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Shifts in Chinese preschool educators' attitude, practice, and language use in mealtime talk: a study grounded in a language education program

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ABSTRACT
This study investigated the effects of a language education program by comparing 30 Chinese preschool educators' : 1) attitudes towards mealtime talk; 2) meal practices; and 3) the experiential functions (material, mental, relational) of the mealtime talk before and after the program. The results demonstrated: 1) 50% of educators showed a positive change in attitude; 2) 30% of educators changed their meal practices from circulating meals to sitting with children; 3) the three types of experiential functions in mealtime talk became more balanced after the education program; and 4) the change of experiential functions in talk was more pronounced amongst educators who changed meal practices.

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Chinese preschool educators; experiential functions; language education program; mealtime talk

Introduction

Mealtime talk has received special attention in the field of educational research due to its benefits for children's language and social-cognitive development. Studies conducted in both family and early childhood education (ECE) settings suggest that mealtime talk provides ample opportunities for children to chat, simulate and engage in arguments with adults who have mature conversational skills, during which children are exposed to and practice various vocabulary, syntactic structures, language expansion patterns, and genres (Hu et al., 2019; Bova & Arcidiacono, 2013; Busch, 2017; Snow & Beals, 2006). The topic choices, communicative roles, and interpersonal functions that adults display during mealtime talk influence children's manner of talk and socialisation process (Ochs & Shohet, 2006). Various factors including adults' educational and cultural background and mealtime routines (e.g. sitting together with children or separately from them) have been identified as influencing the quality of adults' language use at the dinner table (Hu et al., 2019; Degotardi et al., 2016).

Previous studies have mainly used a 'snapshot' approach to capture the 'portrait' of adults language use during mealtime talk; however, little is known about whether this 'portrait' can change if adults gain greater awareness and understanding of the

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pedagogical functions of their language during mealtime. One study employed an intervention to enhance parents' awareness of the value of decontextualised language and found an increase in its use during meal interactions with their four-year-old children (Leech et al., 2018). While this study offers a valuable insight, it was conducted in Western home settings. In contrast, the dynamics of mealtime talk in Chinese preschool settings may differ significantly due to cultural, institutional, and pedagogical factors. The present study addresses this issue by investigating Chinese educators language use before and after a targeted language education program designed to enhance the participating educators language attitudes and practices regarding preschools mealtime talk. This study contributes to the cultural diversity of mealtime talk literature by providing insights into Chinese educators attitudes and practices relating to preschool mealtime.

To capture the features of Chinese educators' language use, this study employs systemic functional linguistics (SFL), which emphasises language as it occurs in interactional contexts. Specifically, we focus on educators use of experiential functions, which refer to how language is processed to reflect speakers diverse experiences in the real world. Using SFL theory, this study analyzes and compares Chinese educators language use during preschool lunch interactions before and after a language training program.

The pedagogical value of mealtime talks in ECE settings

Mealtime is a significant component of the early childhood education (ECE) daily schedule, constituting approximately 7% of a preschool's routines (Chien et al., 2010). In Chinese preschools, children typically have morning and afternoon snacks, along with a formal lunch. Studies indicate that educators skilful interactions with children during mealtime support childrens physical needs and language learning, including vocabulary growth and literacy development (Aukrust & Snow, 1998; Barnes et al., 2020; Cote, 2001; Kultti, 2014; Massey, 2004). For instance, Cote (2001) reported that childrens exposure to decontextualised language (e.g. describing past experiences) when freely chatting with educators during meals may predict their performance on certain literacy tasks like story comprehension and receptive vocabulary. While mealtime talk featured more rare words than book reading, it was often undervalued by many ECE educators (Cote, 2001). A recent study conducted by Barnes et al. (2020) further confirmed the connection between educator-child mealtime interactions and childrens language competence. The researchers considered preschools meal practices as a hybrid space that integrates elements of home and school practices, and then grouped preschool mealtime interactional styles into four cohorts, namely *home (a style based on home practice), classroom (a style based on classroom settings), hybrid-high* (a mixed style of *home* and *classroom* with a strong home influence), *hybrid-low* (a mixed style of *home* and *classroom* with minimal home influence). Using cluster analysis, the researchers found distinct language patterns across groups. The home cluster had the most social/personal talk and least academic/food talk, while the classroom cluster had less of these topics but more managerial talk. The hybrid-low cluster showed limited discussions on academic/food and social/personal topics, whereas the hybrid-high cluster had the highest academic vocabulary in both topics. With the exception of home cluster, the other three clusters predicted greater growth in childrens expressive vocabulary (Barnes et al., 2020).

Educators language attitudes and meal-routine practices have been identified as factors associated with educators language use during mealtime (Cote, 2001; Degotardi et al., 2016). Ødegaard (2007) explored the cultural and pedagogical values embedded in mealtime conversations between educators and very young children, demonstrating how these interactions serve as a platform for co-constructing knowledge. Her study found that educators who value children's initiations in conversations are more likely to adjust their co-narrative styles, anticipate childrens contributions, and facilitate the continuity of narrative conversations. This approach underscores the didactic potential of mealtime interaction for language development (e.g. agencies in communication) and cultural value transmission. Degotardi et al. (2016) analysed the influence of meal practices—whether educators physical positioning (sitting with children vs. circulating during the meals) affected the characteristics of educators interactions with infants during snack time. Compared to educators who moved around serving food, those who sat with children scored higher in language-supporting strategies, as assessed by the Teacher Interaction and Language Rating Scale (TILRS). Additionally, the educators qualification level influenced their Interaction-promoting skills and language-promotion strategies. Educators with diploma and bachelors degrees scored significantly higher than certificate-qualified educators.

Cultural background essentially shapes the language feature employed by educators during their meal interactions with children (Aukrust, 2001; Harte et al., 2019). Aukrust (2001) compared teacher-child conversations between Norwegian and American preschools in the contexts of meals, circle time and other less structured activities. The results showed that in the Norwegian preschools there was more talk that recounted past experiences, whereas the conversations in American preschools involved more management discourses for maintaining conversations, such as encouraging turn taking, evaluating the way of talking, or identifying genres. This finding aligns with numerous studies conducted in home environments that suggest cultural settings shape the way of talk in adult-child meal interactions (Aukrust & Snow, 1998, Degotardi et al., 2022; Ochs & Shohet, 2006).

In the Chinese context, traditional cultural values significantly shape mealtime routines and interactions in preschools. While mealtime conversations are common between parents and young children at home (Liu, 2021), they may not be encouraged in educational settings. Practices such as '食不言' (not talking while eating) and maintaining proper behaviour during meals are deeply embedded in early childhood settings. Educators tend to prioritise table manners and food intake over active conversation. This cultural perspective highlights the unique features of the Chinese ECE context and provides a valuable lens for understanding how cultural norms influence educator–child interactions.

Language education programs for educators

An appropriate language education program is essential for promoting educators professional knowledge and skills in their conversations with children, and thus benefits childrens language development (Henrichs & Leseman, 2014; Mendive et al., 2016; Starling et al., 2012; Wasik et al., 2006). For instance, Henrichs and Leseman (2014) examined the effectiveness of a three-hour group training for 59 kindergarten educators on academic language that contains scientific reasoning and sophisticated lexical categories (e.g. 'Because the air pushes plunger upwards'). The participating educators and the children in their rooms were divided into experimental and control cohorts who were invited to perform science tasks of light reflection and air pressure before and after the training. The researchers found that the educators in experimental group showed a significant increase in lexical diversity and produced more scientific reasoning in the after-training task (air pressure). Educators' academic language growth also facilitated childrens better performance in scientific lexical output (Henrichs & Leseman, 2014).

Efforts have been made in the literature to understand the elements that influence the effectiveness of educators language intervention programs. Educators beliefs that adhere to the intervention program have been recognised as important variations (Hamre et al., 2012; Hanno et al., 2022; Neugebauer et al., 2016; Zucker et al., 2013). Hamre et al. (2012) conducted an educator–child interaction improvement course among 440 early childhood educators and compared the educators beliefs, knowledge and language use between the treatment and control groups. The course took 14 weeks and used the Classroom Assessment Scoring System (CLASS) as the basis to organise and demonstrate effective educator–child interactions. The results showed that educators in the treatment group were more likely than the control group to recognise the value of language experiences for young childrens development and displayed greater interactional skills with children. In another study that investigated the effectiveness of a language intervention program for promoting educators interactions with children who have language difficulties, the researchers found that the level of adherence of the educators attitudes and practices regarding the language intervention program positively predicted the expressive vocabulary learning of children with language difficulties (Zucker et al., 2013).

Different intervention durations and frequencies of training may cause different effects on educators changes in language attitudes and practices. Evidence suggests that intensive and sustained professional programs are necessary to ensure the effectiveness of educators positive changes (Assel et al., 2007; Fukkink & Lont, 2007; Wasik et al., 2006). Starling et al. (2012) explored the impact of educator language intervention training on educators language improvement by interviewing teachers and comparing the literacy performance (written expression and listening comprehension) of students in the experimental group before and after the training program. The study indicated that a 10-week program focusing on the improvement of educators language-using strategies was effective. The trained teachers significantly increased their use of high-level language and communication skills and their students also made progress in language and communication. Michel et al. (2014) also found that the language ability of teachers with longer language training time (11 days or more) was significantly higher than that of teachers with shorter training time.

Theoretical framework

As mentioned before, systemic functional linguistic (SFL) theory of language experiential functions was employed for language analysis in this study. SFL investigates how language use is connected with the contexts of interactions from a social-semantic approach. According to Halliday (1994), a skilful speaker would make language choices sensibly to match interactional situations. Language choices can be processed based on language functions that facilitate the representation of the interactions topic (experiential function), the speakers role in the interaction (interpersonal function), and the mode of information exchange (e.g. face-to-face conversation or formal written communication —textual function).

This study draws on experiential function, which comprises three main language process types including *doing-&-happening (material), sensing (mental)* and *being or having (relational)*, representing the experiential domains of the physical world, conscious world, and relational world, respectively (Halliday & M, 2004). *Material* process (domain) emphasises the state of things happening/changing/being created in the physical world, such as *You need to eat more vegetables/let's have baked potato! Mental* process concerns human beings internal feeling and thinking, such as *Do you want to eat baked potato?/The baked potato smells delicious!* The *relational* process serves to identify the attributes and features of affairs as well as relations among them. 'In a relational clause, things, acts, and facts are not construed as a phenomenon or consciousness, rather, they are construed as one element in a relationship or being' (Halliday & M, 2004, p. 213). Relational process can refer to inner or outer experiences, for example, *this potato is baked* (outer experience—attribute), *the smell of the baked potatoes made me feel more hungry* (inner experience—relation).

Distinct language representations (vocabulary and syntactical structures) are naturally employed when a speaker uses language to express experiences of different domains. Unlike material process involving various transitive verbs (verbs having a direct object, e.g. *eat more vegetables*), mental process contains more mental state terms and projected expressions, such as *I think that we should hurry up*. Relational process may employ more nominal groups (a group of words acting as the subject of a sentence, e.g. *the smell of the baked potato*) in the description of an affairs attributes or a feature of a relationship. In this study, the characteristics of language used by educators during interactions with children at mealtimes were analysed through the lens of the three types of experiential functions. The distribution of these experiential functions in educators speech carries important implications for the language learning opportunities available to children, influencing how they engage with and acquire linguistic skills in everyday contexts.

The present study

Relevant research suggests that educators positive initiation of mealtime talk with children contains extensive pedagogical value for childrens language learning. The factors of educators qualifications and language attitudes, and the way they organise meal routines (whether sitting with children) may significantly impact the quality of educators language use. Well-planned language education programs can affect educators language practices through the changes in their language attitudes. Informed by these notions, this study is set to examine whether the features of Chinese educators language use during preschool lunchtime can be changed through a specialised language education program aimed at promoting their language attitudes and practices relating to mealtime talk.

This study differs from previous studies in three aspects. First, it creates a language program to change educators language use in the mealtime context, rather than capturing the nature of educators language practices as previous studies did (Barnes et al., 2020; Degotardi et al., 2016). Second, it focuses on Chinese educators mealtime talk which is rare in the literature. Third, it explores educators language use from the perspective of language experiential functions drawn from SFL theories, which is methodologically unique and may inspire future research to embrace linguistic theories in ECE research. This study attempts to address the following three questions.

RQ1: How did educators language attitude (positive, neutral, negative) change before and after the language education program?

RQ2: How did educators meal practices (sitting & circulating) change before and after the language education program?

RQ3: i) Did educators language use (three types of experiential functions) change before and after the language education program? ii) If so, to what extend were the change of educators language attitude and change of meal practices related to their language use before and after the language education program?

Material and methods

This study focuses on an intervention grounded in a language education program for educators. A combination of research methods is employed, including language analysis, non-participant observations, and interviews. Language analysis is used to capture the characteristics of educators language use before and after the language education program, drawing on the theory of language experiential functions. Non-participant observations were used to verify whether the educators sat with children or circulated around tables as this is an important meal practice that affects the educators language use (Hu et al., 2019; Degotardi et al., 2016). The interviews with educators were designed to explore their attitudes towards mealtime conversations in preschools through two key questions: i) do you allow children to talk during lunchtime? Please elaborate your ideas; ii) if you allow children's mealtime talk, do you join in their talk? Please describe the situation. The data from the interviews, observations, and language analysis were compared before and after the language education program.

Participants

This study is part of a larger project titled Chinese Childrens Early Language Experiences (CCELE) which considers Chinese young childrens language experiences in home and educational settings. A total of 30 educators in four Chinese preschools (providing care and education to children aged 3 to 6 years) in [City, Province] agreed to participate in this study. As [City] is economically advanced in China, most participating educators (26 out of 30) obtained a bachelors degree or higher in ECE, and the other four educators have the Chinese 'Da Zhuan' qualification that is equivalent to Diploma in English-speaking countries. The ratio of staff to children in these educators settings is about one to ten, which is a common rate in most preschools in Chinese urban areas.

Language education program for educators

A comprehensive language education program was developed to improve the participating educators language knowledge and practices in daily educator–child interactions in a variety of activities, and mealtime talk is an important section of the training. Referring to the relevant research that suggests extensive and sustainable language program for the improvement of educators language attitude and practices (Fukkink & Lont, 2007; Michel et al., 2014), the language program of this study was set for continuous 8 weeks training in each participating preschool individually, comprising three stages.

(1) One of the researchers who is a language professional visited the participating preschools and organised four group training sessions. The researcher introduced pedagogical functions of educators language use in educator–child interactions during mealtime talk and relevant factors that may influence educators language use. Video clips were shown to illustrate good practices of educator–child interactions. In these interactions, educators frequently initiated decontextualised topics and language use was evenly distributed across three experiential functions. The educators were encouraged to share their ideas and opinions during the sessions.
(2) Two sessions were organised to reflect on the preschools' language practices in educator–child interactions. The educators were guided to watch a few video clips collected before the program, followed by the discussions on the educators language practices based on the knowledge gained from previous sessions.
(3) The researcher and the educators worked together to create an 'action plan' for improving the educators language. The plan generally suggested certain strategies for higher quality of language use, for example, increasing reasoning talk to explain affairs to children, using mental state terms to share feelings and thoughts with children, and talking about past experiences (decontextualised topics) with children, etc. Particularly for mealtime talk, the plan emphasised the importance of educators positive attitudes to preschools mealtime talk and suggested the practice of sitting with children for at least 10 min during lunch time while chatting with children. Children were encouraged to serve food themselves during lunchtime.
(4) The educators implemented the action plan in daily interactions with children as suggested. The post-program data collection was undertaken after 2 weeks of the action plan being implemented.

Data collection and generation

Digital video recordings were used to collect the spontaneous educator–child interactions during lunchtime pre and post the program. On the observation day, the research assistant visited the educators room and video recorded educator-child conversations throughout various activities including lunchtime. The participating educators were asked to wear a small external microphone on the collar of their clothes for capturing the language produced by them and the surrounding people. For the language analysis, we selected the peak 15 min of educator-child conversations during lunchtime, which the educators generated the most language, referring to the data generation method in relevant language research (Hu et al., 2019, 2022; Degotardi & Han, 2020).

The interviews with the educators were undertaken after video recording in both pre- and post-program sessions, with scheduling arranged by the educators. Educators expressed their ideas about preschools mealtime talk freely without being limited by the two interview questions. The ethical approval for the study was obtained from the Human Ethic Committee of [University]. Consent forms were collected from the participating educators, other educators in the same room, and the children's parents.

Data coding

Coding scheme for educators language use

The conversations in video clips were transcribed verbatim and then broken into clauses. One clause comprises one subject and one definite verb which is the smallest semantic unit in SFL (Halliday, 1994). A sentence may contain more than one clause, such as *Mei has finished her meal and so she can play with the dolls* containing two clauses: *Mei has finished her meal/and so she could play with the dolls*. The data analysis focused on valid clauses that have specific experiential functions in interactions. Minor clauses related to habitual greeting or comments, such as *'Ok,' 'Hello,' 'You are great,'* or *'Well done,'* were excluded from the analysis.

All the clauses were entered into Excel software and then examined clause by clause to identify the types of experiential function according to SFL theory. Table 1 displays the process of the identification.

Identifying educators' attitudes towards mealtime talk

This information was gained from interviews. Educators' attitudes towards mealtime talk consist of three types: positive, neutral, and negative. Table 2 shows the descriptions and examples of each attitude.

Table 1. Identification of experiential functions of educators' language.

Experiential functions	Descriptors	Examples
Material process	Outer experiences that are of actions and events: things happen, and people or other actors do things or make them happen	Let's have a meal. You should eat more vegetables! The spoon dropped.
Mental process	Inner experiences, a kind of reply of the outer: recording it, reacting to it, reflecting on it, as a separate awareness of our states of being.	Do you want some fish? The fish tastes yummy. I think you will like the pork if you try a bit.
Relational process	To relate one fragment of experience to another, including identifying and classifying (attributes or status)	The bowl in front of you still has lots of rice. The mushrooms are soft. The fried shrimps with onions are my favourite.

Table 2. Descriptions and examples of three attitudes.

Attitude	Description	Example
Positive	Educators support talking with children during mealtime and are willing to engage in mealtime conversations.	'I think it's normal for children to talk while eating and I would join in the conversation sometimes, because mealtime is a relaxing time to share ideas.'
Neutral	Educators allow limited conversation but do not encourage it and may not participate in the talk.	'They can speak in a low voice as long as they can continue eating while talking. We are more like observers during mealtime, not conversation partners.'
Negative	Educators object to talking during mealtime, considering it a distraction or bad habit.	'I don't encourage children to talk during mealtime. It can be dangerous and a waste of time.' 'I don't think it's a good habit to talk while eating, as the old Chinese saying goes: No talking while eating or sleeping.'

Identifying the types of educators meal practices

This information was gained from observation. The meal practices of educators involve two situations. One was sitting together with children and having meals or chatting with children for at least 10 min. Another was a circulating group, where educators walked between the tables to serve food. These educators might occasionally sit with children for a short period, totalling less than 10 min.

Inter-coding reliability

To ensure coding reliability, one researcher coded all the data of the 30 educators language according to the above coding scheme, followed by another trained researcher who coded all educators language attitudes and meal practices, and language data from six randomly selected cases (20%). Cohen's Kappa coefficient was calculated for all the variables to assess reliability. The results showed satisfactory reliability: the Kappa coefficients were 1.00 (100%) for educators language attitudes and meal practices, and 0.79 for experiential functions.

Data analysis

To answer RQ1, a McNemar-Bowker test was performed to examine if the proportions of three language attitudes differed before and after the language education program. McNemar-Bowker test is used to test if the two paired proportions differ (Hintze, 2019). As the educators language attitudes before and after the program were related (paired), this test was appropriate. To answer RQ2, a McNemar test was conducted to test if the proportions of two sitting preferences differed before and after the language education program. To answer the first part of RQ3, the descriptive statistics were calculated to show if the proportions of the three types of experiential functions changed or not. If there were changes, data analysis would proceed to answer the second part of RQ3 using the following steps. First, participants were categorised into three groups: no change (neither attitudes nor practices changed), semi-change (either attitudes or practices had a positive change), full-change (positive changes in both). Then, three separate 2 (with *attitude change* vs. *no attitude change*) x 2 (with *meal practice change* vs. *no meal practice change*) repeated measures ANOVAs were conducted to examine the effects of attitude change, meal practice change, and an interaction of attitude and meal practice change on the three types of experiential functions used by the educators before and after the language program. Data were analysed in IBM SPSS 29.

Results

Results for RQ1 - educators language attitude change before and after the language education program

Table 3 presents the descriptive statistics of educators language attitude, which show changes after the language education program. Specifically, four educators changed their attitudes from negative to positive, six educators from negative to neutral, and five educators from neutral to positive. The McNemar-Bowker test ($\chi^2 = 15.00$, $p < .01$) revealed significant difference in the proportions of three types of attitudes before and after the language education program.

Before the program, half of the educators ($n = 15$) held a negative attitude towards mealtime talk. These educators showed the attitude of 'ban talk' during mealtime. They expressed their concerns that mealtime talk has the hazards leading to accidents or a longer mealtime that impacts the preschool routine process, as one educator claimed, '*I will be worried about allowing children to talk during eating, because they (children) may choke, or they may focus on talking and forget eating. So, I always ask them "no chatting, focus on eating*"'. Ten educators held a neutral attitude. While these educators discouraged mealtime talk, they allowed children to chat from time to time, but would remind children to be '*less talking, more eating*'. Only five educators showed a positive attitude and participated in the mealtime talk, as one educator stated, '*I would like to join in mealtime talk with children though sometimes I need to remind them (children) to chat in a small voice.*'

After the program, the educators who held a positive attitude increased from 5 to 15. The variation in number of the negative group was opposite. The number of the neutral group seemed to have a small change (from 10 to 11); however, this was due to five educators moving from negative to neutral group, and six shifted from neutral to positive group. One educator who changed her neutral attitude to positive one claimed '*I changed views on mealtime talk. While still reminding them (children) not to forget eating, I would initiate conversations with them using decontextualized topics, as I have learned from the language program*'. One educator who changed her attitude from negative to positive expressed her feelings after the language education program: '*I once thought that mealtime talk is risky, as there is a saying that children would be easily choked if they talk during meals. Now I realize this would not happen if we can manage it well, and this practice has been commonly applied in overseas preschools. And now we enjoy talking at the lunch table.*'

Table 3. Descriptive statistics of educators' language attitude pre- and post-program.

	Positive	Neutral	Negative
Pre-program	5 (16.67%)	10 (33.33%)	15 (50%)
Post-program	14 (46.67%)	11 (36.67%)	5 (16.66%)

Results for RQ2 - educators meal practice change before and after the language education program

The descriptive statistics of educators sitting practices are presented in Table 4. The McNemar test (note that SPSS does not give the value of chi-square for McNemar test, $p < .01$) showed that the proportions of two sitting practices significantly differed before and after the language education program. These results indicated that the program had an effect on changing educators meal practices for mealtime.

Specifically, prior to attending the language education program, 18 educators showed the preference for walking around tables to serve food while encouraging children to eat more during lunchtime. The language education program changed the meal practices of nine of these educators from circulating meals to sitting with children while enjoying talking with children. Among the nine educators who experienced positive change in meal practice, seven also showed a positive shift in attitude, while two maintained their original attitude—one remained neutral and the other held a negative attitude. The neutral educator emphasised the challenge of balancing mealtime efficiency and interaction, stating, '*I see the benefits of encouraging children to talk, but mealtime should also be efficient, and managing both aspects can be challenging.*' The educator with the negative attitude expressed concerns relating to classroom management, noting, '*I believe children should focus on eating. Talking during meals disrupts the quiet environment we aim to maintain and can lead to behavioral issues. I don't mind sitting with them as it facilitates table management.*' These examples highlight that while many educators embraced the value of mealtime talk, differences in beliefs, priorities, and cultural perceptions influenced the extent of change.

However, there were eight educators who experienced a positive change in attitude but continued the meal practice of circulating between tables. Among these educators, four mentioned during the post-program interview that it was challenging for them to change the practices if the whole preschool continued following the same routine. For example, they needed larger bowls to facilitate children's food serving at each table without moving around, but there was no supply of large bowls. This suggests that support from the management team is important for educators to make changes to the meal practice.

Results for RQ3a—if educators use of three types of experiential functions changed before and after the program

Descriptive statistics of the proportions of educators use of three types of experiential functions by attitude change and meal practice change are presented in Table 5. Specifically, notable changes were observed on proportions of material language use before (63.13%) and after (56.69%) attending the program. The biggest difference occurred among those educators whose practice changed (71.22% vs. 52.08%). The

Table 4. Descriptive statistics of educators' meal practices pre- and post-program.

	Sitting	Circulating
Pre-program	12 (40.00%)	18 (60.00%)
Post-program	21 (70.00%)	9 (30.00%)

Table 5. Descriptive statistics of the proportions of the three types of experiential functions pre- and post-program.

	Pre-program					Post-program				
	attitude change ($n = 20$)	no change ($n = 10$)	practice change ($n = 21$)	no change ($n = 9$)	total ($n = 30$)	attitude change ($n = 20$)	no change ($n = 10$)	practice change ($n = 21$)	no change ($n = 9$)	total ($n = 30$)
Material	60.13	69.13	71.22	62.22	63.13	56.76	56.53	52.08	59.66	56.69
Mental	14.98	11.14	7.31	16.44	13.70	16.45	18.14	20.44	15.54	17.01
Relational	24.89	19.73	21.47	23.89	23.17	26.79	25.33	27.48	25.80	26.30

proportions of mental language use also differed pre- (17.01%) and post- (13.70%) program attendance. Those educators who demonstrated practice change also exhibited biggest change in the proportions of their mental language use before (7.31%) and after (20.44%) taking the program. Compared to the other two types of language, the change of proportions of relational language use was less prominent (before: 23.17%; after 26.30%).

Results for RQ3b—the effects of changes of attitude and sitting practice on language use

The 2×2 repeated measures of ANOVA revealed a significant main within-subject effect of attending the language education program on educators change of material language use, $F\ (1, 26) = 9.27$, $p < .01$, partial $\eta^2 = .26$. In general, educators used significantly lower proportions of material language after attending the program ($M = 56.69\%$, $SD = 15.71\%$) than before attending the program ($M = 63.13\%$, $SD = 12.44\%$). A significant interaction effect of attending program × meal practice change was also observed, $F\ (1, 26) = 4.67$, $p < .05$, partial $\eta^2 = .15$. Specifically, the results demonstrated that the reduced proportion of material language use after the program was more pronounced among those educators who changed their meal practice (pre-program: $M = 71.22\%$; post-program: $M = 52.08\%$) than among those who did not pre-program: $M = 62.22\%$; post-program: $M = 59.66\%$) (see Figure 1). The two-way interaction (attending program × attitude change) was not significant, nor was the three-way interaction (attending program × attitude change × meal practice change) significant.

Similarly, the 2×2 repeated measures of ANOVA also showed a significant main within-subject effect of the language education program on educators' use of mental language, $F\ (1, 26) = 10.10$, $p < .01$, partial $\eta^2 = .28$. The results showed that educators used a significantly higher proportion of mental language after attending the program ($M = 17.01\%$, $SD = 8.78\%$) than before attending the program ($M = 13.70\%$, $SD = 7.11\%$). The two-way interaction effect (attending program × meal practice change) was also significant on educators change in mental language use, $F\ (1, 26) = 8.07$, $p < .01$, partial $\eta^2 = .24$. The results revealed that much larger increase of using mental language was observed among educators who changed their meal practices (pre-program: $M = 7.31\%$; post-program: $M = 20.44\%$) than those who did not (pre-program: $M = 15.54\%$; post-program: $M = 16.44\%$) (see Figure 2). Neither the two-way interaction (attending program × attitude change) nor the three-way interaction (attending program × attitude change × meal practice change) was significant.

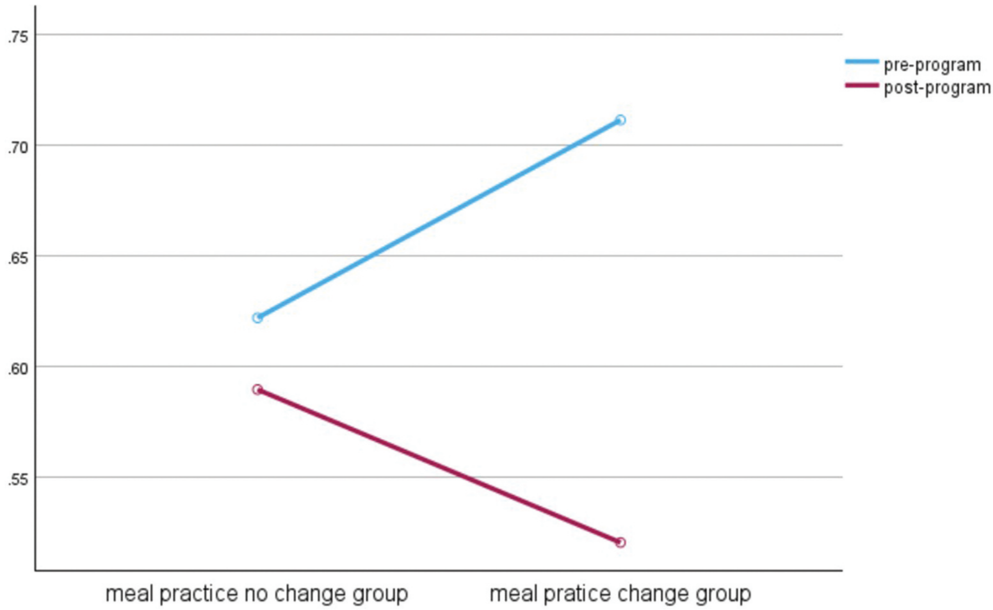

Figure 1. The two-way interaction effect of attending program × meal practice change on the proportions of material language use.

Figure 2. The two-way interaction effect of attending program × meal practice change on the proportions of mental language use.

In terms of relational language use, the 2 × 2 repeated measures of ANOVA found no significant main within-subject effect of the language education program on educators use of relational language, F (1, 26) = 3.42, p = .08, partial η^2 = .12, indicating that the proportions of educators' use of relational language did not change before and after attending the language education program. Neither were the two-way interaction effects significant: attending program × attitude change, F (1, 26) = 0.49, p = .49, partial η^2 = .02; attending program × meal practice change, F (1, 26) = 0.61, p = .44, partial η^2 = .02, nor was the three-way interaction effect significant, F (1, 26) = 0.01, p = .92, partial η^2 = .02.

Discussion

Drawing upon the theory of language experiential functions, this study aims to investigate the influence of a professional program on educators language attitudes and practices concerning preschool mealtime talk. This inquiry was conducted within a cultural context where childrens engagement in mealtime talk is not traditionally encouraged. Unlike existing research which primarily explores how educators child-addressed talk is influenced by their attitudes and cultural backgrounds, this study highlights the influences of a well-designed professional program on the educators language attitudes and practices shaped by traditional norms. The findings of this study have the potential to inspire researchers and relevant organisers to recognise the significance and feasibility of tailored professional programs in addressing cultural influences on educators.

The language analysis revealed that educators patterns of language use remained consistent before and after the training program. Material language was the most frequently used, followed by relational language, while mental state expressions were the least common. The dominance of material language suggests that educators primarily focused on directing childrens behaviours during mealtime, often using message such as, *'Pass me the plate, I will give you more shrimp.'* While such language is essential for managing meal routines, its overuse may limit opportunities for language learning and contribute to tension between adults and children (Degotardi et al., 2022). This finding partially aligns with studies examining Chinese educators language use in play activities, which indicate a frequent use of directive language in interactions with children (Ge & Yan, 2024; Lu et al., 2024).

Notably, the low proportion of mental state language is unexpected, given that mealtimes naturally provide opportunities to express sensory and emotional experiences (e.g. *taste, smell, like*). Before the program, mental state language accounted for approximately 13% of educators' utterances, which is higher than the approximately 7% reported in another study examining Chinese educators' use of mental state language during free play (Han et al., 2023). However, this proportion remains lower than findings from Western preschool settings, where educators' use of mental state language typically ranges from 15% to 20% across various contexts (Frampton et al., 2009). This suggests that Chinese educators may place less emphasis on discussing mental states, possibly reflecting cultural norms that prioritise emotional regulation and restraint in adult-child interactions. Besides, the considerable use of relational language (20%–25%) indicates that educators provided children with opportunities to develop knowledge about the attributes of objects and events. For example, educators frequently labelled food items and described their characteristics, which helped children expand their understanding of different food properties.

The educators exhibited changes in language experiential functions following the language program. Our study observed a significant decrease in material-oriented language after the language program, accompanied by an increase in language of mental processes. This shift resulted in a more balanced language distribution among the educators. This finding partially aligns with previous research indicating that professional programs can effectively enhance educators' language quality in interactions with children (Starling et al., 2012; Wasik & Hindman, 2011). The increase in educators use of mental language is line with Wu's study that demonstrated the increasing use mental state terms after language training programs (Wu et al., 2021). However, changes in educators use of relational language was limited. Unlike the mental language that is characterised with sensory terms, relational language contains a diverse range of 'being and having' expressions with certain syntactic structures (e.g. nominal groups). This distinction relates to speakers' deeper proclivity towards expression, making it challenging to achieve change through a single language education program.

The changes of educators attitudes following the language program are notable. Except for the five educators who originally held positive attitudes, 15 out of 25 educators showed positive changes in their attitudes towards mealtime talk. This change was remarkable within the context of Chinese preschools where mealtime talk is often regarded as inappropriate. Mealtime in Chinese preschools is perceived as a routine for meeting childrens physical needs rather than as a context for promoting broader educational values (Zu, 2017). Studies conducted in Mainland China have emphasised the importance of maintaining a quiet and orderly atmosphere during mealtime in Chinese ECE settings (Wang, 2004; Xie, 2018). Despite these cultural norms, our study demonstrates the potential for educators attitudes to evolve when they recognise the value of mealtime talk and the minimal risk associated with allowing children to chat during meals.

An important finding from this study is that the educators' attitude change was not significantly associated with their language attitude change, rather, their meal practice was. While previous studies have reported that educators attitudes are important elements in determining their language styles (Degotardi et al., 2016; Schachter et al., 2016), our study shows that educators attitude change needs to be accompanied with the change of meal practices to have a significant impact on educators language experiential functions. This result suggests that sitting down with children was a pivotal factor contributing to the educators more evenly distributed experiential functions after the language program. This finding is partially consistent with the study of Degotardi et al. (2016), which found that Australian educators sitting with children tended to have a higher quality of conversation with young children. Qualitative data showed that circulating educators often focused on meal-related topics (e.g. eating more and eating faster), limiting opportunities to expand conversations. A study exploring Chinese families dinner table talk also reported that when parents did not sit with children, the language quality declined as the continuation of the conversations was interrupted (Hu et al., 2019). Our results, along with previous research, suggest that meal practices in which educators and children sit together could serve as simple yet effective strategy to enhance the quality of mealtime talk in preschool settings.

Another noteworthy point is that several educators mentioned in post-program interview that they had difficulties making changes in the meal practices because they were not supported by the management team. This result suggests that involving management support is vital in professional programs. When management teams actively endorse and facilitate the adoption of new practices, educators are more likely to overcome obstacles and successfully integrate program interventions into their daily routines. This issue again ties into a fundamental question: How do Chinese preschools perceive mealtime? If it is primarily viewed as a context to ensure children eat properly, then physical wellbeing priorities may overshadow opportunities for meaningful conversations. Moreover, the pedagogical value of mealtime talk is not recognised in official Chinese policy documents. Shifting this perspective may take time, much like the gradual evolution of China's curriculum over the past two decades—from emphasising group activities to incorporating free play (Ding, 2022; Shen, 2023).

In conclusion, drawing on SFL theory, this study highlights how a targeted language program can enhance Chinese preschool educators mealtime language use by influencing their attitudes and meal practices. While their language primarily focused on doing-&-happening experiences, the program led to a more balanced distribution of experiential functions. Though half of the educators developed a more positive attitude towards mealtime talk, attitude change alone had little impact. Instead, changes in meal practices were critical—educators who sat with children used higher-quality language, creating a richer language-learning environment.

Limitations and implications

A few limitations of the study need to be kept in mind to avoid over-generalisation of the results. Firstly, the sample size of 30 educators is limited and most of them had university qualification which is higher than the average level of Chinese ECE educators. Research suggests that educators qualifications are a predictor to their child-addressed language in ECE settings, and university-qualified educators demonstrate a higher quality of language performance than non-university qualified educators (Hu et al., 2019; Degotardi et al., 2016). The results from this study only revealed the characteristics of a group of Chinese educators mealtime talk that may be more desirable than those of other Chinese educators. Secondly, the language education program did not involve the management team of the preschools, potentially reducing the effectiveness of the program. Thirdly, the analysis excluded the children's feedback on the educators language. We only focused on the educators language, which is an incomplete picture of the changes in Chinese preschools mealtime talk.

With the above considerations in mind, the findings carry implications for education programs aimed at promoting educators language attitudes and practices relating to preschool mealtime talk. Firstly, considering that the cultural-specific views on preschools mealtime talk in China that are rather negative and non-supportive, the education programs, including both pre-service and in-service teacher education programs are needed to raise Chinese ECE educators awareness of the value of mealtime talk as a good opportunity to provide high-quality language environments for children. Secondly, to improve the quality of educator–child interactions during mealtimes and throughout the day, language strategies such as initiating decontextualised topics and using mental expressions should be recommended. Thirdly, the practice of sitting with children during mealtime is a critical factor for the improvement of educators language quality, should receive more attention in preschool routines. Finally, the results of the study are significant to cross-cultural research and language education programs. Existing research delineates how language features of educators was shaped by their cultural backgrounds, yet little explores whether cultural influence can be mitigated. This study demonstrates that influencing educators' language use and pedagogical beliefs is not only possible but also meaningful for enhancing children's learning, even in contexts where traditional cultural norms remain influential. Over the past few decades, early childhood education in China has undergone significant reforms, gradually challenging long-standing practices. For instance, while structured activities still dominate, there has been a growing emphasis on play-based learning (Shen, 2023). These findings highlight that with targeted professional development and systemic support, educators' practices can evolve in ways that are both culturally adaptive and pedagogically responsive.

Disclosure statement

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

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