

Barriers to collaboration between school teachers and child care workers: implications for HRM and school leadership

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Abstract

Purpose – Whilst an urgent need for collaboration is increasingly seen in education to better respond to socio-educational challenges, in practice, collaboration between primary school teachers and their partners is hampered by barriers. The aim of this study is to shed light on these barriers from a human resource management (HRM) angle, using the ability, motivation and opportunity (AMO) framework.

Design/methodology/approach – Quantitative and qualitative data were collected amongst staff in 16 child centres offering joint pre-school, education and childcare.

Findings – The authors' findings suggest that in general, both teachers and childcare workers perceive themselves as skilled and motivated for collaboration. They perceive aspects of opportunity to perform as most important barriers.

Practical implications – Based on this research, school leaders are advised to organise opportunities for collaboration, especially by fostering an inclusive organisational climate and scheduling sufficient time for collaboration.

Originality/value – This paper contributes to the relatively scarce body of research on HRM within the education sector. Furthermore, it illustrates the applicability of the AMO model for gaining insight into how educational management can be utilised to foster increased collaboration between teachers and childcare workers.

Keywords Collaboration, School improvement, AMO framework, Human resource management, School leadership

Paper type Research paper



Introduction

The notion that school improvement is enhanced by fostering professional collaboration is widely supported and internationally innovative practices that aim to address related challenges have emerged in many places (Armstrong *et al.*, 2021; Azorin and Muijs, 2017). This issue calls for an approach from the perspective of educational management, as educational management concerns the responsibility for the proper functioning of a system in an educational institution (Connolly *et al.*, 2019). An area where these innovative practices are found is collaboration between school and childcare staff. Driven by the rising number of children growing up in diverse pedagogical environments and a growing recognition of the benefits of childcare for children beyond meeting parental needs, collaboration between primary schools and childcare is increasingly perceived as essential for optimal support of children's development (Fukkink and Van Verseveld, 2019; Plantenga and Remery, 2017).

In response to this need, new initiatives have emerged in the Netherlands, such as the establishment of so-called "integrated child centres for education and care" (hereinafter referred to as child centres). These child centres combine primary education with out-of-school care (OSC), coupled with pre-school (ages 2–4) and day care (ages 0–4), offered by organisations from two different sectors, namely primary schools and childcare providers, each with their own legislation and labour agreements and professional educational backgrounds (Eurydice, 2019; Fukkink and Boogaard, 2020). In the present study, the term interprofessional collaboration (IPC) is used to refer to this specific school-to-childcare collaboration, where professionals with different types of expertise – primary school teachers and childcare workers – work together to optimise children's opportunities for development. Despite the relevance of IPC in child centres, Keuning *et al.* (2022) concluded that IPC is still often short-term oriented, occurs on a small scale and is characterised by low levels of cohesion. Moreover, OSC occupies a vulnerable position within IPC, manifested by the fact that in many countries OSC receives little priority and faces low status (Cartmel, 2019; Hurst, 2020; Jutzi and Woodland, 2019). Yet, it is specifically between school and OSC that one would expect frequent IPC, given that children experience boundary crossing from school to OSC daily.

From an educational management angle, this issue holds significance since educational management encompasses the responsibility for ensuring the effective operation of a system within an educational institution (Connolly *et al.*, 2019) and HRM can serve as a catalyst for effective schools (Loeb *et al.*, 2012). Therefore, a more comprehensive grasp of factors that hinder the educational ecosystem, such as collaboration between teachers and childcare workers, is imperative to address this concern adequately. Based on the premise that the quality of teachers is widely acknowledged as a crucial factor in educational outcomes (Darling-Hammond, 2023), the importance of human resource management (HRM) in schools as a mechanism to achieve high levels of teacher performance and school effectiveness is increasingly being stressed (Bryson *et al.*, 2023; Huang *et al.*, 2022; Loeb *et al.*, 2012). Boselie (2014) defines HRM as 'management decisions related to policies and practices that together shape the employment relationship, and are aimed at achieving certain goals'. However, despite the growing recognition of the need for HRM in education, human-resource-related concepts are still under limited study (Aboramadan *et al.* 2020) and alignment between strategic goals and human resource (HR) practices is still lacking (Vekeman *et al.* 2016). Nevertheless, it is imperative to acknowledge the pivotal role of HRM in education and its potential to contribute to the needs and development of individual teachers (Runhaar, 2017; Tuytens *et al.*, 2021). Within this perspective, the application of the ability, motivation and opportunity (AMO) framework offers a promising lens for our research. Not only as it is widely recognised as one of the prevailing theories in the field of HRM research (Bos-Nehles *et al.* 2023), but also because it has been fruitfully utilised in qualitative research in a rather similar context, to elucidate explanations for the (lack of) knowledge sharing amongst health professionals with diverse professional backgrounds (Currie *et al.*, 2015).

The AMO framework proposes that individuals perform [here, collaborate] well when they have the ability (A), the motivation (M) and the opportunity (O) to perform (Beltrán-Martín and Bou-Llusar, 2018; Marin-García and Martínez Tomas, 2016). Although AMO is often used on an organisational level, in which employees are considered consumers of HRM (Bos-Nehles *et al.* 2023; Meijerink *et al.*, 2016), we use the AMO framework at an individual level, by using employees' own perceptions of their AMO for IPC as a starting point. The rationale behind this choice is that providing insights into needs from an employee's perspective enables the alignment of HRM from an educational management perspective accordingly. This is important as Bohlmark *et al.* (2016) state that "principals provide management in a complex and knowledge intensive organisation" (p. 913), and our study sheds light on a specific part of this complex environment. An example illustrating the complexity in relation to HRM is provided by Van Beurden *et al.* (2021) who demonstrate that HR practices that are available but not considered effective by teachers are negatively associated with employee engagement and job performance. Obstacles to HRM implementation, as identified by Runhaar and Sanders (2013) encompass teachers' limited recognition of the usefulness of HR practices and perceived incompetence of managers in fulfilling their HRM responsibilities, which is an educational management issue.

Thus, the intended contribution made by this paper is twofold. By empirically exploring whether the AMO framework is a suitable framework for explaining barriers to IPC, we aim to offer insights that can be utilised for developing effective HR practices in education, a context where acknowledgement of the added value of HRM is not always evident. By doing so, we concurrently add to the growing body of literature on HRM in education. And secondly, this study has great societal relevance for principals who want to enhance IPC, which is useful in many countries and various educational contexts. Hence, we aim to answer the following two research questions:

- RQ1. To what extent do primary school teachers and childcare workers at child centres perceive themselves to have the abilities, motivation and opportunity to engage in IPC?
- RQ2. To what extent can barriers to engaging in IPC, mentioned by teachers and childcare workers, be classified using the AMO framework?

Theoretical background

In this section, we briefly introduce existing literature about HRM within the education context, the AMO framework, followed by a specific definition of the AMO factors, focussing on IPC.

HRM within the education context

In recent years, there has been an increased interest in HRM within the context of education (Tuytens *et al.* 2023). Several reasons can be identified for this. Firstly, from an international perspective, there is a growing shortage of teachers, which can be attributed to both the ageing population of current teachers and younger teachers leaving the profession (Darling-Hammond and Podolsky, 2019; Donitsa-Schmidt and Zuzovsky, 2016; Seeliger and Håkansson Lindqvist, 2023) which can be considered an HRM problem. Furthermore, a perceived control-oriented HRM, dissatisfaction with performance appraisal and little autonomy may also cause teachers to consider leaving their jobs (Dahle and Urstad, 2023). Additionally, teaching is increasingly regarded as a demanding and complex occupation necessitating additional requirements, such as the abilities to adapt to changing environments, exhibit innovative behaviour and collaborate more effectively to support

children's learning and development (Pagan-Castano *et al.*, 2021). This calls for effective support from an HRM perspective to achieve strategic goals through effective collaboration between teachers and other professionals with related expertise.

AMO: key determinants of employee performance

The AMO framework is widely applied to study factors that influence work performance (Bos-Nehles *et al.* 2023). Within this framework, the different AMO factors interact with each other (Bos-Nehles *et al.* 2023; Jiang *et al.*, 2012). At the individual level, opportunity seems to be a prerequisite that may also enhance motivation and ability (Beltrán-Martín and Bou-Llugar, 2018; Bos-Nehles *et al.*, 2013; Kellner *et al.*, 2016). In their review study Bos-Nehles *et al.* (2023) offer an explanation for this assertion, concluding that opportunity provides an environment in which ability or motivation can flourish. Bos-Nehles *et al.* (2013) revealed that ability emerged as the strongest predictor of performance, whilst opportunity exerted a moderating effect on this relationship. In the same vein, Boselie (2010), in the health care sector, found that ability-enhancing practices and opportunity-enhancing practices had a stronger effect on professional behaviour compared with motivation-enhancing practices. These findings align with Van Berkel *et al.* (2022), who advocated for providing opportunities to perform for street-level bureaucrats, frontline professionals such as police officers, healthcare providers and teachers (Lipsky, 1980), as a crucial boundary condition for enhancing their performance. Taylor (2007) argued that motivation-enhancing practices, such as incentives or evaluations, have no effect on improving teachers' professionalism, a viewpoint consistent with the findings of Andreeva and Sergeeva (2016). In their study of knowledge-sharing behaviour in secondary schools, they revealed that autonomous motivation was the key predictor of desired behaviour when ample opportunities to perform existed, whereas controlled motivation had no impact. However, in situations where opportunities to perform were limited, controlled motivation became critical, whilst autonomous motivation became irrelevant (Andreeva and Sergeeva, 2016).

Abilities for IPC. Ability is generally defined as the knowledge, skills and competencies that individual employees possess (Marin-Garcia and Martinez Tomas, 2016). Because of the large number of IPC abilities and measures referred to in the literature (Schmitz *et al.*, 2017), we narrowed down IPC abilities to three core ones that will be outlined below.

Understanding and appreciating professional roles and communicating effectively in an interprofessional setting are widely considered two core competencies for successful IPC (Suter *et al.* 2009; Garvis *et al.*, 2016). Following Suter *et al.* (2009), we define *interprofessional communication* in our study as 'meaningful and responsive formal and informal communication in which language is adjusted to professionals with another professional background' and *role understanding and appreciation* as 'acknowledging and respecting the professional roles and responsibilities of all professionals and valuing their benefit to the child'. Thirdly, we take reflexivity into account as IPC ability, i.e. the extent to which professionals reflect upon and adapt their working methods and functioning within their team, as it is widely recognised as a key element for successful IPC (Doll *et al.*, 2013; Knickel *et al.*, 2019).

Work motivation for IPC. Work motivation is defined as "a set of energetic forces that originate both within and beyond an individual's being, to initiate work-related behavior and to determine its form, direction, intensity, and duration" (Pinder, 1998, p. 11). However, in HR research, various measures are used, including indicators of intrinsic motivation such as commitment and engagement, as well as indicators of extrinsic motivation such as financial rewards and job security (Bos-Nehles *et al.* 2013; Knies and Leisink, 2014; Van Waeyenberg and Decramer, 2018). This lack of clarity is problematic, as evidenced by Trépanier *et al.* (2020), who found that employees respond differently to work-related situations depending on the type of work motivation that drives them. Moreover, the dichotomy between intrinsic

and extrinsic motivation is too vague to apply to work settings (Gagné and Deci, 2005). Based on the self-determination theory by Deci and Ryan (1985), work motivation is distinguished in amotivation (the absence of motivation), three controlled regulation processes and two autonomously regulated processes (Gagné *et al.* 2015).

The three types of controlled motivation are distinguished as follows. External-social regulation is driven by the wish to gain approval from others or to avoid criticism (Gagné *et al.* 2015). External-material regulation is driven by more tangible reasons, including financial rewards or job retention. Introjected regulation refers to behaviour that arises because of internal pressures (e.g., feelings of shame when not exhibiting the behaviour).

The two autonomous regulation processes are theoretically distinguished as identified regulation and intrinsic motivation. In identified regulation, there is congruence between the underlying importance of the work and one's personal goals and values. Intrinsic motivation is used when the work itself is "fun" and satisfying (Gagné and Deci, 2005). Gagné *et al.* (2015) argued that many activities in work organisations are not intrinsically interesting, but when they correspond with personal goals and values, they still represent autonomous motivation. Thus, autonomous motivation, being a broader concept than intrinsic motivation, is more relevant in work settings (Cerasoli *et al.* 2014).

Opportunity to engage in IPC. Opportunity to perform, which may be defined as a set of environmental or contextual enablers of "productive behaviour" that are external to the individual (Bos-Nehles *et al.* 2020), has been operationalised in various ways (for an overview, see Marin-Garcia and Martinez Tomas, 2016). However, in general four aspects seem important to consider: enough time to perform the task, professional autonomy, a favourable work environment and supportive leadership (Bos-Nehles *et al.*, 2013; Meijerink *et al.*, 2016; Salas-Vallina *et al.*, 2021; Van Waeyenberg and Decramer, 2018).

Firstly, employees should perceive they are able to spend enough time on IPC, as providing enough dedicated time positively affects performance (Bos-Nehles *et al.* 2013; Conway and Monks, 2008).

Secondly, professional autonomy is defined as the degree of independence and liberty that employees experience in how they carry out their tasks (Bos-Nehles *et al.* 2017). This is important in our context, considering the difference in professional autonomy between primary education teachers and childcare workers (Boselie and Veld, 2012; Strong and Yoshida, 2014).

Thirdly, a favourable work environment in accordance with a particular organisational climate substantially affects team and organisational outcomes (Carlucci and Schiuma, 2012; Schneider *et al.*, 2017). An organisational climate is based on shared perceptions about the psychological impact of the work environment on employee well-being (James *et al.*, 2008). School-to-childcare collaboration is still characterised by "us and them" distinctions, which indicate a lack of inclusion between all staff working together around providing education and care to children (Keuning *et al.* 2022). This would make an inclusive organisational climate a favourable work environment for IPC. An organisational climate can be considered inclusive to the extent that its policies, practices and procedures demonstrate that all individuals in the organisation perceive themselves to be valued members of the workplace, without pressure to assimilate in order to be accepted (Shore *et al.*, 2011).

Fourthly, following from the organisational support theory, employees are more likely to exhibit the behaviour desired by the organisation when they perceive leadership behaviour as supportive (Wright and Nishii, 2013).

In summary, Table 1 provides a brief overview of the AMO for IPC variables.

Methods

Our study followed a convergent mixed-methods design, which means that quantitative and qualitative data were gathered around the same time and data were merged in the

AMO factor	Definition and aspects
Abilities for IPC	<p>The knowledge, skills and abilities individual employees possess:</p> <ul style="list-style-type: none"> - understanding and appreciating professional roles: respecting and valuing roles/responsibilities and expertise of professionals with different expertise and being able to use the knowledge of one's own role and that of other professionals for the purpose of optimal development and guidance of the child (adapted from Suter et al., 2009) - communicating effectively in IPC settings: meaningful informal and formal communication in a responsive and accountable manner focussed on the child's development and guidance (adapted from Carmack and Harville, 2020) - reflexivity: conscious reflection on the functioning of interprofessional cooperation by professionals involved (adapted from Knickel et al., 2019)
Work motivation for IPC	<p>A set of energetic forces that originate both within and beyond an individual's being, to initiate work-related behaviour and to determine its form, direction, intensity, and duration:</p> <ul style="list-style-type: none"> - Amotivation, lack of motivation - external (social/material) motivation, driven by the wish to gain approval from others or (financial) rewards. (Gagné et al., 2015). - introjected motivation, driven by internal pressures (Gagné et al., 2015) - identified and intrinsic motivation, corresponding with personal goals and values or when the work is inherently enjoyable
Opportunity to engage in IPC	<p>A set of environmental or contextual enablers of productive behaviour:</p> <ul style="list-style-type: none"> - enough time to carry out the task - professional autonomy, the degree of independence and liberty that employees experience in how they carry out their tasks - inclusive organisational climate, a climate in which all individuals in the organisation perceive themselves to be valued members of the workplace, without pressure to assimilate in order to be accepted - supportive leadership, supportive behaviour, aimed at increasing commitment and development

Source(s): Authors' own work

Table 1.
Summary of AMO factors for IPC, definitions adapted to the context of our study

interpretation phase of the research. This type of research allows a broader and deeper understanding of complex human phenomena for which using quantitative and qualitative data alone would not be sufficient ([Doyle et al., 2019](#)), as is the case with IPC in our context.

Sample

This study is part of a larger project on leading IPC within child centres. The first phase of the sampling involved convenience sampling based on the geographic location of the child centres, followed by purposeful variation sampling aiming to achieve a depth of understanding ([Robinson, 2014](#)), for example, by seeking variety in pupil and staff numbers. A total of 21 child centres were invited, 16 of which participated in our study. Employees could voluntarily decide whether they wished to participate based on an information letter.

Quantitative data. A total of 495 questionnaires were distributed online and 273 questionnaires were received. Of these 273 questionnaires, 17 were deleted because participants did not complete the questionnaire, resulting in a response rate per child centre ranging from 33.3% to 81.3% with a mean of 51.7%. Thus, the final sample in this study was 256 employees. The majority of the sample were primary education teachers (72%), compared to 28% childcare workers, whilst 5 respondents listed "other" as a function or combined functions. Participant age ranged from 22 to 65 years. The average age of childcare workers ($n = 72$) was 41.6 years ($SD = 10.4$), for teachers in grades 1–3 ($n = 82$) it was 41.1 years

($SD = 12.1$) and for teachers of grades 4 and above ($n = 97$) it was 40.7 years ($SD = 10.8$). Not all participants responded to all items, especially amongst childcare workers.

A common rule is to have at least 10 to 15 participants per variable (Field, 2018, p. 683). Given that our study involved 9 variables, our sample size was adequate for further analysis.

Qualitative data. To investigate what barriers were perceived by employees, we conducted focus group interviews. These interviews were conducted in Dutch by the first author. The focus group interviews were all audio-recorded and transcribed verbatim afterwards. To compose these focus groups, leaders were asked to identify a group of approximately three to five staff members per focus group who could be regarded as representative of their staff with respect to age, experience and attitude towards child centres. In sum, 83 staff members took part in one of the 26 focus groups: 38 childcare workers, 29 school teachers grade 1–3 and 16 school teachers grade 4 and above. On average, the interviews lasted about 45 min.

Instruments

Questionnaire. The questionnaire was tested prior to this study by a validation field study (factor analysis and internal consistency reliability analysis) amongst 159 participants working at 13 other child centres. With the exception of *inclusive organisational climate*, all subscales showed Cronbach alpha scores above 0.75, which is in general considered adequate for research. Therefore, only some minor adjustments were made in this subscale. All items used a 6-point Likert-style response scale, from 1 (*fully disagree*) to 6 (*fully agree*). The questionnaire was in Dutch; sample items were translated into English for this article. The final scales are explained below.

IPC abilities. Abilities at the individual level are often measured with the construct of occupational self-efficacy, an individual's belief in their ability to be successful in certain situations or to accomplish a specific task (Bos-Nehles *et al.* 2023; Knies and Leisink, 2014; MacLeod *et al.*, 2022). A researcher-designed 12-item scale using the wording, "I am skilled in (. . .)," was developed, based on the three earlier mentioned IPC core competencies. A sample item is "I am skilled in working with other professionals to see how we can collectively improve an activity next time." We conducted a principal components analysis (PCA) to check the consistency of the three subscales. Preliminary analysis indicated that the data and variables were appropriate (Field, 2018) for PCA: Kaiser–Meyer–Olkin (KMO) = 0.917; Bartlett's test of sphericity, $\chi^2(66) = 1619.97, p < 0.001$. PCA revealed one factor explaining 50.7% of the total variance for IPC abilities. Based on this outcome, it was decided to work with a combined scale for IPC abilities.

Motivation for IPC. Motivation for IPC was measured using 15 items from the validated Multidimensional Work Motivation Scale (Gagné *et al.* 2015), adjusting the original scale by asking why people put effort into IPC instead of "in their work". A sample item is "I put effort in interprofessional collaboration, because it has personal significance to me." Preliminary analysis indicated that the data and variables were appropriate (Field, 2018) for PCA: KMO = 0.86; Bartlett's test of sphericity, $\chi^2(153) = 3175.913, p < 0.001$. However, the PCA revealed only four factors, explaining 72.56% of the total variance, instead of the six theoretically distinguished variables. Identified motivation and intrinsic motivation, in line with previous research by Trépanier *et al.* (2022), appeared to be one variable – autonomous motivation – explaining 33.54% of the variance. A second component corresponding to introjected motivation explained 22.86% of the variance, the third component corresponding to materially regulated motivation explained 9.97% of the variance and the fourth component, corresponding to amotivation, explained 6.19% of the variance. The items corresponding to socially regulated motivation did not form a separate component and loaded on both materially regulated motivation and introjected motivation. Therefore, items corresponding to socially regulated motivation were removed in further analysis.

Opportunity to engage in IPC. Opportunity to engage in IPC was measured using a researcher-designed scale addressing perceived professional autonomy (4 items, $\alpha = 0.834$, $\mu = 4.50$), opportunity to spend enough time on IPC (3 items, $\alpha = 0.779$, $\mu = 3.28$) inclusive organisational climate (4 items, $\alpha = 0.76$, $\mu = 4.44$) and supportive leadership (4 items, $\alpha = 0.82$, $\mu = 4.33$). A sample item is “In my job, I have the opportunity to apply my own ideas about interprofessional collaboration in practice”. Preliminary analysis indicated that the data and variables were appropriate (Field, 2018) for PCA: KMO = 0.89; Bartlett’s test of sphericity, $\chi^2(105) = 1751.886$, $p < 0.001$. The PCA revealed four factors that exactly matched the theoretically distinguished variables, explaining 67.31% of the total variance.

Focus groups. Focus groups were organised in which staff members were interviewed about IPC in their child centre. Throughout the focus groups, all participants were given a chance to speak; less active participants were involved in the conversation by engaging them directly with questions such as, “And what are your views on (. . .)?” Two short vignettes of a meaningful situation close to their own everyday practice aimed to establish a recognisable and equal starting point for the focus groups. The vignettes were created in advance by the researchers and submitted for validation to a manager of a child centre not participating in the research.

Vignette 1 described the specific situation of Lisa, a 5-year-old girl who is in grade 1, attends OSC two days a week and appears to have difficulties with the transitions between school and OSC. The focus group interview started with the opening question: “And what if a child like Lisa came to your child centre?” Vignette 2 involved the specific situation of Rayan, a three-year-old boy about whose language development concerns exist and therefore multiple professionals would need to be involved. For vignette two, the same initial question was asked.

Data analysis

Questionnaire. Given the focus on IPC in the Early Childhood Education and Care (ECEC) domain (from toddler groups up to and including grade 3), we analysed the data using one-way ANOVA in SPSS, followed by a Bonferroni post hoc analysis to assess differences between groups. We distinguished between childcare workers, primary school teachers working in grades 1 through 3 and school teachers working in grade 4 and above. Due to limited operating hours, only a few childcare workers work exclusively in OSC and most of them combine this job with working at pre-school play groups. Therefore, childcare workers could not be distinguished into two subgroups. Based on our 6-point scale, we defined mean scores up to the scale midpoint 3.5 as indicating a major barrier, scores between 3.5 and 4.5 as a minor barrier and scores above 4.5 were not considered a barrier.

Focus groups. Qualitative content analysis of the transcripts was conducted, divided into inductive and deductive approaches as described by Elo and Kyngäs (2008), for which we used Atlas.ti 22. In a first stage, we identified 264 text fragments that mentioned a barrier to IPC, mostly comprising one or two sentences each. In this study, a barrier was defined as “a circumstance that may cause difficulties for IPC”. In a second stage, we analysed these text fragments with the aim of assigning them to one of the theory-derived AMO aspects. Thus, we coded each barrier as a lack of abilities, lack of motivation, or lack of opportunity. The third stage involved identifying underlying sub-aspects, with the sub-variables used in the questionnaire as a guide in coding. Reliability of the coding process was ensured as follows: we started coding the first interviews by the first and second author independently and differences were discussed in order to reach consensus. Then, the first author coded the remaining interviews and results were discussed by all four authors. After finishing the coding process, we analysed the coded text fragments using two distinct approaches. Firstly, we scrutinised the occurrence of relevant codes across the focus group interviews, thereby considering the number of interviews in which these codes emerged. Additionally, we employed the same three respondent groups as utilised in the quantitative analysis.

Considering the unequal group sizes of these three groups, comparing absolute numbers could lead to misleading interpretations and to address this concern, we included normalised numbers instead of absolute numbers. This addition enabled a better comparison of the number of coded text fragments per respondent group. Lastly, a thematic description was formulated for each category of barriers, where, for the purpose of this article, the quotes used were translated into English.

Results

The presentation of our findings is organised by our two research questions, aiming to understand the perceptions of primary school teachers and childcare workers at child centres regarding their AMO for IPC and whether perceived barriers could be classified using the AMO framework.

RQ1: perceived AMO for IPC

IPC abilities. The high scores for IPC Abilities (see [Table 2](#)) indicate that staff from both sectors generally felt that they were skilled in IPC. A one-way ANOVA was conducted to compare abilities for IPC between childcare workers, teachers working in grades 1–3 and teachers working in grade 4 and above. Post hoc comparison analysis revealed a statistically significant difference ($p = 0.048$) in the perceived levels of IPC abilities between childcare workers and teachers in grades 1–3, with the latter group ($M = 5.175$) reporting higher perceived ability compared to childcare workers ($M = 4.988$).

Work motivation for IPC. [Table 2](#) reveals higher scores for autonomous motivation to engage in IPC than for controlled motivation and amotivation. One-way ANOVAs also demonstrated statistically significant differences in the four types of work motivation for IPC amongst the three respondent groups. The ensuing significant distinctions will be presented below, based on post hoc comparison analysis.

Firstly, post hoc comparison analysis determined a statistically significant difference ($p = 0.016$) between teachers in grades 1–3 and teachers in grades 4 and above concerning the extent to which they lacked motivation for IPC. Teachers in grade 4 and above ($M = 1.78$) were more likely to agree that they had no motivation to put effort into IPC, compared with teachers in grades 1–3 ($M = 1.44$).

Secondly, concerning controlled, materially regulated motivation, post hoc comparison analysis determined a statistically significant difference between teachers in grades 1–3 and

Variable	Childcare workers ($n = 72$)		Teachers grades 1–3 ($n = 82$)		Teachers grade 4 and above ($n = 97$)	
	Mean	SD	Mean	SD	Mean	SD
Abilities*	4.99	0.62	5.18	0.44	4.99	0.49
Amotivation*	1.70	1.04	1.44	0.67	1.78	0.99
Controlled material motivation*	2.05	0.99	1.63	0.96	2.15	1.26
Controlled introjected motivation*	3.18	1.27	2.60	1.39	3.26	1.39
Autonomous motivation*	5.02	0.79	5.15	0.67	4.84	0.77
Professional autonomy	4.37	0.81	4.57	0.81	4.52	0.82
Sufficient time for IPC	3.13	1.03	3.26	1.32	3.33	1.08
Inclusive organisational climate	4.24	0.86	4.52	0.66	4.49	0.70
Supportive leadership	4.23	0.83	4.43	0.86	4.30	0.90

Note(s): *One-way ANOVA significant at $p < 0.05$

Source(s): Authors' own work

Table 2.
Perceived AMO for IPC (means and standard deviations) at child centres, by employee type

childcare workers ($p = 0.049$) and between teachers in grades 1–3 and teachers in grade 4 and above ($p = 0.005$). For teachers in grades 1–3, material benefits were less of a driver for putting effort into IPC, compared with the other two groups.

Thirdly, post hoc comparison analysis determined a statistically significant difference amongst the three groups concerning introjected motivation. A significant difference was found between teachers in grades 1–3 and childcare workers ($p = 0.021$), as well as between teachers in grades 1–3 and teachers in grade 4 and above ($p = 0.002$). Both childcare workers ($M = 3.18$) and teachers in grade 4 and above ($M = 3.30$) were more likely to put effort into IPC due to self-imposed expectations compared to teachers in grades 1–3 ($M = 2.59$).

Lastly, post hoc comparison analysis determined a statistically significant difference ($p = 0.016$) between teachers in grades 1–3 and teachers in grade 4 and above in terms of autonomous motivation. Teachers in grades 1–3 ($M = 5.15$) exhibited a higher dedication to IPC driven by personal value, compared with teachers in grade 4 and above ($M = 4.84$).

Opportunity. Findings show that no significant differences were found amongst the participant groups. Overall, participants agreed that not enough time for IPC was provided (see Table 2). The average scores for all three respondent groups were considerably below the theoretical midpoint value of 3.5 (min-max: 1–6), indicating a barrier. Overall findings showed that inclusive organisational climate and supportive leadership may be considered minor barriers, taking into account their mean scores between 3.5 and 4.5.

RQ2: classifying barriers using the AMO framework

Table 3 provides a comprehensive overview of barriers identified in the study, presenting the number of focus group interviews in which each barrier emerged. Additionally, the table offers a more detailed analysis of the distribution of these barriers across the three respondent groups mentioned earlier, presenting normalised numbers, adjusted for differences in group sizes.

Lack of abilities for IPC. Table 3 reveals that a lack of ability as a barrier to IPC emerged in 20 of 26 focus groups and was predominantly mentioned by teachers in grades 1–3. A considerable number of these comments had to do with a widespread lack of interprofessional communication concerning the children's transfer from school to OSC and a lack of reflexivity about how IPC could occur more effectively. A *lack of interprofessional communication* could relate to practical matters or procedures (example 1), but even when there was basic communication, it did not always have a pedagogical nature (example 2):

I think there have been times that a younger child was lost because they walked home alone instead of walking to OSC. But often the opposite happens: children who mistakenly think they must go to OSC. It happened just this week, and for me it was unclear what to do. (teacher, grades 1–3)

1	2	3	4	5	6
Lack of abilities	20	59	43,7	80,1	57,1
Lack of motivation	8	8	6,6	5,7	15,6
Lack of professional autonomy	18	26	30,6	28,6	10,4
Lack of sufficient time	25	65	72,1	77,2	25,9
Lack of inclusive organisational climate	21	63	78,6	42,9	62,3
Lack of supportive leadership	16	35	26,2	51,5	25,9

Note(s): 1. Variable 2. Number of focus groups in which the topic was mentioned ($n = 26$) 3. Total number of coded text fragments 4. Normalised number of quotations by childcare workers. 5. Normalised number of quotations by teachers grades 1–3 6. Normalised number of quotations by teachers grades 4 and above

Source(s): Authors' own work

Table 3.
Classification of
barriers, using the
AMO framework (in
normalised numbers)

They [childcare workers] bring the little ones into the classroom, but nothing of any communication is ever given. They stick their heads around the corner and say, 'Oh yes, the teacher is already there, have a nice day!' (teacher, grades 1–3)

Barriers that were linked with a *lack of reflexivity*, concerned the extent to which staff reflected upon and adapted their interprofessional working methods. Some respondents did not even consider the idea of reflecting on IPC, and some mentioned it as something that “just does not happen”.

Sometimes it has to do with the right timing. For instance, practising evacuation together. Then they [the teachers] think “what an inconvenient time”, but if they choose a time themselves, it's inconvenient for us again. So if you were to discuss it together, you could look together at how you could do it better next time. (childcare worker)

Lack of motivation for IPC. The absence of motivation emerged in 8 focus group interviews, with the normalised numbers indicating a slightly higher representation amongst teachers in grade 4 and above. In general, the quotations revealed that respondents did not always see the point of IPC or simply showed a lack of interest in the matter.

Well, it's called out-of-school *care*. What I see, is that they give the kids the opportunity to relax, but I don't consider it an extension of school. So actually it doesn't interest me that much. (teacher, grade 4 and above)

Lack of opportunity for IPC. A lack of opportunity in IPC was addressed in all focus group interviews. Within this category, the lack of sufficient time for IPC stood out in particular: this was mentioned in 25 of 26 focus group interviews. The lack of an inclusive organisational climate was mentioned in 21 of the interviews, followed by the lack of professional autonomy (18 interviews) and the lack of supportive leadership (16 interviews). Considering the normalised numbers presented in Table 3, the following observations come to light. Time constraints for IPC emerge as the largest barrier for teachers in grades 1–3 and childcare workers, whereas it is less prevalent amongst teachers in grade 4 and above. A lack of an inclusive organisational climate is experienced as an important barrier by childcare workers, to a slightly lesser extent by teachers in grade 4 and above and to the least degree by teachers in grades 1–3. The lack of supportive leadership is predominantly experienced by teachers in grades 1–3, whilst it is less prominent amongst teachers in grade 4 and above and childcare workers. Finally, a lack of professional autonomy was perceived as a relatively minor barrier, with teachers in grade 4 and above reporting it the least.

With regard to *lack of time*, participants mentioned a lack of dedicated time, not having enough time available for IPC, but also not being able to find shared moments for IPC, for instance, due to the different working hours:

What I really struggle with is the fact that if [name of childcare worker] wants to join a joint meeting, she has to do it in her free time. Whereas with us, meeting time is part of your work, it happens during working hours . . . (teacher, grades 1–3).

Actually, we speak to each other very little. Because they [childcare workers] only start after the school day. They are then straightaway busy with the children, while we are doing everything that has to be done after school.' (teacher, grades 1–3).

The second topic, *lack of an inclusive organisational climate*, reflected that sometimes employees – in general childcare workers – did not feel they were treated with equal respect, as a professional and sometimes quotes from teachers in grade 4 and above seemed to indicate less respect for the childcare worker profession.

Not all teachers do this, but there are still some who act like they are better than us, like “they're just childcare workers, all they do, is change diapers”. It's a bit disrespectful, if you'd ask me. (childcare worker)

I don't think that if our school was smaller, we'd have more contact with the childcare workers. Childcare and school are two separate things, they work in a different way with the children. There is a big difference between saying, "You can choose between playing football, running around in the gym, or, uh, lying on the couch," and saying, "Alright, let's do some math now." It's like a whole different world to me. (teacher, grade 4 and above).

The third topic concerned *lack of supportive leadership*. Whereas childcare workers in particular experienced limited availability of their supervisors (who often manage several centres), teachers especially in grades 1–3 were hindered by management teams giving little priority to IPC and failing to put their words into action.

Is becoming a child centre a priority? Yes, it certainly is because it has a positive impact on attracting new children. *And how do you notice it being prioritised by the management team?* That's challenging to say. I've encountered several management teams, all of whom expressed the intention to prioritise the development of a child centre. Unfortunately, despite the verbal commitment, little progress was made each time. (teacher, grades 1–3)

Fourthly, regarding the *lack of professional autonomy*, it became apparent that teachers are used to having a great amount of professional autonomy, whereas this is less common for childcare workers. This was expressed, for example, in working practices where teachers imposed and childcare workers followed.

You know, sometimes they [the teachers] just impose things on us, like what we have to put on our windows. It's like, "Hey, this is the theme, so stick this on your windows." But for us in OSC, it would be way more fun to hang up crafts and stuff. But the school doesn't allow that. They want everything to have a unified look. The problem is, we don't have any say in how things should look. It would be so much better if childcare workers were included in the working group that decides on the building's appearance. But right now, we're left out of that decision-making process. (childcare worker)

Discussion

The aim of this study was to investigate the extent to which using the AMO framework is helpful in understanding the lack of further development of IPC in child centres and by doing so, offering insights for developing effective HR practices. We studied this by identifying to what extent teachers and childcare workers perceive themselves to have AMO for IPC and to what extent the barriers they experience to IPC can be categorised within the AMO framework. Indeed, the latter turned out to be highly feasible, as evidenced by our empirical data. Moreover, our results revealed that a perceived lack of opportunity to perform is the main obstacle to further increasing IPC.

Our data provided strong evidence that teachers in grades 1–3 play a pivotal role in IPC within child centres. They demonstrate the highest ability in IPC, as shown in their self-assessment and their ability to identify barriers arising from insufficient IPC by others, as shown in the qualitative data. Moreover, this group exhibits the most favourable motivation profile, characterised by elevated levels of autonomous motivation coupled with low levels of controlled motivation and amotivation. Opportunity to perform was found to be the most important barrier in IPC, based on both qualitative and quantitative data and for all three respondent groups. Whilst the questionnaires did not reveal significant differences, the focus group insights indicated that teachers in grades 1–3 primarily faced barriers related to time constraints for IPC and a dearth of supportive leadership. In contrast, childcare workers predominantly encountered barriers arising from a poor inclusive organisational climate and limited time allocated for IPC. Childcare workers report feeling less included by teachers, whilst the group of teachers in grade 4 and above, in turn, also includes childcare workers less, due to inequality in the nature of their respective roles and responsibilities they perceive between themselves and childcare workers. Currie *et al.* (2015) showed that in the healthcare

sector status differences hinder IPC between professionals with a different professional background. A similar situation may be at play here, given that the education and healthcare sectors are related fields both characterised by hierarchy and strong professional norms (Edmondson *et al.*, 2016). Our findings add to the body of knowledge on AMO research. The presence of opportunity to perform affects autonomous motivation (Andreeva and Sergeeva, 2016); therefore, when opportunity to perform is perceived as a barrier, autonomous motivation may not contribute to performance (here: IPC) and the high quality of autonomous motivation we found amongst both teachers and childcare workers may not affect their performance in IPC.

Dividing teachers into two groups, grades 1–3 and grade 4 and above, appeared useful. The ANOVA results showed that these are two different groups with their own perceptions of IPC between childcare and education: teachers of grade 4 and above have a lower motivation compared to teachers in grades 1–3. This distinction was confirmed in the qualitative data, which showed that teachers in grades 4 and above – adjusted for group size – felt less connected to the child centre and, maybe for the same reason, experienced the fewest barriers in IPC. The lower percentage of children attending OSC amongst pupils from grade 4 and above, may be a factor in this, and this could be studied further.

Some findings from our study merit comments, which will be outlined next. In our study, we operationalised AMO for IPC with a questionnaire that, in a pilot version, produced reliable scales. The qualitative data contributed to further robustness, because they provided an accurate view of what these barriers relate to in daily practice, especially concerning the opportunity to perform in IPC. Notable is the discrepancy between the high scores concerning perceived abilities and the significant number of barriers related to abilities in the qualitative data, which would suggest a lower score on this variable in the quantitative data. A plausible explanation for this paradox lies in the non-identical nature of the measurements employed. The questionnaire utilised self-efficacy in IPC as a measure of IPC abilities, based on the theoretical premise that self-efficacy serves as a significant predictor of professional behaviour in specific contexts (Bos-Nehles *et al.* 2023). The qualitative data on the other hand, identified challenges, primarily revolving around the lack of abilities in others rather than the participants' own deficiencies. This is evident in the considerably higher scores on ability reported by teachers in grades 1–3, who also express a greater dearth of IPC abilities in others, as indicated by the higher number of barriers they reported under abilities, compared to childcare workers and teachers in grades 4 and above. Another explanation was found in the research conducted by Jones *et al.* (2021) on self-efficacy in IPC settings, which revealed that respondents exhibited high self-efficacy in communicating with others and in role valuation, but low self-efficacy in more intricate scenarios such as interprofessional conflicts and providing feedback in IPC settings. Similarly, our questionnaire addressed aspects of communication with others and role valuation, where the qualitative data actually revealed barriers that had links to more complex situations involving conflicts and disputes.

Our study also has several limitations. Firstly, the questionnaire used self-reported data and for practical reasons we did not measure whether the perceptions of teachers and childcare workers corresponded to their actual behaviour. Secondly, the distinction made in literature between the three core IPC abilities was difficult to maintain in quantitative data. This could have been caused by the wording of the items, which led to the possibility that they may have measured an overarching factor 'being skilled'. In addition, fragments indicating a barrier due to not applying ability do not always provide insight into the backgrounds of non-use. Besides not having the ability, non-use may also be caused by either a lack of motivation or not having the opportunity to use the ability. This is supported by Bos-Nehles *et al.* (2023), who stated that motivation and opportunity can interact with abilities.

Theoretical contribution

Our primary theoretical contribution lies in the insights into the employee perspective concerning their AMO to perform in IPC. The mixed-method design proved of great value in gaining a thorough understanding of the context in which childcare workers, teachers in grades 1–3 and grade 4 and above engage daily to shape IPC. To the best of our knowledge, this is the first HRM study to examine IPC from an employee perspective within the education sector. By accumulating this knowledge, valuable insights can be derived to inform the development of effective HR practices tailored to this specific context. This knowledge may also be relevant to other collaboration networks involving schools, such as school-to-school collaboration between different educational phases (e.g. primary and secondary schools), which aim to ensure smoother transitions across these phases, as proposed by [Azorin and Muijs \(2017\)](#), or school networks in which health professionals or social workers collaborate. Moreover, we have developed measures to assess the extent to which staff in education are equipped for IPC. However, further validation of these measures is recommended. Self-reported data provide a broad understanding of how employees perceive their own IPC abilities, but a positive bias may be apparent. It is therefore recommended that future research should also include actual behaviours. Furthermore we recommend taking into account multi-level issues as suggested by [Bos-Nehles et al. \(2023\)](#), and, based on our findings, the interrelatedness between ability and opportunity. And finally, it would be valuable to consider incorporating outcome variables in future research, to provide insights into whether increased opportunity to perform indeed translates into enhanced IPC.

Conclusion

Through empirical exploration, we aimed to assess the suitability of the AMO framework in explaining barriers to IPC. Our objective was to offer insights that could be used for the development of effective HR practices in education, a context where the acknowledgement of the added value of HR practices is not always evident ([Runhaar and Sanders, 2013](#); [Van Beurden et al., 2021](#)). By doing so, we aimed to contribute to the growing body of literature on HRM in education. We conclude that in line with [Tuytens et al. \(2021\)](#), strategic HRM did not seem to be aligned with the strategic goal (here: achieving IPC), given the barriers currently experienced, in particular concerning opportunity to perform. Although previous research ([Beltrán-Martín and Bou-Llusar, 2018](#); [Kellner et al., 2016](#); [Lipsky, 1980](#); [Taylor, 2007](#); [Van Berkel et al., 2022](#)) pointed out the significance of the “opportunity to perform” factor as a crucial element, our analysis of both qualitative and quantitative data revealed that this specific aspect was precisely where most barriers were identified.

In the context of educational management, two primary concerns hold practical relevance: allocating sufficient time for IPC and fostering an inclusive organisational climate, wherein both teachers and childcare workers are equally esteemed and appreciated. Considering the role of line managers in HRM, as suggested by [Knies and Leisink \(2014\)](#) and the substantial amount of barriers we found, professional development in strategic HRM is advocated to ensure implementation of aligned HR practices by school and childcare leaders.

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