

## Contributing Factors on Malaysia Preschool Teachers' Belief, Attitude and Competence in Using Play Activities

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### ABSTRACT

This study focud on preschool teachers' belief, attitude, knowledge and competence in using play in Malaysia. Its purpose is to find out indicators significantly contribute to belief, attitude, knowledge and competence in play of preschool teachers in Malaysia. The method used was factor analysis in order to confirm indicators in each variable as significant indicators as factors with loading factor 0.40. Sample size in this study consists of 150 respondents. The result showed belief has 3-factor solution namely content belief, language and literacy belief, and teaching belief. Attitude has 2-factor solution, namely emotion and behavior. Competence has 3-factor solution, namely implementation, content and guiding. Indicators of each factor were also discussed.

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## 1. INTRODUCTION

Many problems faced in early learning children in preschool such as improvement of motivation. According to [1], teachers need to increase the motivation of children to learn by applying the methods of learning through play. Many teachers did not apply the play method because they felt that they assumed a waste of time if they used play. She stated that the concept of learning through play misconstrued by many preschool teachers in Malaysia. This situation was not a serious problem for many teachers who did not have hope that children can learn and succeed in their studies through this play method. She concluded in her research that play can improve children competence.

Play is a child right that should be given to them. Parents, teachers, kindergarten or nursery operators and the community must play a key role in the effort that these kids get that right. For the purposes, Education National Curriculum [2] focuses on the approach to learn through play in the process of teaching and learning in preschool. Play is an activity that became bushel for children. They will explore their inquiry and discovery and develop direct experience in nature. Play is important for the early child education as a teaching and learning method. In the concept of learning, aspect of children's play is still less in preschool [3]. Therefore, their study showed friendship and a sense of competence is essential to motivate a child in the early stages of learning. Play, according to [4], is a teaching technique that gives kids an opportunity to do something in pretend activities in controlled conditions. Teaching and learning in the classroom based on the principle of learning through play. Play activity is children's work. Play is a channel which can expand a child's development to an optimum level. Play has a significant strength and experience, forms the basis of playing time in the model of early childhood education. Shortly, learning through play is an organized and

structured approach to provide opportunities for children to learn in an environment that is free and safe, happy and meaningful. Operational terms used in the study would be explained belows.

### 1.1. Beliefs

Beliefs according to [5]-[8] are concluded as judgments about what is true or false—what attributes are linked to a given thing. Beliefs can be based on scientific information, feelings and intuition, or cultural norms. As used here, the term refers to an individual or group's beliefs about the agency, about conditions of land and resources it manages (including causes of change in those resource conditions), and about the consequences of agency actions.

### 1.2. Attitudes

Attitudes according to [9] and [5]. meant learned tendencies to react favorably or unfavorably to a situation, individual, object, or concept. As used here, attitudes indicate people's level of support for or opposition to agency actions, or indicate individual or group preferences for a certain activity or course of action.

### 1.3. Competence

Competence is a term that is used both scientifically and in everyday language. Underlying a large variety of meanings, it is possible to discern a small semantic core that is captured by the terms "ability", "aptitude", "capability", "competence", "effectiveness" and "skill". Competence can be attributed to individuals, social groups or institutions, when they possess or acquire the conditions for achieving specific developmental goals and meeting important demands presented by the external environment. Because schools must educate, teach, and prepare each student for future life tasks, the focus in this report will be on competence as an individual attribute, rather than on the competence of a social group or institution [10].

Previous research [11] results showed that preschool teachers describe play competence as a multidimensional construct, encompassing different competencies such as attentive, cognitive, and organizational. The results from the quantitative analyses showed that experienced teachers rate their play competence higher than teachers with limited experience of work in educational settings. Thus, this indicates that play competence develops during practical experience in the field.

### 1.4. Preschool Program

Pre-school program is defined as a planned educational program for children in the years before a child commences school. Children are usually aged between 3 and 5 years of age. Pre-school may take place in a range of settings including a purpose built building, in a community setting, a school, as part of a long day care centre or a mobile or visiting service [12]. According to them, early childhood education is a term that describes the education of young children from birth through age five. As early childhood educators we believe that from the time of birth, all children are ready to learn.

The preschool program is a critical step in every country nowadays [13] including Malaysia to strengthen school readiness and to close the achievement gap in education development. They describe competence; those are knowledge and skills, that most children can be expected to exhibit in a high-quality program as they complete their first or second year of preschool. These reasons empower the importance of preschool program as an educational process for everyone.

The support young children need to attain the competencies varies from child to child. Many children learn simply by participating in high-quality preschool programs. Such programs offer children environments and experiences that encourage active, playful exploration and experimentation. With play as an integral part of the curriculum, high-quality programs include purposeful teaching to help children gain knowledge and skills [14].

## 2. RESEARCH METHOD

The study design was descriptive. It purposed to describe contribution of each items in each construct of every variable. One hundred and fifty preschool teachers were participated as sample of this research. They selected using stratified random sampling. The method used in this study was quantitative method. In this method, the data were analyzed using factor analysis. Factor structure for each independent and dependent variables were constructed separately using exploratory factor analysis based on Principal Component (PCA) extraction method with oblique rotation (i.e. Direct Oblimin). Loadings < .40 were suppressed since the sample size consists of 150 respondents [15]. The main purpose of this procedure was to group the acceptable subscales into meaningful distinct factor. Internal consistency reliabilities for each dimension were examined using Cronbach's alpha.

The Kaiser-Meyer-Olkin (KMO) indexes of sampling adequacy for all factor analyses were explored to ensure the sufficiency of covariance in the scale items to warrant factor analysis. The Bartlett's test for sphericity was also applied to each analysis to guarantee that the correlation matrix was not an identity matrix. KMO indices for all analyses were  $> .79$ , while almost all KMO values for individual items were  $> .50$ , which is above the acceptable limit of  $.50$  [15]. This item was then removed from the analysis. Bartlett's tests for sphericity for all analyses were sufficiently large with  $p < .001$ , indicating that the correlation matrices were not identity matrices.

Numbers of parameters for each variable were accessed through parallel analysis where the eigenvalues from factor analysis were compared with eigenvalues from Monte Carlo simulation. The numbers of parameters were retained if the eigenvalues from factor analysis exceeded the simulated eigenvalues [16].

### 3. RESULTS AND ANALYSIS

#### 3.1. Beliefs

Based on data analysis, it was found that belief had been remain to a 3-factor solution, explained 41.8% of the variance with 23 out of 27 items exceeds the minimum cut-off load of  $.40$  required for a sample of 150 hence. Four items were excluded because they had loading factor least than  $.40$ . The three-factor solution are teaching belief in general with 8 items, belief on teaching content with 10 items, and belief in language and literacy development with 5 items as explained in table 1, 2, and 3 as follows. Table 1 shows that eight items are significant and collapsed in belief on teaching in general because loading factor of all items is more than  $.40$  for 150 respondents. It also means that the eight items have significant contribution onto belief on teaching, and all activities mentioned in it may be used to increase teachers' belief on teaching in general.

Table 1. Significant Items in Teaching as Beliefs' Construct

Constructs and Items Included	Loading Factor
<b>Teaching (in general)</b>	
Teachers need to implement play activities in or outside classroom	.784
Teachers should provide opportunities for children to ask questions related to play activity	.612
Teachers need to guide children to engage with the material, activity of foundations in play activities.	.474
Teachers need to give ample time for children select stories while doing play activities.	.441
Teachers give spaces for parents suitably participating in implementing play activities.	.569
Teachers need to provide additional time for children in paly activities if they are interesting to it	.547
Teachers use play activities to force classroom regulation.	.540
Teachers need to use rewards such as coupon, placat, star to encourage children participate in play activities.	.509
<i>Cronbach's alpha = .818, % variance explained = 26.9, Eigenvalue = 6.18</i>	

Table 1 shows that there are eight significant items in teaching as beliefs' construct. It means that all items gave significant contribution into teaching as beliefs. Among eight items, item 'teachers need to implement play activities in or outside classroom' has the strongest contribution. It shows that for teachers, implementing play activities is not only in the classroom, but it also needs in outside classroom. This condition shows that teachers view play as a useful method in every place of teaching and learning. On the other hand, item 'teachers need to give ample time for children select stories while doing play activities' gave the lowest contribution into teaching as belief. It means teachers need to manage their time well to give ample chance to children to practice their competence through play. Next, Table 2 shows that ten items are significant and collapsed in belief on teaching content because loading factor of all items is more than  $.40$  for 150 respondents, as follows. It also means that the ten items have significant contribution onto belief on teaching content, and all activities mentioned in it may be used to increase teachers' belief on teaching content.

Table 2. Significant items in Teaching Content as Beliefs Construct

Constructs and Items Included	Loading Factor
<b>Teaching Content</b>	
The use of play methods can increase children self concept and positive attitude toward learning.	.687
Teachers need to provide opportunity to children for building social competence with other children through play activities.	.664
Teachers need to tell stories to children before starting to implement play activities	.592
Teachers need to change play activities based on children needs	.612
The use of play children can support children growth.	.491
The use of play methods need to consider various cultures of children	.742
The use of play methods need to consider children's interest.	.645
The use of play needs to consider children's diversity in levels of their growth.	.548
Teachers need to get competence for children literacy after play activities	.512
The use of play is an evaluation technic in children growth.	.473
<i>Cronbach's alpha = .734, % variance explained = 7.7, Eigenvalue = 1.78</i>	

Table 2 shows that the highest loading factor item is the use of play methods can increase children self concept and positive attitude toward learning. It means that teachers need to keep or defend play activities as a method to increase self concept and positive attitude because both are very important in children growth. Otherwise, the lowest loading factor item in Table 2 is the use of play is an evaluation technique in children growth. It means that teachers' view on to play as an evaluation technique in children growth need to be more supported and increased. Next, five items in table 3 are significant and collapsed in belief on language and literacy development because loading factor of all items is more than .40 for 150 respondents. It also means that the five items have significant contribution onto belief on language and literacy development, and all activities mentioned in it may be used to increase teachers' belief on language and literacy development of children.

Table 3. Significant Items in Language and Literacy Development as Beliefs Construct

Constructs and Items Included	Loading Factor
<b>Language and literacy</b>	
Teachers give chance to children create free dialogue through play.	.459
Teachers need to do writing activities as additional one as an integrated part of play activities.	.684
Teachers need to use play activities to teach children read.	.491
Teachers use play activities to solve children's problems related to behaviour.	.411
Teachers need to integrate culture and language used at home through play activities.	.443
<i>Cronbach's alpha = .622, % variance explained = 7.2, Eigenvalue = 1.66</i>	

Table 3 shows that from five significant items in language and literacy development in beliefs, item with the highest loading factor is 'teachers need to do writing activities as additional one as an integrated part of play activities'. It means if teachers provide additional activities in play, writing practice is the most available as an integrated activity in play. It shows that this item gave the highest contribution among other items onto language and literacy development of children. Besides, the lowest item in table 3 is teachers use play activities to solve children's problems related to behavior. It means the teachers' difficulty of using play to train children solving problems related to their behavior. It also shows that the teachers' difficulty of using play to train problem solving competence gave the lowest contribution onto children's language and literacy development.

### 3.2. Attitude

Based on data analysis, it was found that Attitude had been constrained to a 2-factor solution with 17 out of 20 items loaded to the new constructs. The other three items were dropped from the analysis due to insignificant factor loadings. These two factors explained 42.9% of the variance. The two-factor solutions are behavior with 8 items and emotion with 9 items, as explained in table 4 and 5 as follows. Table 4 shows that eight items are significant and collapsed as behavior because loading factor of all items is more than .40 for 150 respondents. It also means that the eight items have significant contribution onto behavior, and all activities mentioned in it may be used to increase teachers' attitudes on increasing children's behavior.

From eight items in behavior, item 'for me, implementing play activities is viewed from materials and time management is no charge' has the highest loading factor. It means that this item has the highest contribution on to behavior. And the lowest loading factor item is 'I try to accommodate parents' and society's opinions in designing play activities'. It shows that accommodating parents' and society's opinions gives lowest contribution on behavior.

Table 4. Significant Items in Behavior as Attitude Construct

Constructs and Items Included	Loading Factor
<b>Behavior</b>	
For me, implementing play activities is viewed from materials and time management is no charge.	.745
I emphasize the implementation of play in teaching and learning process.	.710
I always use play activities to develop children growth.	.697
Use play activities to develop language growth of children.	.655
I use play activities to improve children behavior	.529
I take initiative action to prepare materials for play activities	.529
It is easy for me to do play activities in my classroom	.515
I try to accommodate parents' and society's opinions in designing play activities	.473
<i>Cronbach's alpha = .829, % variance explained = 32.9, Eigenvalue = 5.92</i>	

Table 5 shows that nine items are significant and collapsed as emotion because loading factor of all items is more than .40 for 150 respondents. It also means that the nine items have significant contribution onto emotion, and all activities mentioned in it may be used to increase teachers' attitudes on developing children's emotion.

Table 5. Significant Items in Emotion as Attitude Construct

Constructs and Items Included	Loading Factor
<b>Emotion</b>	
I give ample chance to children to actively participate through play activities	.803
I know benefits of play activities toward children growth.	.677
I like guiding children through play activities	.630
I opine that play activities are only kill the time.	.630
I always design play activities to support children growth.	.614
I can use time to develop science and understanding about play activities	.538
I use play activities to support children in different perspectives from cognition, emotion, and socialisation.	.518
I implement play activities starting from semester one	.410
Receive training about play activities can support me to implement effectively	.401
<i>Cronbach's alpha = .794, % variance explained = 10.0, Eigenvalue = 1.79</i>	

From nine items in emotion construct, item 'I give ample chance to children to actively participate through play activities' has the highest loading factor. It means that this item has the highest contribution on to emotion. And the lowest loading factor item is 'receive training about play activities can support me to implement effectively'. It shows that training about play activities need to be increased.

### 3.3. Competence

Based on data analysis, it was found that competence which was remain as three constructs or three-factor solution, had been explained 62.3% of the total variance explained with all 20 items exceeds minimum cut-off load of .40. The three-factor solutions are implementation with 8 items, content with 6 items and guiding with 6 items, as explained in table 8, 9 and 10 as follows.

Table 8 shows that ten items are significant and collapsed as implementation competence because loading factor of all items is more than .40 for 150 respondents. It also means that the ten items have significant contribution onto implementation, and all activities mentioned in it may be used to increase teachers' implementation competence.

Table 8. Significant Items in Implementation as Competence Construct

Constructs and Items Included	Loading Factor
<b>Implementation</b>	
I use dramatic play activities to increase children growth.	.944
I use dramatic play to increase language or literacy growth of children	.884
I use dramatic play to increase growth of imagination and creativity of children.	.858
I may use dramatic play to increase children emotion.	.784
I use dramatic play in teaching and learning process in minimum five minutes	.703
I control the implementation of dramatic play well	.651
I select suitable 'prop' which is use in dramatic play	.622
I can implement regulating play effectively in teaching and learning process	.500
<i>Cronbach's alpha = .831, % variance explained = 41.3, Eigenvalue = 8.26</i>	

From eight items in implementation construct, item 'I use dramatic play activities to increase children growth' has the highest loading factor. It means that this item has the highest contribution on to teachers' competence among other items. And the lowest loading factor item is 'I can implement regulating play effectively in teaching and learning processes. It shows that the implementation of regulation play gives lowest contribution on teachers' competence. Table 9 shows that 6 items are significant and collapsed as content in teachers' competence because loading factor of all items is more than .40 for 150 respondents. It also means that those items have significant contribution onto content construct, and all activities mentioned in it may be used to increase benefit of teachers' content competence.

Table 9. Significant Items in Content as Competence Construct

Constructs and Items Included	Factor Loading
<b>Content</b>	
I give suitable rewards for successful children in play activities	.823
I ensure there is positive implementation in play activities	.788
I can select play activities which is suitable with children growth.	.743
I ensure there is pre activities before doing real play activities	.741
I may ensure children to fulfil regulation when they are participated in play activities	.561
I encourage children to create and discuss before starting play activities	.447
<i>Cronbach's alpha = .828, % variance explained = 12.1, Eigenvalue = 2.42</i>	

From six items in content construct in Table 9, item 'I give suitable rewards for successful children in play activities' has the highest loading factor. It means that this item has the highest contribution on to teachers' content competence among other items. It also shows that giving rewards to successful children is very important. And the lowest loading factor item is 'I encourage children to create and discuss before starting play activities'. It shows that to create and discuss for children gives lowest contribution on teachers' content competence. Table 10 shows that 6 items are significant and collapsed as guiding in teachers' competence because loading factor of all items is more than .40 for 150 respondents. It also means that those items have significant contribution onto guiding construct, and all activities mentioned in it may be used to increase benefit of teachers' guiding competence.

Table 10. Significant Items in Guiding as Competence Construct

Constructs and Items Included	Loading Factor
<b>Guiding</b>	
I select and use materials which is suitable with play methods	.842
I use play methods in my teaching process	.837
I create teaching and learning circumstance more interesting by using play technics	.826
I lead children to create useful object	.714
I lead children to reach teaching adn learning objective through play	.666
I lead my colleagues to use play activities in teaching and learning process	.408
<i>Cronbach's alpha = .851, % variance explained = 8.9, Eigenvalue = 1.77</i>	

From six items in guiding construct in Table 10, item 'I select and use materials which is suitable with play methods' has the highest loading factor. It means that this item has the highest contribution on to teachers' guiding competence among other items. It also shows that selecting materials is very important if teachers wanted to implement play methods. And the lowest loading factor item is 'I lead my colleagues to use play activities in teaching and learning process'. It shows that to lead colleagues to use play activities in teaching and learning process gives lowest contribution on teachers' guiding competence.

#### 4. DISCUSSION AND CONCLUSION

##### 4.1. Factors Contributing on Teachers' Beliefs

The research found that beliefs would be divided into three constructs, namely teaching belief, belief on teaching content, and belief on language and literacy. It means that judging teaching and learning process in preschools in Malaysia viewed belief into three categories or factors. Teachers believe on teaching process in general, teaching materials, and the language they used. The result supported [5] that beliefs can be based on scientific information, feelings and intuition, or cultural norms. The teachers' view may be based on scientific information, their feelings or cultural norms while they were teaching.

Based on the result, teaching and learning process in general got the strongest contribution from when teachers need to implement play activities in or outside classroom. It shows that for teachers, implementing play activities is not only in the classroom, but it also needs in outside classroom. This condition shows that teachers view that play as a useful method in every place of teaching and learning. On the other hand, teaching and learning process in general got the lowest contribution from when teachers need to give ample time for children select stories while doing play activities. It means teachers need to manage their time well to give ample chance to children to practice their competence through play. This study supports previous study conducted by Elizabeth et.al [17]. They found that teachers view that play as a useful method in every place of teaching and learning.

Hereafter, teaching content was the strongest supported from when the use of play methods can increase children self concept and positive attitude toward learning. It also supports the study by Elizabeth et.al [17]. It means that teachers need to keep or defend play activities as a method in order to increase self concept and positive attitude because both are very important in children growth. Otherwise, teaching content got the lowest contribution from when the use of play is an evaluation technique in children growth. It means that teachers' view on to play as an evaluation technique in children growth need to be more supported and increased.

In beliefs on language and literacy development, it is very important for teachers to do writing activities as additional one as an integrated part of play activities. It means if teachers provide additional activities in play, writing practice is the most available as an integrated activity in play. It shows that it gave the highest contribution among other items onto language and literacy development of children. Besides, Teachers need to increase how use play activities to solve children's problems related to behavior. This study supported study of [18]-[21]. It means the teachers' difficulty of using play to train children solving problems related to their behavior. It also shows that the teachers' difficulty of using play to train problem solving competence gave the lowest contribution onto children's language and literacy development.

#### **4.2. Factors Contributing on Attitude**

Attitudes meant learned tendencies to react favorably or unfavorably to a situation, individual, object, or concept. As used here, attitudes indicate people's level of support for or opposition to agency actions, or indicate individual or group preferences for a certain activity or course of action. The research found that based on preschool teachers' attitude was divided into two constructs, namely behavior and emotion. It means that teachers had different tendencies to react favorably or unfavorably to a situation, individual, object, or concept [5].

Behavior got the strongest contribution from the play activities are viewed from materials and time management is no charge. It means that teachers' view about materials and time management is necessary. On the other hand, behavior got the lowest contribution from parents' and society's opinions in designing play activities. It shows that parents' and society's opinions need to be improved. It supported the study of [22]-[26].

Furthermore, emotion construct got the strongest contribution from giving ample chance to children to actively participate through play activities. It means that giving ample chance to children is necessary to be maintained. Emotion got the lowest contribution from receiving training about play activities can support me to implement effectively. It shows that training about play activities need to be increased.

#### **4.3. Factors Contributing on Competence**

Competence is a term that is used both scientifically and in everyday language. It means "ability", "aptitude", "capability", "competence", "effectiveness" and "skill". Competence can be attributed to individuals, social groups or institutions, when they possess or acquire the conditions for achieving specific developmental goals [6]. The research found that competence was divided into three constructs, namely implementation, content and guiding. Those three constructs attributed social groups or institution at preschools and its individuals in it. Competence in this study is scientific meaning in order to achieve specific developmental goals in preschool education. It supports two previous studies [27], [28].

Based on the result, implementation construct was strongly supported by the use of dramatic play activities to increase children growth. It means that dramatic play has an important role in children growth. Teachers can implement regulating play effectively in teaching and learning processes although it gives lowest contribution on teachers' competence.

Furthermore, content competence got the strongest contribution from giving suitable rewards for successful children in play activities. It also shows that giving rewards to successful children is very important. Teachers always encourage children to create and discuss before starting play activities although its contribution is low. It shows that to create and discuss for children need to increase to support teachers' content competence.

In guiding construct, teachers need to maintain how to select and use materials which is suitable with play methods. It also shows that selecting materials is very important if teachers wanted to implement play methods. Teachers also always lead my colleagues to use play activities in teaching and learning process although it didn't give strong contribution in guiding. So, It is necessary to show how to lead colleagues to use play activities in teaching and learning process [29], [30].

From the discussion, it could be concluded that belief, attitude, and competence are essential factors to contribute preschool teachers in Malaysia to implement play activities. Preschool teacher in implementing play activities, they should try to attend indicators significantly contributing to their belief, attitude, and competence in order to teachers' personality to apply play activities. The way purposes to strengthen the quality of teaching and learning process in preschools in Malaysia.

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