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ORIGINAL ARTICLE

Developing a Toolkit to Evaluate Listening Comprehension and Speech Use Abilities of Children Aged 12 to 36 Months

Thuy Bich Thi Nguyen, Linh Khanh Thi Vo[+], Chi Van Nguyen

Nha Trang National College of Pedagogy, Vietnam
[+]*Corresponding author ● Email: vklinh@sptwnt.edu.vn*

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ABSTRACT
Children's language development is crucial for play, learning, and communication. It is greatly significant for cognitive development, personality formation, and growth. Children's language development is particularly thriving between the ages of 12 and 36 months, when they begin to communicate through social interactions in certain settings. The aim of this study is to develop a toolkit to evaluate children's abilities between the ages of 12 and 36 months in terms of their listening comprehension and speech use skills. Data was drawn from an experimental process of the toolkit conducted on 303 children aged from 12 to 36 months from various regions in Khanh Hoa province, consisting of urban, rural and mountainous areas. The results demonstrate high internal consistency, criterion validity and toolkit reliability. This study has practical implications for pedagogical lecturers and students majoring in Early Childhood Education for teaching, learning and scientific purposes; for preschool teachers in assessing children's language development, allowing them to choose appropriate content, methods, and educational forms to effectively support the children's language development as well as for parents in evaluating their children's language proficiency in order to proactively seek professional assistance if necessary.

I. INTRODUCTION

Language plays an important role in human communication and thinking, especially for children in developing their thinking, personalities and social relationships. Children's language development is particularly sensitive between the ages of 12 and 36 months. This is a crucial time when native language acquisition occurs most successfully and is vital to children's growth and overall development at this age. In other words, a critical component that is vital to children's overall development in this age group is the efficient acquisition of the mother tongue during this period. Moreover, language is not only a tool for communication but also a foundation for psychological and cognitive processes such as thinking, memory and imagination. It helps children effectively engage in daily activities like play, learning and self-care. In order to properly develop children's language, it is necessary to have a formal educational tool for the first language acquisition, which is now in the state of absence, as highlighted by Warni et al. (2023). This tool can also fulfil the task of language proficiency assessment, serving as the foundation for educators to choose the appropriate objectives, curriculum and teaching strategies (Nguyen et al., 2023). The efficiency of language development for children is affected by the challenges, rarity and difficulty of precise determination of the children's language competence through evaluating their language development between the ages of 12 and 36 months (Young-tae, 2018). In order to effectively support children's language development, educators must first identify the proper goals, materials, and educational approaches based on the assessment of the

child's language abilities. However, it is still demanding to effectively assess a child's language development between the ages of 12 and 36 months due to the decontextualized conditions of various toolkits (Nganga et al., 2024), and the insufficient frequency of the assessment.

In Vietnam, in recent years, language development for preschool children has been increasingly emphasized. Many studies have proposed effective methods to promote children's language development. However, there is still a lack of toolkits to accurately evaluate language abilities of children aged 12-36 months (Nguyen et al., 2023). Consequently, it is challenging to support children's language development appropriately and timely. Therefore, it is necessary to create a toolkit for preschool teachers to evaluate language development of children aged from 12 to 36 months in kindergartens. In this study, a set of toolkits was designed in order to evaluate children's linguistic competency in this age range. The primary question of the research is: To what extent is the proposed toolkit reliable and effective for evaluating the listening comprehension and speech use competency of children aged 12 to 36 months? In order to answer the research question, mixed-methods experimental research design were adopted on 303 participants who are children aged 12-36 months in various kindergartens in the South central coastal region of Vietnam.

This study aims to explore the theoretical situations and practices of evaluating children's language development in Vietnamese kindergartens which is generally conducted by preschool teachers. The study effectively demonstrates the significance and necessity of creating the toolkit to evaluate listening comprehension and speech use competencies of children aged 12 to 36 months from both theoretical and practical perspectives. Moreover, the research also sheds light on the expected outcomes of language development education for children of all ages in terms of listening comprehension and speech use, the language development characteristics of each age group during the period from 12-36 months, as well as phonetic characteristics, vocabulary, grammar of Vietnamese language for this age range. Importantly, a contextualised toolkit to evaluate the abilities of listening comprehension and speech use of children aged 12 to 36 months in Vietnamese preschools is developed and tested for reliability and effectiveness on multiple participants.

2. LITERATURE REVIEW

Theoretical background

Key concepts

Linguistic competency refers to the ability to comprehend and convey information effectively through language; expressed with phonetics, vocabulary and grammar (Dinh, 2018). Yuldashevna (2022) views linguistic competency as the ability to master the combination of sounds, syntax and semantics known as the grammar of a language. People with such competence have learned to utilize the grammar of their spoken language to generate an unlimited amount of statements. Moreover, Yusupbayeva (2025) defined linguistic competence as the ability to use language correctly, meaningfully, and in accordance with communicative contexts. The capacity of a speech receiver to perceive linguistic sounds, deduce the meaning of those sounds from the meaning of words, and consequently comprehend the message embedded in sentences and sentence patterns is known as speech perception and comprehension. Comprehending speech in our native language is an impressionistically effortless and routine task (Monahan, 2018). Children's ability to listen and comprehend speech is demonstrated by their accurate perception of speech sounds, their comprehension and fulfillment of verbal instructions, and their ability to respond to enquiries from others. Receptive language development is demonstrated in the growth of speech comprehension skills (Nguyen et al., 2023). The capacity to express one's intentions through language in social communication activities is known as speech ability (expressive language). This refers to the speaker's capacity to communicate linguistically by using language abilities with word choice, pronunciation, phrase structure, and sentence link. Children's capacity to speak, when developed and educated adequately, can aid in a variety of life activities and contribute to the overall development of the child's personality (Nguyen et al., 2023). The process of gathering information about a subject's linguistic ability and determining their degree of achievement in accordance with the standard definition of language capacity for a certain age is known as assessment of language capacity (Nguyen et al., 2023).

The importance of assessing language capacity of children aged 12-36 months

Language development is a critical aspect in every person's life, especially for preschool children, who are on the path of developing and perfecting their physiological and psychological functions. Language plays a decisive

role in the formation and comprehensive development of language of children aged 12 to 36 months (Aprilia & Neisya, 2024). The formation of language is a fundamental basis for the development of cognitive psychological processes such as sensation, perception, thinking, imagination, memory, and the development of basic activities for toddlers aged 12 to 36 months, such as activities with objects, learning, play, hygiene activities, self-care, and self-service. Thus, language can be considered an important tool that helps children think and grasp the national culture, express their thoughts, opinions, and feelings to their parents, friends, teachers, and other adults thanks to communicating with people around them (Dang et al., 2021).

To help 12 to 36 month-old children fully and effectively acquire and develop language, it's necessary for preschool teachers to regularly monitor, check, and assess the children's language development to determine whether they are developing normally in terms of language, whether they can understand what others say, and whether they can express their thoughts, opinions, and desires verbally for others to understand. Accordingly, teachers can implement appropriate measures tailored to each child's individual needs to help them develop language fully and completely, in accordance with the developmental milestones expected for their age. The results of assessing children's language development are essential for preschool teachers to design plans for organizing language development activities for children and closely monitor the language development process of each child at each stage. On the other hand, these results are also essential information to inform parents about their child's listening comprehension and speech use competence during activities that take place in the daily routine at preschool.

Purposes, contents and methods of assessing the language capacity of children aged 12-36 months

The importance of accurate early evaluation of children, especially children with low language capacity (Law, 2023) emphasises using various measures and reliable toolkits in different contexts with suitable purposes, contents and methods. Miller (1978) introduces three purposes when assessing children's language capacity, including those aged 12-36 months, namely to detect potential abnormal issues in the child's language, to assess the child's current language ability at early intervention and to evaluate the effectiveness of early intervention. Language acquisition contains five basic components as phonology (sound knowledge), meaning (semantics), word structure/style unit (morphology), sentence structure (syntax), and usage (pragmatics) (Küçükkelepçe & Akyol, 2019). The language ability of children aged 12-36 months is specifically manifested in two areas: understanding spoken language and using spoken language. Both of these skills are related to the perception and understanding of objects or events, to understanding the meaning of words and using them, as well as the principles of arranging words to form sentences according to grammatical structures, and to pronouncing words according to certain rules and standards in order to engage in social communication. Therefore, when assessing a child's language ability, it is necessary to develop test items that fully include the aforementioned factors. Specifically, the test items designed to evaluate a child's language ability must encompass both listening comprehension and speech use skills. Each area includes all the content constructed to assess the child's language ability according to linguistic factors such as pronunciation ability, understanding the meaning of words and sentences, the ability to use words, and sentence formation. Miller (1978) proposes four methods for assessing children's language capacity, including standardized testing, developmental standards, non-standardized testing, and observational actions (Action observe). When assessing the language abilities of children aged 12 to 36 months, various assessment methods can be applied depending on the evaluation purpose. The methods for assessing children's language abilities can be divided into two main categories, namely direct testing by the examiner on the test subject and indirect testing methods such as observing the child's actions or interviewing parents or caregivers.

Previous studies

The majority of existing research endeavours centre on the language development traits of Vietnamese children, offering precise and suitable techniques and metrics to foster children's language acquisition. These provide significant theoretical and practical contributions that advance child language development techniques in Vietnam. Nevertheless, none of the relevant studies mentioned above looks closely at the instruments used to gauge preschool-aged children's language development.

A set of language assessment criteria for children from birth to 36 months of age was developed with the aim of providing a common set of language assessment instruments for use in evaluating children's language development, based on the St. Gabriel and MacArthur Bates communication development assessment sets. Vietnamese children, ranging in age from birth to 36 months, whose mother tongue is Vietnamese, are the project's research subjects.

However, the research's focus is limited to infants from birth to 36 months old living in the inner city and suburbs of Hanoi capital. The research focuses on examining children's language on three aspects: phonetics, vocabulary and grammar (Pham, 2022).

The toolkits used to assess children's language development are varied due to the difference of languages and countries, ranging from language development surveys to vocabulary checklists used as a screening tool to detect language deficits in two-year-old children (Rescola, 2019), the clinical evaluation of preschool language fundamentals (second edition), the school entry alphabetic and phonological awareness readiness test used to measure language and pre-literacy skills of children at age 5 (Smith et al., 2021), the Ivorian children's language assessment toolkit used to measure phonological awareness, vocabulary, oral comprehension, and tone awareness in the Abidji, Attié, and Baoulé languages of Côte d'Ivoire (Jasińska et al., 2022), Ragama early assessment for children (REACH) complete preschool developmental assessment, a toolkit for 2-5 year old children in Sri Lanka (Caldera et al., 2023), 44 of the most popular apps in Google, Amazon and Apple app stores used to assess the educational potential of apps for preschool children in the UK (Kolak et al., 2021) and the Pragmatics Profile of Everyday Communication Skills to assess pragmatics among preschool children in Vietnam (Pham et al., 2024).

Participants of various studies on preschool children's language development are multilingual children (De Lamo White & Jin, 2011), dual language learners (Kim et al., 2020) and children with special needs (Pham et al., 2024). Due to cultural and linguistic diversity, multilingual children are more likely to receive a false diagnosis, according to numerous studies, which highlights the necessity for an assessment procedure (De Lamo White & Jin, 2011). De Lamo White's research findings assert the sociocultural approach which enables medical professionals to interpret findings in light of the linguistic and cultural background of the child while there was a statistically significant association between parental and professional caregivers' concerns about language development and the level of preschool social participation, with a mediating effect of child social competence at the age of 3 years as well as 4 years (Doove et al., 2021). It is thought that a vocabulary test taken alone should not be used as the only content evaluation to determine if a child has a language handicap (Conti-Ramsden & Durkin, 2012).

Of the several study initiatives mentioned above, no author has yet conducted a thorough investigation into the instruments used to gauge preschool-aged children's language development. The efficiency of language development for children is influenced by the difficulty, rarity, and difficulty of precisely determining a child's language capacity, particularly for those between the ages of 12 and 36 months (Young-Tae et al., 2018). As a result, in order to fully and completely support preschoolers' language development, this is an area that needs funding and in-depth research. A language assessment instrument for children aged 12 to 36 months is useful for screening and evaluating children with speech disorders and language impairments in addition to evaluation of typical children's language skills, diagnosis, and early detection for prompt intervention; speech therapy services for children with impairments or language issues; and fostering the development of social skills for future generations. Specifically, a significant proportion of children with linguistic impairments have been identified in the last several years. Early detection increases the likelihood that the children will receive treatment and integrate into the community, which will improve their ability to speak and learn.

Developing the toolkit to evaluate listening comprehension and speech use competency of children aged 12 to 36 months

The toolkit consists of 48 items, including 24 items for assessing listening comprehension competency and 24 items for children's speech use ability. Based on the content and expected outcomes of language development education for children of all ages in terms of language reception and speech use in the Early Childhood Education program (Ministry of Education and Training, 2021), language development characteristics of children of each age during the period from 12-36 months (Bloom & Lahey, 1998) as well as phonetic characteristics, vocabulary, grammar of Vietnamese language (Bates et al., 1997a, 1979b), we built a matrix of toolkit to assess children's ability to comprehend speech and use speech with the references from the toolkit of assessing preschool children's language development from Young-Tae et al (2018) and Bayley scales of infants development-III in terms of receptive and expressive language development (Steiner, 2021).

The tasks to evaluate the children's listening skills were structured in an age-appropriate and progressively more challenging order to test listening comprehension and word meaning comprehension (nouns, verbs, and adjectives; some function words like auxiliary words, relative words), as well as the abilities to listen and understand some types

of sentences according to grammatical structure (core simple sentences, simple sentences with extended components), according to speaking purposes (many types of questions, command sentences) (Ministry of Education and Training, 2021). The test items' difficulty level closely corresponds to children's speech comprehension and listening skills at every age (Dinh, 2018), ensuring test subjects' suitability and improving the toolkit's feasibility.

In order to assess children between the ages of 12 and 36 months' pronunciation skills, we rely on the toolkit matrix in which we particularly focus on the features and intricacy of pronouncing Vietnamese phonemes and syllables (Vu & Nguyen, 2019) to create pronunciation exercises tailored to the needs of children at each age group. Children's pronunciation of phonemes is evaluated by having them pronounce words that contain a phoneme that has to be tested, rather than testing them on individual phonemes, as children learn pronunciation naturally through words.

In order to assess a child's ability to use words, we draw on the toolkit matrix in which we particularly focus on the characteristics of Vietnamese words (Vu & Nguyen, 2019) and kindergarten age stages from 12 to 36 months (Ministry of Education and Training, 2021) in order to choose and create test items for children at every age group. For instance, only assess a child's capacity to refer to nearby things, adults and actions (grandma, baby, chicken, dog, go, etc.) using single words with simple syllable structures when they are between 12 and 15 months old. Children's capacity to employ words at a higher level, such as those that indicate the topic of the action (22–24 months) and negative terms (25–27 months), is examined as they become older.

In order to assess a child's ability to use sentences, we base on the toolkit matrix in which we particularly focus on the Vietnamese sentence characteristics (Vu & Nguyen, 2019). The toolkit gradually increases the difficulty when testing children of the following ages to speak sentences: from testing the ability to say 1-word sentences (12–15 months) or sentences with 1 or 2 words (16–18 months) to state the child's own needs and desires (situational sentences, sentences with insufficient components). Children between the ages of 19 and 21 months can speak in sentences of two to three words that have a basic sentence structure. At the age of 22–24 months, give command phrases. At the age of 28–30 months, ask more complex questions like "For what? Why? Where?" and move from simple inquiries like "What?" and "What to do?" The toolkit includes items to assess children's sentence usage, word usage, and pronunciation at each age level.

3. MATERIALS AND METHODS

Participants

In this study, the participants are children aged 12-36 months in various kindergartens in the South central coastal region of Vietnam. The samples were recruited across different areas in Khanh Hoa province consisting of urban, rural and mountainous areas. 303 participants are divided into age groups of 12-15 months (30 children), 16-18 months (30 children), 19- 21 months (39 children), 22-24 months (33 children), 25-27 months (50 children), 28-30 months (39 children), 31-33 months (40 children) and 34-36 months (42 children) (see Table 2). In planning participant recruitment, we collaborated with their kindergarten teachers to ensure simultaneous collection of data related to the toolkit and appropriate convergent validation measures.

The assessment toolkit

There are 24 items in the experimental toolkit that assess children's listening comprehension skills and 24 ones that assess their ability to utilize speech.

Table 1. Items to evaluate listening comprehension and speech use skills of children aged 12 to 36 months

No.	Items assessing listening comprehension skills	Items assessing speech use skills
1		Pronunciation: - Imitate simple language sounds (ba ba, ma ma…); and various sounds (meo meo, bim bim, măm măm…); - Repeat after adults the words containing the sounds a, o, c, ch, g, t, ưa, nh, n, l, đ, e, v, ph, ng, uô, th, oa, uâ, iê, kh, ươ.

2	Listen and interpret types of words: - Nouns indicating body parts and the functions of facial features, parts of objects/animals, animals, objects, names of household items, adjectives indicating size like 'big/small', indicating length/shortness, phrases indicating the function of objects; negation words indicating comparison (similar, different), meaning of words indicating time 'day/night', - Action verbs, - Linking words (connecting words) between verbs (indicating actions happening simultaneously 'both… and');	Use words: - simple syllable-structured words that refer to familiar objects and actions (grandma, baby, chicken, dog…); - nouns and verbs that refer to familiar, surrounding objects and actions, - personal pronouns, - adjectives indicating many/few, big/small
3	Listen and interpret types of sentences: - Sentences with 1-3 simple requests, phrases indicating position "above," "inside," "outside"; - Interrogative sentences with adverbs and verbs indicating actions occurring in the present, interrogative sentences with negation (in the form of choice questions), the question "where?" "…which one?" (to identify objects), - Exclusion questions (or choice prompting questions) and comparison questions.	- Use sentences + one or two-word sentences to express personal needs and desires, sentences with 2-3 words, + imperative sentences, and compound sentences, + simple question forms, questions like "What to do?" To do what? Why? Where? - Answer the questions "When?", questions with words/phrases indicating that an event has occurred - Explain the function/purpose of some tools - Correctly identify the subject of the action

Procedures

As for the piloting stage, the toolkit of 48 items was used in 3 stages in various kindergartens in Khanh Hoa province. After each trial, based on the statistical results, the toolkit was adapted and revised in terms of structures, indicators, contents of the items, such as eliminating those that elicited sluggish, ambiguous, or negligible responses to ensure the toolkit's reliability, efficacy, dependability, and validity in light of the experimental findings. After consulting the experts on the toolkit, we proceeded the experimental research on children aged 12-36 months.

4. RESULTS AND DISCUSSION

Analysis of experimental results

Reliability and validity of the toolkit

- *Reliability:* We employed the Cronbach's Alpha correlation model (Cronbach's Coefficient Alpha) to evaluate the reliability of the designed instrument in evaluating children's speech comprehension and usage between the ages of 12 and 36 months (henceforth referred to as the tool). Experts state that when the Cronbach's Alpha coefficient is 0.6 or greater, reliability is deemed adequate (Nguyen & Dao, 2016).

The scales' Cronbach's Alpha reliability coefficients range from 0.711 to 0.904 with different age groups, according to the analysis results (see Table 2). The theory of reliability states that these alpha coefficients are high enough to satisfy the reliability standards for a tool used to evaluate children between the ages of 12 and 36 months in terms of their speech usage and listening comprehension skills.

Table 2. Reliability of the tool in assessing listening comprehension and speech use skills of children aged 12 to 36 months

No.	Scales	Sample sizes	Cronbach's Alpha
1	Children from 12-15 months	30	0.874

2	Children from 16-18 months	30	0.867
3	Children from 19-21 months	39	0.838
4	Children from 22-24 months	33	0.817
5	Children from 25-27 months	50	0.739
6	Children from 28-30 months	39	0.818
7	Children from 31-33 months	40	0.882
8	Children from 34-36 months	42	0.853

We determined the correlation coefficient between each indicator's scores and the scores of the other indicators in the full measurement in order to test the reliability of each indicator in the tool for evaluating children's speech comprehension and usage between the ages of 12 and 36 months. While indicators with a correlation value of 0.30 or higher are thought to have guaranteed reliability, those with a correlation coefficient of 0.20 or less are regarded as low-reliability items and require modification or elimination.

According to the analysis results presented in Table 3, every item on every scale in the evaluation tool for children ages 12 to 36 months' listening comprehension and speech use skills has a correlation coefficient greater than 0.35, indicating that the reliability of each item is appropriate.

Table 3. Reliability coefficient of each item - tool for assessing the ability to understand and use speech in children aged 12 to 36 months

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
12-15 months				
NH.1215.01	3.3333	3.885	.460	.885
NH.1215.02	3.6333	2.861	.789	.832
NH.1215.03	3.5333	2.947	.816	.828
SD.1215.01	3.5333	3.016	.762	.837
SD.1215.02	3.6333	3.206	.549	.877
SD.1215.03	3.6667	2.920	.729	.844
16-18 months				
NH.1618.01	3.67	3.057	.608	.854
NH.1618.02	3.70	2.838	.729	.834
NH.1618.03	3.80	2.648	.726	.832
SD.1618.01	3.73	3.030	.506	.870
SD.1618.02	3.80	2.579	.783	.821
SD.1618.03	3.97	2.585	.662	.847
19-21 months				
NH.1921.01	2.26	3.722	.381	.855
NH.1921.02	2.41	3.090	.733	.786
NH.1921.03	2.56	3.410	.560	.822

SD.1921.01	2.23	3.445	.569	.820
SD.1921.02	2.56	3.094	.773	.778
SD.1921.03	2.59	3.248	.683	.798
22-24 months				
NH.2224.01	3.8182	2.403	.653	.783
NH.2224.02	3.8182	2.653	.358	.827
NH.2224.03	4.0000	2.000	.684	.763
SD.2224.01	3.9394	2.184	.590	.786
SD.2224.02	4.0303	1.968	.683	.764
SD.2224.03	4.0303	2.093	.569	.793
25-27 months				
NH.2527.01	4.0200	1.449	.560	.677
NH.2527.02	3.9000	1.602	.544	.682
NH.2527.03	3.8000	1.755	.630	.678
SD.2527.01	3.7400	2.115	.371	.743
SD.2527.02	3.9200	1.544	.577	.671
SD.2527.03	4.2200	1.563	.372	.752
28-30 months				
NH.2830.01	3.2821	2.787	.557	.795
NH.2830.02	3.2564	2.617	.719	.759
NH.2830.03	3.5641	2.621	.596	.787
SD.2830.01	3.2564	2.880	.511	.804
SD.2830.02	3.5128	2.572	.624	.780
SD.2830.03	3.1282	3.115	.513	.805
31-33 months				
NH.3133.01	4.3000	2.010	.643	.872
NH.3133.02	4.1750	2.353	.597	.878
NH.3133.03	4.2750	2.102	.594	.879
SD.3133.01	4.2250	2.076	.750	.853
SD.3133.02	4.2250	2.076	.750	.853
SD.3133.03	4.3000	1.805	.867	.829
34-36 months				
NH.3436.01	3.6667	2.959	.648	.827
NH.3436.02	3.6905	2.804	.742	.809

NH.3436.03	3.6667	3.252	.436	.865
SD.3436.01	3.6667	2.862	.724	.813
SD.3436.02	3.6667	2.813	.763	.805
SD.3436.03	3.6667	3.106	.539	.847

Thus, from the above analysis results, it can be stated that the scales for assessing the ability to understand and use speech of children aged 12 to 36 months are quite reliable (Cronbach's Alpha reliability coefficients of the scales range from 0.71 to 0.90); the reliability of each item in each scale for assessing the ability to understand and use speech in children aged 12 to 36 months is appropriate (correlation coefficients greater than 0.35).

- *Validity of the tool:* To validate the effectiveness of the tool for assessing the ability to understand and use speech of children aged 12 to 36 months, we use the factor analysis method to check the similarity between the measurement structure and the characteristic structure to be measured. The conditions for using the factor analysis method are: 1) The KMO test coefficient must be greater than 60; 2) The Bartlett test must be significant; 3) The correlation matrix of the measurement must have a significant number of correlations greater than 0.30.

Table 4. Results of the analysis of necessary conditions for using the factor analysis method to test the effectiveness of the tool for assessing the listening comprehension and speech use skills of children aged 12 to 36 months

No.	Scales	Sample sizes	KMO and Bartlett's Test	Sig.
1	12-15 months	30	0.819	0.000
2	16-18 months	30	0.831	0.000
3	19-21 months	39	0.786	0.000
4	22-24 months	33	0.804	0.000
5	25-27 months	50	0.768	0.000
6	28-30 months	39	0.834	0.000
7	31-33 months	40	0.810	0.000
8	34-36 months	42	0.788	0.000

The Bartlett test result is significant (sig <0.0001), the estimated KMO measure coefficients of the scales (see Table 4) vary from 0.768 to 0.834, and the point correlation matrix of the indicators show a significant number of correlations greater than 0.30. Consequently, factor analysis can be used to assess the items' validity using the aforementioned data.

All of the scales in the tool for evaluating children's speech comprehension and usage skills between the ages of 12 and 36 months have loading coefficients of 0.50 or higher on a single factor, according to the results of the factor loading coefficient computations (see Table 5).

Thus, the tool for assessing the ability to understand and use speech in children aged 12 to 36 months is highly effective.

Table 5. The effectiveness of the assessment tool for evaluating listening comprehension and speech use skills of children aged 12 to 36 months

Items	Factors	Items	Factors
12-15 months		**16-18 months**	
NH.1215.01	.578	NH.1618.01	.738
NH.1215.02	.865	NH.1618.02	.834
NH.1215.03	.890	NH.1618.03	.813
SD.1215.01	.850	SD.1618.01	.627

SD.1215.02	.670	SD.1618.02	.878
SD.1215.03	.833	SD.1618.03	.769
19-21 months		**22-24 months**	
NH.1921.01	.505	NH.2224.01	.783
NH.1921.02	.846	NH.2224.02	.488
NH.1921.03	.689	NH.2224.03	.806
SD.1921.01	.705	SD.2224.01	.748
SD.1921.02	.872	SD.2224.02	.798
SD.1921.03	.823	SD.2224.03	.712
25-27 months		**28-30 months**	
NH.2527.01	.699	NH.2830.01	.710
NH.2527.02	.725	NH.2830.02	.835
NH.2527.03	.814	NH.2830.03	.731
SD.2527.01	.571	SD.2830.01	.655
SD.2527.02	.777	SD.2830.02	.758
SD.2527.03	.505	SD.2830.03	.661
31-33 months		**34-36 months**	
NH.3133.01	.749	NH.3436.01	.780
NH.3133.02	.725	NH.3436.02	.851
NH.3133.03	.706	NH.3436.03	.557
SD.3133.01	.830	SD.3436.01	.845
SD.3133.02	.850	SD.3436.02	.850
SD.3133.03	.920	SD.3436.03	.661

By computing the correlation coefficients between the measurements, the validity of the instrument for evaluating children's speech comprehension and usage skills between the ages of 12 and 36 months is also examined. The items on each scale are correlated with one another ($r > 0.5$), according to the findings of the point-biserial correlation study (see Table 6), which guarantees the tool's high validity.

Table 6. Correlation matrix of the measurement tools for assessing the ability to understand and use speech in children aged 12 to 36 months

	12-15 months			**16-18 months**	
	NH.1215	SD.1215		NH.1618	SD.1618
NH.1215	1		NH.1618	1	
SD.1215	.803**	1	SD.1618	.834**	1
	19-21 months			**22-24 months**	
	NH.1921	NH.1921		NH.2224	SD.2224
NH.1921	1		NH.2224	1	
SD.1921	.719**	1	SD.2224	.791**	1
	25-27 months			**28-30 months**	
	NH.2527	TSD.2527		NH.2830	TSD.2830

NH.2527	1		NH.2830	1	
SD.2527	.696**	1	SD.2830	763**	1
	31-33 months			**34-36 months**	
	TNH.3133	TSD.3133		NH.3436	SD.3436
NH.3133	1		NH.3436	1	
SD.3133	.849**	1	SD.3436	.820**	1

Results of assessing the ability to understand and use speech in children aged 12 to 36 months

The results of the assessment of listening comprehension and speech use capacity of children aged 12 to 36 months (see Table 7) show that 218 children have normal levels of listening comprehension and speech use skills (accounting for 71.9%).), the number of children at different ages with normal language development also accounted for the highest percentage, ranging from 61.9% to 76.9%. Thus, the majority of the children assessed in this study have a normal level of language development.

Table 7. The ability to understand and use speech in children aged 12 to 36 months presented by age

		Levels of language development				**Total**
		Have linguistic problems	**Not good**	**Normal**	**Good**	
Children aged 12-15 months	Amount	2	4	21	3	**30**
	%	6.7	13.3	70.0	10.0	**100**
Children aged 16-18 months	Amount	2	3	21	4	**30**
	%	6.7	10.0	70.0	13.3	**100**
Children aged 19-21 months	Amount	3	5	29	2	**39**
	%	7.7	12.8	74.4	5.1	**100**
Children aged 22-24 months	Amount	1	3	25	4	**33**
	%	3.0	9.1	75.8	21.1	**100**
Children aged 25-27 months	Amount	2	4	38	6	**50**
	%	4.0	8.0	76.0	12.0	**100**
Children aged 28-30 months	Amount	2	4	30	3	**39**
	%	5.1	10.3	76.9	7.7	**100**
Children aged 31-33 months	Amount	2	4	28	6	**40**
	%	5.0	10.0	70.0	15.0	**100**
Children aged 34-36 months	Amount	3	5	26	8	**42**
	%	7.1	11.9	61.9	19.0	**100**
Total	**Amount**	**17**	**32**	**218**	**36**	**303**
	%	**5.6**	**10.6**	**71.9**	**11.9**	**100**

Table 8. The ability to understand and use speech in children aged 12 to 36 months, categorized by gender and experimental area

Levels of language development	**Genders**				**Locations**						**Total**	
	Boys		Girls		Nha Trang		Ninh Hòa		Diên Khánh			
	A*	%	A*	%	A*	%	A*	%	A*	%	A*	**%**

Have linguistic problems	10	3.30	7	2.31	4	1.32	7	2.31	6	1.98	**17**	**5.6**
Not good	20	6.60	14	4.62	9	2.97	12	3.96	11	3.63	**32**	**10.6**
Normal	116	38.28	100	33.00	79	26.07	69	22.77	70	23.10	**218**	**71.9**
Good	17	5.61	19	6.27	17	5.61	9	2.97	10	3.30	**36**	**11.9**
Total	**163**	**53.80**	**140**	**46.20**	**109**	**35.97**	**97**	**32.01**	**97**	**32.01**	**303**	**100**

*A=Amount

The percentage of children with delayed language development and those with good language development is quite similar, approximately 11% (with 10.6% of children having delayed language development and 11.9% having good language development). There is a certain discrepancy in the percentage of children with good language development across different ages, with the age group of 19-21 months having the lowest percentage of children with good language development (5.1%), and the age group of 34-36 months having the highest percentage of children with good language development (19.0%). There is a certain degree of variation, but not too significant, in the percentage of children with delayed language development (ranging from 8.0% to 12.8%).

The percentage of children with very slow language development is the lowest (5.6%), and this rate is relatively uniform across age groups (ranging from 3.0% to 7.0%). The results of the assessment of listening comprehension and speech use abilities in children aged 12 to 36 months (see Table 8) show that the proportion of different levels of listening comprehension and speech use abilities among children in this age group is generally balanced by gender and experimental area.

4.2. Discussion

Preschool teachers must routinely observe, examine and evaluate the language development of their children in order to support the children's complete and successful language acquisition and development (Ministry of Education and Training, 2021). They must carefully monitor the language development process of each child at every level in order to build appropriate strategies for arranging language development activities for their children based on the available toolkits they've found, which are normally inadequate due to their decontextualized standards. Moreover, parents should be continuously informed about their children's language development. Choosing an assessment tool that aligns with program goals and meets the needs of children and educators can, however, be a challenge in and on itself (Zaslow et al., 2009). The necessity of creating an appropriate toolkit to evaluate the abilities of listening comprehension and speech use of children aged 12 to 36 months in Vietnamese preschools inspires the current study.

The purpose of this study was to examine the theoretical issues and practices of evaluating very young children's language development in order to create a contextualised toolkit to evaluate listening comprehension and speech use capacity of children aged 12 to 36 months in Vietnamese preschools. The study highlights the significance and necessity of creating the toolkit to evaluate the competency of listening comprehension and speech use among children aged 12 to 36 months in terms of theoretical contribution and practical values. The study succeeds in developing an appropriate toolkit consisting of 24 items to evaluate listening comprehension skills and 24 items to evaluate speech use skills of children aged 12 to 36 months old. From all the above analyses, the results revealed that the test items of the toolkit demonstrate their validity in measuring the ability to understand speech and to use speech, thereby helping to classify the children's language ability and development level. In other words, the assessment results of the above items on children ensure the reliability, and the toolkit can be used to quantitatively assess the listening comprehension and speech usage abilities of children aged 12 to 36 months.

Pedagogically, the study provides preschool teachers and parents a trustworthy, impartial and scientific instrument to precisely assess children's language development, which facilitates the creation of suitable content and techniques to enhance their linguistic capacity. Additionally, it can supply instructional resources for Early Childhood Education students, educators and teachers for their research, teaching and learning. It suggests that preschool teachers use the manual during their working with children in their classes to become a reliable observer and evaluator and maintain adherence to the procedures of conducting language environment assessment, in line with Zaslow et al.'s and Finders et al.'s findings (2023).

5. CONCLUSION

The most significant finding of the research is to develop and validate a toolkit to evaluate the ability to listen and understand and use speech of children aged 12 to 36 months with 48 test items, assessing both the basic areas of speech comprehension and usage skills among children of this age range. This toolkit not only assists early childhood educators in evaluating the language development of each child in their charge, but it also helps pedagogical lecturers and early childhood education majors design curriculum, instructional strategies, and appropriate learning environments that will support children's language development. Furthermore, when parents see that their child is having language difficulties, the toolkit assists them in assessing their child's language proficiency and encourages them to seek professional assistance promptly. This toolkit is useful for screening and evaluating children with language disorders and language pathologies in addition to helping evaluate the language proficiency of typical children. Children's social skills are developed through assessment, diagnosis, and early detection of appropriate intervention methods, such as speech therapy for children with impairments or language issues, which results in significant human values.

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