassecker et al., 2023).

Similar social-cognitive processes underpin the emotional sensitivity that supports prosocial moral reasoning in young children. A significant proportion of preschool-aged children approach prosocial dilemmas by considering the feelings and needs of those receiving help (Donohue et al., 2024; Essler & Paulus, 2022; Tavassoli et al., 2023). Additionally, Kim and Kochanska (2024) found that children aged four to five were capable of sophisticated prosocial reasoning in their evaluations of moral situations using simplified semiprojective moral dilemmas.

Early capacities for empathetic and sympathetic responses to others' distress play a critical role in this development (Gungordu et al., 2025; Paulus et al., 2024). Empathy is morally significant because it heightens awareness of another person's emotional experience and – particularly in situations involving moral responsibility – enables young children to recognize when distress is caused either by themselves or by others (Decety & Holvoet, 2021; Matthys & Schutter, 2023).

Emotion regulation. Responsive interactions with caregivers provide essential models of emotion regulation and expression. In fact, during the earliest stages of life, infants are entirely dependent on significant others to manage and sooth their emotional states. Over time, children gradually internalize the regulatory strategies modelled by caregivers, developing their capacity to navigate emotional experiences. The same applies to the internalization of shared rules and social standards that guide moral behaviour. According to Kim and Kochanska (2024), although societies employ external systems (e.g., laws) to regulate social conduct, it is inner mechanisms of self-regulation that are most essential, not only for maintaining social cohesion but also for forming good citizens (Navarini, 2023). In fact, they refer to those inner systems of self-governance, which are not imposed through external control, as conscience or morality (Bayne et al., 2023). These contemporary perspectives on the relationship between self-regulation and morality align with the Aristotelian view that the passions of the soul – that is, the emotions – accompany moral action, to the point of maintaining that emotions can perfect such action through virtue, by enabling individuals to take joy in what is good and to feel sorrow for what is bad.

Moral motivation. Developmental psychologists have long recognized that young children are capable of prosocial behaviour (Hay & Cook, 2007). However, the studies conducted by Tomasello (2023) and others (Hepach et al., 2023) significantly extend this understanding, showing that young children not only recognize others' goals and intentions but also engage in cooperative activities from as early as their second year of life. Remarkably, toddlers often suppress their own desires to help others achieve their goals—even when those goals differ from their own and even in the absence of external rewards (Woo & Spelke, 2023; Woo et al., 2024). Furthermore, substantial empirical evidence indicates that infants, as early as the first year, can infer others' intentions based on observed behaviour (Geraci et al., 2022; Reschke et al., 2020; Vaish et al., 2010; Woo et al., 2024). This early sensitivity to goal-directed

actions likely provides the conceptual foundation for children's later ability to respond to others' intentions in a constructive and socially meaningful way.

These findings indicate that young children begin to incorporate their understanding of intentionality into moral evaluations, forming judgments of responsibility that reflect both intentions and outcomes (Wellman & Miller, 2008). The development of cooperative relationships based on mutual obligations within the family plays a key role in children's moral internalization— a process that apparently begins in early childhood rather than later. As young children come to understand themselves as individuals who strive to do the right thing, their early moral sensitivity becomes integrated into their emerging self-awareness.

If the four enabling conditions of practical wisdom can reasonably be developed by children, then it is also reasonable to conclude that they can acquire phronetic behaviors and become phronetic agents earlier than other approaches suggest. More specifically, on the Aretai model, even early manifestations of virtue may reflect incipient forms of practical wisdom, insofar as they involve rudimentary integration of moral perception, deliberation, emotion regulation, and motivation. This does not imply that practical wisdom is a threshold concept that is either fully present or absent. Rather, the Aretai model conceives phronesis as a graded form of ethical expertise that admits degrees of development. On this view, what appears in early childhood are not fully developed instances of practical wisdom, but its initial, partial manifestations, which become progressively more integrated, stable, and context-sensitive over time.

6. Conclusion

So far, we have argued that practical wisdom—like any other high-order skill or form of expertise—can and should begin to take root in early years, laying the groundwork for virtuousness as ethical expertise. The preliminary evidence reviewed here appears to support an optimistic view that, from a very early age, children are capable of displaying rudimentary forms of moral perception, moral deliberation, emotion regulation, and moral motivation—the four skills that the Aretai model identifies as constitutive of practical wisdom.

As we noted at the outset, this model challenges traditional views of practical wisdom by proposing that its skills be cultivated from the very beginning, rather than focusing exclusively on the habituation of discrete ethical virtues. In this regard, it should be noted that being monistic about practical wisdom does not imply that it is simple or lacking in constitutive features: in fact, the Aretai model's virtue monism, in other words, does not imply that practical wisdom can be trained as a single and simple trait; rather, it is among the main tenets of the model that practical wisdom can be unpacked into discrete skills, that should be the primary objects of moral education.

Critics have questioned the educational feasibility of this approach, arguing that the skills associated with practical wisdom may be too cognitively demanding for young children. Although further empirical studies are needed to examine this issue more thoroughly, the conceptual considerations and preliminary evidence discussed here seem sufficient to challenge this line of criticism and support a twofold thesis. First, we have presented research that, while still emerging, is broadly consistent with the idea that practical wisdom— at least when conceived as expertise— can begin to

be cultivated from early childhood. Second, we have argued that, insofar as this cultivation is possible, practical wisdom may deserve a more central place in educational practice. If this virtue—arguably the most important, or even the only one, in a monistic framework, such as the Aretai Model, that unifies the others—has its roots in early development, then continuing to focus primarily, or even exclusively, on the training of individual virtues risks overlooking an essential dimension of moral and educational formation.

We are aware that the idea of teaching practical wisdom to young children may face resistance, often based on the concern that *phronesis* is too complex and abstract for young minds. However, this objection stems from a misinterpretation of our claims. We are not suggesting that children can attain the level of ethical expertise of an experienced adult. Rather, our focus is on cultivating the foundational skills that underlie practical wisdom—capacities that can and do begin to emerge early in life. We already see early traces of these skills in toddlers who show empathy or engage in prosocial behaviour such as helping or sharing. These tendencies provide a natural basis upon which to build, using age-appropriate activities, discussions, and guidance to support their development. After all, no one would reasonably argue that a young child is ready to conduct scientific research at an expert level. Yet few would dispute that early childhood is the ideal time to begin nurturing the habits of observation, curiosity, and reasoning that form the basis of scientific thinking. The same happens with practical wisdom: one needs to begin cultivating its seeds in early childhood so that ethical expertise can gradually and organically take shape over time.

This statement is similar to what Henderson (2023, 2026) describes as *entangled phronesis*: a moral-psychological mechanism that underpins the relational virtue of emulation by enabling a learner to share in and progressively appropriate the phronesis of a moral exemplar in developmentally sensitive ways. On this view, when children are exposed to moral role models, such as teachers and educators, their engagement is not merely imitative but involves participation in the practical reasoning of the exemplar, thereby supporting the gradual development of their own ethical capacities.

We could describe this as quasi-phronetic. However, our proposal differs in that, rather than grounding the route to phronesis primarily in emulation or limiting direct moral instruction to specific virtues, we argue for the deliberate cultivation of phronetic skills themselves as the primary means of fostering the forms of virtuous behaviour associated with phronesis.

Contrary to the idea that a foundation of habituated virtue must be established prior to the development of practical wisdom, the Aretai model proposes that the capacities underlying phronesis begin to emerge from the outset of moral development. In line with Henderson's account of *entangled phronesis* (2023, 2026), early habituated virtue – while not yet fully phronetically informed in the learner – can nonetheless participate in phronesis through its relational entanglement with the practical wisdom of moral exemplars, thereby planting the initial seeds of ethical expertise. Thus, our model challenges the sequential approach by proposing that practical wisdom is not the result of virtues but their very foundation. From this perspective, nurturing the features of practical wisdom – that is, the skills of moral perception, deliberation, emotion regulation, and moral motivation – creates the conditions for the development of genuine and deeply-rooted virtues.

The central aim of this article was broader than simply defending the Aretai model itself. Our main purpose was to argue that the capacities associated with *phronesis* should be cultivated from the earliest stages of moral development. If we accept the premise that practical wisdom can, and should, be fostered from early childhood, what are the practical implications for education and parenting? There are certainly many. For example, we should create environments that promote ethical reflection and dialogue, encourage empathy and perspective-taking, support children in developing emotional regulation, and cultivate a sense of agency and responsibility.

Practical applications of this approach might include regular classroom and family discussions of everyday moral dilemmas, reading stories from multiple perspectives to explore characters' emotions and motivations, teaching techniques for managing anger and frustration, and involving children in collaborative decision-making and community-oriented activities. These are not abstract ideals but concrete strategies that align with what we know about children's developmental trajectories.

In conclusion, while the question of whether practical wisdom can be effectively taught from early childhood remains open to further empirical investigation, the preliminary evidence discussed here suggests that this possibility is both plausible and worth pursuing. By examining the monistic framework of the Aretai model through the lens of child development, educators can begin to equip children with the ethical tools needed to navigate increasingly complex moral situations and, over time, contribute to the formation of more just and compassionate communities. This is therefore not merely a matter of abstract theorizing but an invitation to rethink character education in ways that may foster the development of ethically attentive and morally grounded individuals.

Note

1. Against the thesis that moral motivation is a constitutive skill of practical wisdom, it might be argued that someone can possess a skill without being motivated to act on it, unlike what happens with practical wisdom, which inherently involves motivation at its core. However, many influential models of expertise, especially in complex domains, include motivational components (Dreyfus & Dreyfus, 1991; Swartwood & Tiberius, 2019). One, for example, couldn't be considered as an expert firefighter should they lack motivation to rescue. Along the same lines, Schwartz and Sharpe (2019) conceive of wisdom as a moral skill accompanied by the motivational support they label as 'moral will'.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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