Competency Level of Operators for Private Early Childhood Care and Education in Malaysia

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Abstract

This study aims to determine the level of competency of operators for private early childhood care and education (ECCE) across Malaysia, towards the development of carer-educator professional framework. The levels of competency included in this study are disposition, knowledge, skills and practices. In this study, quantitative research was conducted and 551 operators were randomly selected from various private ECCE across Malaysia. The ECCE includes children nursery (TASKA) and children preschool (TADIKA). Descriptive and inferential statistics based on one single t-test were applied to the survey data collected in order to answer the research objectives. In general, the study shows that all private ECCE operators have high level of competency in terms of disposition, knowledge, skills and practices except for operators of TASKA and operators that manage both TASKA and TADIKA. This study is important as early childhood education such as TASKA and TADIKA are the places where the foundation of a child's development and the first formal education for children begins. Future research will investigate the relationship between the level of competency and years of service and Early Childhood Care Education (ECCE) professional qualification of the operators.

Keywords: ECCE, carer-educator, operators of carer-educator, competencies, disposition, knowledge, skills, practices

1. Introduction

Nurseries and preschools are the first formal education institutions for children to develop their social, emotional, cognitive and physical needs holistically in order to build a solid and broad foundation for lifelong learning and wellbeing [1]. Hence, the cultivation of our children's good education indirectly depends on these credential private institution providers [2] which are generally known as the operators, supervisors, principals or headmasters. However, without realizing, the development of early childhood education program in private institutions has been rising tremendously around the globe [3, 4].

Studies had shown that qualified carer-educators and teachers in early childhood preschool programs did made significant impact and had resulted in improved outcomes of young children [5] and, it is parallel to the statements by the United States Departments of Health and Human Services as well as the United States Department of Education in 2016 which affirmed that the quality of any early learning setting is directly related to the quality of their staffs, which includes their understanding of children's growth and development [6].

Children who were taught by knowledgeable and certified teachers that had gone through specialized training in early childhood education program were more sociable and develop significantly in terms of the use of language and manners. They performed at a higher level on cognitive tasks and were more likely to enter into an appropriate grade for their age compared to children who were cared for by less qualified teachers [7, 8, 9, and 10].

Therefore, it is the responsibility of the operators, supervisors, principals or headmasters to have a better understanding on the professional development of carer-educators and teachers in early childhood care and education

to equip these carer-educators and teachers with qualified, certified and competent skills to nurture the children's potential [11, 12].

Continuing on this matter, therefore, this study aims to determine the level of competency of operators, supervisors, principals or headmasters for private institution of early childhood care and education (ECCE) programme towards the development of carer-educators professional framework. This is owing to the fact that the private sectors' institutions contribute to the highest participations in the study considering that there are extensive growth of nurseries and preschools owned by private institutions or statutory body in Malaysia.

Competency is the combination of observable and measurable knowledge, skills, abilities and personal attributes that contribute to enhance employee performance and ultimately result in organizational success [13,14]. On the other hand, Mulder [15] stated that competency is a part of generic competence that is a coherent cluster of knowledge, skills and attitudes which can be utilized in real performance contexts while the California Department of Education [16] stated that a competency area organizes knowledge, skills, and dispositions that collectively define an essential component of effective, high-quality early care and education practice. In this study, competency is measured by knowledge, disposition, skills and practices.

2. Methodology

In this paper, quantitative analysis was applied on conducted surveys which were drawn from a larger research study on quality of early childhood carer-educator in Malaysia. Throughout, the surveys measured the level of competencies of early childhood care and education operators. The competency is divided into four categories namely disposition, knowledge, skill and practices, which is aligned with the California Early Childhood Educators [16]. The data collected were analyzed using Minitab 18. Descriptive statistics on variables of interest were computed and inferential t-test were applied to measure the levels of competency. Descriptively, there are four Likert scales used to measure the competency which are: scale 1 refers to very low competency, scale 2 refers to low competency, scale 3 refers to high competency and scale 4 refers to very high competency.

3. Result and Analysis

This study was conducted on the operators in private early childhood care and education (ECCE) centres in Malaysia to determine the level of competency of operators towards the development of carer-educators professional framework. The private ECCE operators comprised two categories: operators who were employed either only as principal or administrator (denoted by OPE) and the second group are those who are the principal or administrator as well as having a role as carer or educator (denoted by OPCE). The ECCE centres involved in this study are centres for children nursery (TASKA), centres for children preschool (TADIKA) and centres which provide both nursery and preschool (TASKA & TADIKA). All centres have both OPE and OPCE categories. A total of 551 respondents participated in this study, comprising 17.4% OPE respondents and 82.6% OPCE respondents.

3.1 Distribution of Respondents

a) Gender

The data on the distribution of gender for each ECCE centre in this study is shown in Table 1. Among the 551 respondents, majority of them are female. This can be seen in all categories of the operators in which female has represented a big number of respondents. The data shows that approximately 97.8% which is 536 respondents are female while male respondents are approximately 2.72%, which is 15 respondents.

Table 1. Distribution of respondents by gender

Gender	**TASKA**		**TADIKA**		**TASKA + TADIKA**	
	OPE	OPCE	OPE	OPCE	OPE	OPCE
Male	2	2	3	7	0	1
Female	40	184	39	212	15	46
Total	42	186	42	219	15	47

b) Age

The respondents in this study had a wide age range which is from less than 20 years old until above 55 years old. The data on the age distribution of the respondents is presented in Table 2. From this table, only 4 out of 551 respondents age less than 20 years old. They consist of 3 OPCEs from TASKA and 1 OPCE from TADIKA. Most of the respondents are at the age of 31 – 35 years old, which are 108 respondents, contributing to approximately 19.6% of the respondents. The second highest number of respondents who participated in this study are the respondents aging

from 41 to 45 years old that depicts 17.2% or 95 respondents. Meanwhile, 48 respondents are at the age of 50 years old and above which makes about 8.7% of the total study respondents.

Table 2. Age distribution of operators

Age	TASKA		TADIKA		TASKA +TADIKA	
	OPE	OPCE	OPE	OPCE	OPE	OPCE
<20	0	3	0	1	0	0
	(0.0%)	(1.6%)	(0.0%)	(0.5%)	(0.0%)	(0.0%)
20-25	2	13	3	17	0	1
	(4.8%)	(7.0%)	(7.1%)	(7.8%)	(0.0%)	(2.1%)
26-30	5	29	4	29	2	7
	(11.9%)	(15.6%)	(9.5%)	(13.2%)	(13.3%)	(14.9%)
31-35	10	44	7	35	3	9
	(23.8%)	(23.7%)	(16.7%)	(16.0%)	(20.0%)	(19.1%)
36-40	10	32	7	25	4	4
	(23.8%)	(17.2%)	(16.7%)	(11.4%)	(26.7%)	(8.5%)
41-45	8	30	7	36	3	11
	(19.0%)	(16.1%)	(16.7%)	(16.4%)	(20.0%)	(23.4%)
46-50	1	15	3	31	1	5
	(2.4%)	(8.1%)	(7.1%)	(14.2%)	(6.7%)	(10.6%)
51-55	2	9	6	21	1	7
	(4.8%)	(4.8%)	(14.3%)	(9.6%)	(6.7%)	(14.9%)
>55	4	11	5	24	1	3
	(9.5%)	(5.9%)	(11.9%)	(11.0%)	(6.7%)	(6.4%)

From Table 2, we can see that the youngest respondents of OPE in TASKA are at the age of 20 – 25 years old that are 2 (4.8%) respondents. Most of them are at the age of 31 - 35 and 36 – 40 years old, both with 23.8% or 10 respondents, and there are 4 respondents (9.5%) who age above 55 years old. For OPCE in TASKA, the youngest respondents age less than 20 years old and the oldest are at the age of above 55 years old with a number of 3 respondents (1.6%) and 11 respondents (5.9%), respectively. As much as 44 respondents of OPCEs in TASKA which is 23.7% are at the age of 31 – 35 years old.

For OPE in TADIKA, the youngest respondents are of the age of 20 – 25 years old with the percentage number of 7.1% or 3 respondents. There were three scales of age that noted the highest and similar percentage of 16.7% which is 7 out of 42 respondents: respondents of the age of 31 – 35 years old, 36 – 40 years old and 41 – 45 years old. However, for OPCE in TADIKA, there is 1 respondent (0.5%) who is the youngest with the age of below 20 years old. The highest percentage of the respondents are at the age of 31 – 35 years old and 41 – 45 years old with the percentage number is 16% that is 36 respondents, for both ranges.

There is a total of 15 respondents of OPEs in TASKA & TADIKA and none of them are in the age range of 25 years old and below, which indicates that the youngest respondents of OPE in TASKA & TADIKA are at the age of 26 – 30 years old with the percentage of 13.3%. The highest number is the respondents aging 36 – 40 years old with 26.7% that is 4 out of 15 respondents. There is only one respondent (6.7%) who is in the age range of 55 years old and above. For OPCE in TASKA & TADIKA, there is one youngest respondent who is within the age of 20 – 25 years old. The highest percentage is 23.4% that is 11 out of 47 respondents aging from 41 – 45 years old while there are 3 respondents (6.4%) aging above 55 years old.

c) Academic Qualification

Table 3 shows the highest academic qualification of ECCE operators involved in this study. Among the six categories of academic qualifications, most of the respondents are diploma holders with a number of 161 respondents that is 29.22%. The second highest is the MCE/SPM/O-Level holders with 28.13% or 155 respondents, followed by Bachelor's Degree holders for 133 respondents, or 24.14%. The least number of highest academic qualification holder observed is for Primary School/UPSR certificate holder which is only 1 respondent.

Majority of the OPEs in TASKA are diploma holders which is 50% or 21 out of 42 respondents and none of them are Primary School/UPSR or LCE/SRP/PMR/PT3 certificate holder. There are only 2 OPE respondents who are Master's Degree holders. For OPCE in TASKA, most of them are MCE/SPM/O-Level holders with the percentage of 34.4% or 64 respondents out of 186. Primary School/UPSR and LCE/SRP/PMR/PT3 holders are the lowest, contributing 0.5% of the respondents or only 1 respondent for each of these categories of academic qualifications.

For Master's Degree holder, they only contribute 2.2% which is 4 out of 186 respondents.

Table 3. Highest academic qualification of operators

Highest Academic Qualification	TASKA		TADIKA		TASKA&TADIKA	
	OPE	OPCE	OPE	OPCE	OPE	OPCE
Primary School/UPSR	0 (0.0%)	1 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
LCE/SRP/PMR/PT3	0 (0.0%)	1 (0.5%)	1 (2.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
MCE/SPM/O-Level	7 (16.7%)	64 (34.4%)	13 (31.0%)	58 (26.5%)	0 (0.0%)	13 (27.7%)
HSC/STPM/STAM/A-Level	2 (4.8%)	19 (10.2%)	1 (2.4%)	10 (4.6%)	2 (13.3%)	2 (4.3%)
Certificate	3 (7.1%)	18 (9.7%)	1 (2.4%)	16 (7.3%)	1 (6.7%)	2 (4.3%)
Diploma	21 (50%)	40 (21.5)	11 (26.2%)	68 (31.1%)	5 (33.3%)	16 (34.0%)
Bachelor's Degree	7 (16.7%)	39 (21.0%)	13 (31.0%)	57 (26.0%)	6 (40.0%)	11 (23.4%)
Master's Degree	2 (4.8%)	4 (2.2%)	2 (4.8%)	10 (4.6%)	1 (6.7%)	3 (6.4%)

For OPE respondents in TADIKA, MCE/SPM/O-Level and Bachelor's Degree respondents have the highest percentage, that is 31.1% with the number of 13 respondents, for both, while none of the respondents are Primary School/UPSR graduates. The respondents with Master's Degree contribute only a small number which is 2 respondents or 4.8% of OPEs in TADIKA. Meanwhile, the highest percentage of academic qualifications owned by OPCEs in TADIKA is the Diploma holders which contribute to 31.1% of the respondents that is 68 respondents out of 219. As much as 10 respondents, about 4.6% of the respondents, are HSC/STPM/STAM/A-Level and Master's Degree holders, both similar, and none of them are Primary School/UPSR or LCE/SRP/PMR/PT3 certificates holder.

From Table 3, we can see that none of the OPE respondents in TASKA & TADIKA are Primary School/UPSR or LCE/SRP/PMR/PT3 or MCE/SPM/O-Level certificates holder. As much as 40% of the respondents, about 6 respondents, are Bachelor's Degree holders. Besides, there is 1 respondent for each Certificate and Master's Degree as their highest academic qualification. For OPCE respondents in TASKA & TADIKA, 34% of them are Diploma holders or 16 respondents from the total of 47. The minimum qualification they have is MCE/SPM/O-Level since none of them are Primary School/UPSR or LCE/SRP/PMR/PT3 graduates, and only 3 respondents (6.4%) hold Master's Degree as their highest academic qualifications.

3.2 Level of Competency of ECCE Operators

Competencies of OPEs and OPCEs in ECCE centres involved in this study are measured by their level of practices, skills, knowledge and disposition which are shown by the mean value. Figure 1 illustrates the mean value of practices, skills, knowledge and disposition for each OPE and OPCE in the three types of ECCE centres which are TASKA, TADIKA and TASKA & TADIKA.

From Figure 1, it is noticed that the highest mean value for OPCE in TADIKA is disposition with the mean value of 3.4162 while the lowest mean value is knowledge (3.1311). Despite that, skills and practices are placed as second and third with the mean value of 3.2471 and 3.2310, respectively. The pattern for practices, skills, knowledge and disposition level for OPE are also similar to the OPCE where the highest level is disposition, followed by skills, practices and knowledge with the mean value 3.4107, 3.237, 3.2303 and 3.145, respectively.

For TASKA, the mean value for disposition is the highest for OPCE and OPE with the value of 3.5106 and 3.3929, respectively, and knowledge is placed last for both OPCE and OCE with mean value of 3.1911 and 2.9924, respectively. However, skills are placed third for OPCE and last for OPE.

Nevertheless, for OPCE in TASKA & TADIKA, the respondent number is the highest for practices with the mean value 3.1730. The second highest is disposition, followed by skills and knowledge with the mean value of 3.1250, 3.0300 and 3.000, respectively. Pattern for competencies level for OPE in TASKA & TADIKA is the same as in TASKA where the highest mean value is disposition, followed by practices, skills and knowledge with the mean value of 3.3383, 3.3213 and 3.1955, respectively.

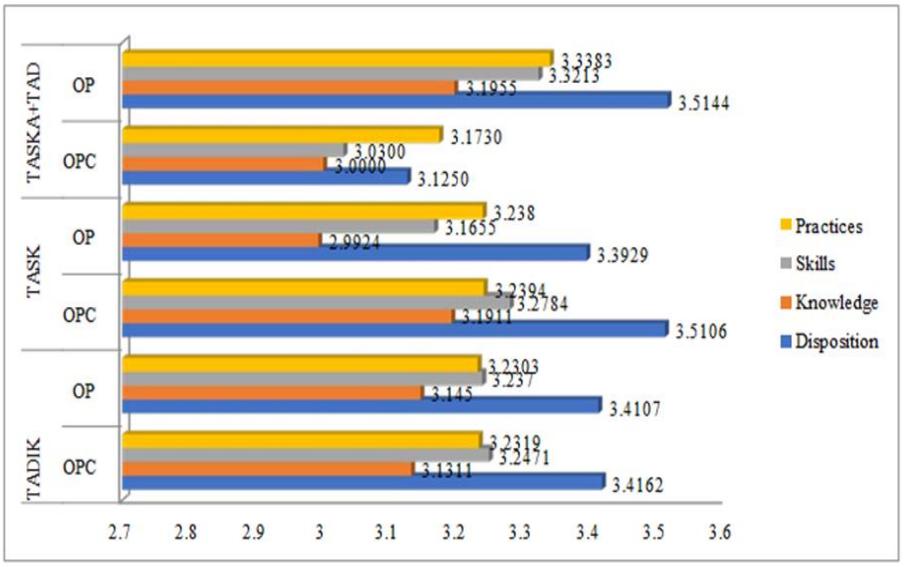

Figure 1. Mean level competency for operators

Overall, we can see that disposition has the highest mean value in most of the categories of operators in different centres, and the lowest mean value of disposition is 3.1250 for OPCE in TASKA & TADIKA. Disposition is self-value among operators that can be considered as habit, gained by experience, and improved along with time. It is apparent that in all of the categories of operators, there were not many who are in the age of 26 years old and below. This indicates that the respondents are mature enough to have good disposition. Wagner and Rush [17] stated that older adults have a better disposition than younger adults. This may be the evidence of their length of services as well as life experience that nurture the disposition.

Besides, knowledge has the lowest mean value for all categories of operators with the lowest mean value which is 2.9924 for OPE in TASKA while the highest is 3.1911 for OPCE in TASKA. Based on the descriptive analysis on the highest academic qualifications, we can review that majority of the respondents are diploma holders. Moreover, they also have the least percentage for the Bachelor's and Master's Degree holders compared to other categories. This corresponds to Atanga et al. [18] who stated that the knowledge of worker is influenced by professional qualification, which reflects that the operators may have lack of knowledge in the related field of ECCE.

3.3 Test of significance for ECCE Operator Competency Level

Descriptive statistic has no uncertainty and cannot describe the whole population of the target study. Therefore, one sample t-test was used to test the significance of the competency level for private ECCE operators. Table 3 shows the results of the analysis using a t-test of significance for TASKA and TADIKA operator's competency level. The hypothesis of t-test for the level competencies are defined as having a significant higher competency if the mean competency level is more than 2.99.

Table 3. Significance level of competency

Competency	**TASKA**		**TADIKA**		**TASKA and TADIKA**	
	OPE	OPCE	OPE	OPCE	OPE	OPCE
Disposition	4.98*	16.72*	6.14*	14.01*	1.61	7.41*
Skills	-0.25	5.72*	2.39*	4.23*	0.08	3.14*
Knowledge	1.49	9.00*	4.63*	7.21*	0.27	4.55*
Practices	2.78*	7.45*	3.82*	7.54*	1.57	4.81*

*Denote significant at 1% significant level

From the findings, it is demonstrated that majority of the operators have significant higher level of competency. However, the competency level for skills and knowledge for OPE which are the operators of TASKA show an insignificant higher level of competency. It was also a similar case for OPE that own both TASKA and TADIKA. In this case, the level of competency for disposition and practices show insignificant higher level of competency as well.

The results reflect that the OPE in TASKA and the OPE that manage both TASKA and TADIKA have low competency. This might be due to years of services as some of the OPE are younger, hence, the experience of being a proficient operator is still at a lower level.

4. Discussion and Conclusion

A good carer-educator could be reflected by a good operator where the competencies become one of the benchmarks for a good profession. Operators are among the ones who are responsible to manage and operate the ECCE centres, including the staffs, children, centre facilities as well as the learning sources and materials. Competencies for operators in ECCE centres represent the centres' quality in providing a good learning environment and experience as well as convenient surroundings for children to learn, and for carer-educator to have a good work environment and welfare so that they can give the best services and experience to the children and other related party. Based on the objective of the study, the results revealed that private ECCE centres offered in Malaysia currently have operators with high competencies excepts for OPE in TASKA as well as OPE that manage both TASKA and TADIKA which show insignificance on the higher competency. The outcome may have resulted from some of the operators-cum-owners who need to operate and manage more than one ECCE centre. Therefore, they have limitations to be a proficient operator, resulting in lower competency. Nonetheless, to support and strengthen this finding, it is suggested that further study need to be carried out through interview, observation as well as document analysis. Future works will also be required to investigate whether there is a difference in terms of operators' level of competency with their ECCE professional qualification as well as service duration in ECCE centres.

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