



## Preschool Experience as Predictor of Language Learning Outcomes among a Sample of Grades 1, 2, and 3 Students in Bahrain

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### Abstract

The aim of the present study was to examine the effects of preschool experience on academic achievement, with specific reference to English language learning outcomes of Grades 1, 2 and 3 students in the Kingdom of Bahrain. Data from a representative sample of 402 students covering all three grades, from Bahrain public elementary schools were statistically analyzed using mean scores, t-test and one-way ANOVA test. The findings of the study revealed consistently higher mean scores in all the three grades for students who attended preschool compared with those who did not attend preschool. There was no significant difference found in ANOVA scores within the grades. The authors of this study recommend extensive research and the integration of pre schools with elementary schools as part of compulsory education; a national level quality measurement system is also recommended for a better future of the nation.

**Keywords:** Early childhood education, English language, Learning outcomes, Predictors, Preschool, Preschool experience.

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### Contribution of this paper to literature

The study attempts to bridge the gap of several years in published research on preschool education in Bahrain. It demonstrates long-term positive effects of bilingualism, learning English in early years and preschool experience on the academic performance of Bahraini elementary school students.

## 1. Introduction

In spite of the vast amount of research conducted on children in the age group of 6, also known as the preschool age, the position and purpose of education of children in this group in the US education system is still ambiguous. Little and Cohen-Vogel (2016) from the University of North Carolina analyzed 39 policy documents produced by 8 prominent US organizations actively advocating early childhood education and divided them into two broad categories, the developmentalists and the academic advocates. The two authors define developmentalists (comprising Alliance for Childhood; American Association of Pediatrics and Defending the Early Years) as those who believe that the focus of ECE (Early Childhood Education) should be the development of skills and behaviors through exposure to academic components via play, but no standards should be set for these skills to be achieved. The academic advocates (organizations, namely the National Council of Teachers of Mathematics; Student Achievement Partners; National Association of Elementary School Principals; National Association for Education of Young Children and National Institute of Early Education Research), on the other hand, are those who emphasize academic content and skills in early childhood education to ensure that students acquire knowledge and skills before they enter formal schooling. Little and Cohen-Vogel (2016) state that both groups share common goals and views regarding their visions for preschool. However, when these groups discuss preschool as it is practiced today and the problems they face, their opinions are divided.

More recently, amidst these diverse viewpoints, preschool education has evolved to be inclined towards school readiness in terms of habit formation, discipline, behavior, overall development, creativity and academic achievement i.e. learning the 3Rs. This is supported by the 4<sup>th</sup> position statement of NAEYC (2020) released in April 2020, which states, 'the degree to which early learning programs support children's delight and wonder in learning reflects the quality of that setting' (p.5). NAEYC (2020) guidelines for Developmentally Appropriate Practice in Action further elaborate on educators following a comprehensive curriculum focused on every child effectively achieving individualized goals 'across all domains (physical, social, emotional, cognitive, linguistic and general learning competencies) and across all subject areas (language and literacy, including second language acquisition, mathematics, social studies, science, art, music, physical education and health)'(p.22).

Bahrain, among the GCC (Gulf Cooperation Council) countries, with a 97.5% adult literacy rate, is placed in first position, with a high enrolment ratio of approximately 102.1% for secondary education as per the 2018 statistics of World Data Atlas (2018). Education is free and compulsory up to grade 9 in Bahrain, and it is the fundamental right of all the citizens according to the report of the Ministry of Education (2018). However, preschool education is neither compulsory nor free. There are no comprehensive care programs carried out by the government; rather, the private sector primarily provides service to children in their early years, organized under two kinds of settings: for children under 3 years, there is infant-toddler (Nursery setting) and for 3 to 6 year olds, there is KG/Preschool setting (Hadeed & Sylva, 1999; Ministry of Education, 2018). The World Data Atlas refers to private institutions as 'all educational institutions not operated by a public authority, regardless of whether or not they receive financial support from public authorities'. A large number of these non-governmental institutions such as cultural bodies, organizations, associations, communities, private enterprises and individual persons provide organized educational programs at pre-primary level. As per the updated open data released by the Ministry of Education, there are 131 private kindergartens supervised by the Ministry of Education and 63 nurseries supervised by the Ministry of Social Development; there are 71 more attached to private foreign schools. This makes a total of 265 non-government institutes for children from the ages of 1 to 6 in Bahrain. All of these are co-educational in nature, although from grade 1 onwards, there are separate public schools for boys and girls.

According to the World Data Atlas (2018) the net enrolment rate in pre-primary education for Bahrain was 54.7 % in 2015, growing at an average annual rate of 3.70% per annum since the year 2000. Net enrolment rate in pre-primary education is the ratio of children of the official pre-primary school age who are enrolled in pre-primary school to the total population of the official pre-primary school age children. The Ministry of Education also reported that 4216 children were attending nurseries and 34,585 children were attending kindergartens as of the year 2018 data. This high rate of enrolment in preschools in Bahrain requires attention be paid to the quality of children's education as they progress to the lower elementary grade levels. The data supplied to the International Association for the Evaluation of Educational Achievement by the Ministry of Education, Bahrain, in January 2016 reported by Oxford Business Group (2020) stated that primary education, from the ages of six to 11, covered grades one to six. There were 58 state primary schools for boys with 30,929 pupils, and 55 for girls with 32,466 students, giving a total of 113 government primary schools collectively teaching approximately 64,000 children. In spite of the highest literacy rate and enrolment ratio among GCC countries (World Data Atlas, 2018) research especially in the area of preschool education in Bahrain and its impact on education in the later years has been scarce. The only investigations and sporadically published literature or conference papers in English language on topics such as effects of preschool (Hadeed, 1994), quality of preschools (Hadeed & Sylva, 1999), home intervention program for this age group (Hadeed, 2005) and development of Arabic edition of Early Childhood Environment Rating Scale (Hadeed, 2014) are reported for the period 1994 to 2013. Some of these research studies were conducted in collaboration with FPG Institute at the University of North Carolina. Later, AlKhalifa (2015) in her master's level unpublished dissertation paper entitled *Education and International Development*, shared her insights on the current situation of early childhood education and care in Bahrain. However, for the advancement of early childhood education in Bahrain and even to inform about preschool practices or to suggest the implications for public policies, these research studies are not adequate or updated. Moreover, it will be an oversight of potentially valuable data if research does not focus on the increasing rate of enrollment in preschool and children's performance at later or higher grade levels.

Globally, parents' preference for home-based learning for better literacy and numeracy skills (Ezati, Madanda, & Ahikire, 2018) and under appreciating the value of kindergartens, lack of infrastructural support from the government (AlKhalifa, 2015; Ross, Pinder, & Coles-White, 2015) and lack of clarity on the role of primary schools and different forms of early childhood education are some of the reasons that have been identified as undermining the position of preschool education (Al-Mogbel, 2014; Aljabreen & Lash, 2016; Chepsiror, 2021; Gahwaji, 2013; Whyte, Amisshah, & Mensah, 2020). On the other hand, a more recent qualitative study using documentary analysis conducted by González-Moreira, Ferreira, and Vidal (2021) examines the transition related factors affecting continuity from early childhood education to primary education in ten European Union (EU) countries. Emphasizing the cognitive, social and emotional well-being of children, the findings of the study also report that most countries start compulsory primary education at the age of 6 and the last year of early childhood education, that is from the ages of 5 to 6, is mostly free, which favors continuity and consistency in student performance (González-Moreira et al., 2021). The early years in a child's life are crucial for cognitive and social development, especially language development, including a second language like English for better concept-formation, socio-cultural awareness and effective communication. In countries like Bahrain that look up to advanced models of education, the long-term impact of preschool education is an area that requires more attention and systematic research.

### *1.1. The Purpose of the Study*

There is paucity of updated research on preschool education in Bahrain. In light of an increased rate in preschool enrollment in Bahrain, it is necessary to investigate children's performance in academic subjects, particularly language in elementary schools, in order to coordinate efforts between preschool and elementary school programs. There is also a dire need for taking up on research conducted earlier and examining the academic outcomes of pupils who had some kind of preschool experience in their early years. Accordingly, the purpose of the present study was to investigate preschool experience and English language learning outcomes of Grades 1, 2 and 3 students in a selected sample of Bahrain elementary schools.

The study addresses the following questions:

1. What is the level of achievement in English language learning at the end of grades 1, 2 and 3 among Bahraini elementary school students?
2. Are there significant differences in mean scores in English language at the end of each of grade level of 1, 2 and 3 between Bahraini students who attended preschool and those who did not?
3. Is there any significant interaction between preschool experience and English language learning outcomes at the end of grades 1, 2 and 3 respectively of Bahraini elementary school students?

## **2. Literature Review**

The following literature review discusses a number of longitudinal studies on the most significant predictors during preschool years for success in later years: bilingualism and language learning including reading and writing; preschool education as part of regular public schools; quality of preschool education through national level quality measurement system research and also about positive and fade-out effects of pre-primary years. Furthermore, a detailed review of research on early childhood education published in English language in the Gulf region and the Middle East is presented, focusing on the objectives and curriculum; an impact study on pre-primary education in Bahrain is also presented.

### *2.1. Early Predictors of Improvement in Reading and Writing Skills*

Over the past decades, the importance of pre-primary education and its academic, mental, psychological and social implications in child development have been realized and researched all over the world (in developed as well as developing countries) especially with a focus on self-esteem and school readiness (Al-Mogbel, 2014; Arafat, Korat, Aram, & Saiegh-Haddad, 2017; Graf, Hernandez, & Bingham, 2016; Peisner-Feinberg et al., 2001). In addition, the benefits of experience and stimuli in the first five years of life, which also include success in later years of formal education, have been the focus of multiple researches (Al-Mogbel, 2014; Burchinal et al., 2020; Dickinson, Nesbitt, & Hofer, 2019; Kjeldsen, Karna, Niemi, Olofsson, & Witting, 2014; Papadimitriou & Vlachos, 2014; Suggate, Schaughency, McAnally, & Reese, 2018).

A longitudinal study conducted with 287 children in Greece identified the specific skills during preschool years that can predict reading performance in grades 1 and 2. The results found that in grade 1, reading performance with accuracy and fluency can be predicted by phonological awareness and phonological memory scores in kindergarten. Besides these, in grade 2, for reading performance as well as text comprehension, the most significant predictor is oral language proficiency (Papadimitriou & Vlachos, 2014). Along the same line, Kjeldsen et al. (2014) concluded from a longitudinal study conducted with Swedish speaking children in Finland that gains from phonological awareness led to better decoding skills at grade 3, carried through grade 6 and better reading comprehension skills in grade 9. A more recent longitudinal study, conducted by Suggate et al. (2018) spanning 15 years (sample group of 19 months to 16 years of age), provides new evidence for the long-term interplay between early language literacy and later reading and vocabulary development. Fifty-eight families, mostly of New Zealand European descent, participated in the study and one clear implication from the findings emphasizes that children should be exposed to high quality language from early childhood, coupled with maternal vocabulary (Suggate et al., 2018). Shanahan and Lonigan (2010) who were also members of the US National Early Literacy Panel (NELP), summarized 'Developing Early Literacy: Report of the National Early Literacy Panel' which was published in 2008. The report provides an extensive meta-analysis of about 300 studies enlisting early literacy measures that correlate with later literacy achievements. The report concludes that phonological awareness, oral language skills and adopting literacy curricula in preschools have the most positive impact on children's early literacy learning. Finally, another report submitted in December 2016 by Graf et al at the University of Chicago, to Kenneth Rainin Foundation, regarding preschool predictors of academic achievement, establishes the fact that the domain of Oral Language and Literacy, represented in every state of the US, is the most clearly defined predictor of kindergarten

readiness (p.1). This document also provides details regarding skills, predictors and predicted outcomes together with relevant scientific literature for each of the five domains: Oral language and literacy, Math, Science, Socio-emotional development and Approaches to learning. Concepts about print and manual writing stand prominently among other skills related to oral language and literacy (p.8).

There are relatively few research studies found on writing as compared to reading. A Canadian study by [Ouellette, Sénéchal, and Haley \(2013\)](#) conducted on kindergarten students and followed up in grade 1 concluded that children coming from kindergarten with strong early literacy experience tend to acquire writing skills in the first year of schooling more easily than their counterparts who have weak literacy experience. Another study conducted in the same year in the US by [Dinehart and Manfra \(2013\)](#) found positive association between writing experience in early years and later academic success in writing and math skills on standardized tests. They reported that fine motor skills such as object manipulation tasks and fine motor writing were important predictors for better academic performance in grade 2 for children from low socio-economic status families.

### *2.2. Bilingualism and Language Learning Skills*

[Walk, Matsuo, and Giovanoni \(2015\)](#) compared the preschool predictors of English language outcomes in kindergarten between monolingual and bilingual children. They analyzed the data from two studies covering state-funded preschools in different regions of the US and systemically examined the effects of motor skills and social development on language learning. The results showed that simple and routine adult interaction was predictive of English language skills among monolingual and bilingual children, indicating the importance of implicit learning over explicit instruction in early language acquisition. [Espinosa \(2015\)](#) discussed the challenges and benefits of early bilingualism in the United States context and asserted that young dual language learners are quite capable of learning multiple languages during early childhood years since they benefit socially, linguistically and cognitively when they acquire 2 or more languages and thus benefit from their language processing skills. [Ozfidan and Aydin \(2017\)](#) also examined the prospects of bilingual education curriculum in fostering academic achievement and enabling native speakers to learn a second language, among other benefits, in Turkey. The results emphasized the necessity for bilingual education in the curriculum.

### *2.3. Impact Studies - Positive Versus Fade Out Effect*

[Mokrova et al. \(2015\)](#) and a number of researchers in the earlier years, including [Lamb and Ahnert \(2006\)](#); [Barnett \(2011\)](#) and [Yoshikawa et al. \(2013\)](#) found a positive correlation between high quality early childhood care and education and development of child's social and academic skills. However, a large scale program evaluation by the Administration for Children and Families (2010), observational studies by [Belsky et al. \(2007\)](#) and [Peisner-Feinberg et al. \(2001\)](#) and more recently the ExCEL P-3 project study conducted by [McCormick, Hsueh, Weiland, and Bangser \(2017\)](#) and a study covering six African countries conducted by [Gove et al. \(2017\)](#) suggest that in the long run, the positive effects of high quality ECCE tend to diminish in early elementary school. In a related study of their own, [Mokrova et al. \(2015\)](#) reported 'no fade out effects only on social skills, but not on academic skills' (p.4).

A study conducted in Bangladesh by [Nath \(2012\)](#) examined the test data on learning achievement collected from 7093 pupils from 440 primary schools, out of which only 15.3% of the pupils attended preschool. The study concluded that attendance at preschool did not have a relationship with learning achievement among other school related and additional educational factors. Another comprehensive and well-designed long-term study reviewed a 40 year old program offered to children of low socio-economic status families in the US. This program called Head Start is based on a whole child model with cognitive, socio-emotional development, health and parenting practices training as its mandate. In spite of significant gains at the age of 3, the findings do not identify an impact in cognitive domain as strong as in the others, especially in grade 1 (U.S. Department of Health and Human Services, 2010). In the Brazilian context, the issue of early childhood education is all the more relevant due to the fact that early childhood education is officially recognized as the first stage of basic education and is an integral part of the National Education Plan in Brazil (Law No. 9.394,1996 and Law No. 10.172,2001 respectively), as stated in a study reported by [Gardinal-Pizato, Marturano, and Fontaine \(2012\)](#). The study, controlled for socioeconomic level, evaluated Portuguese language proficiency and mathematics skills of 294 students of both genders, from Grades 3, 4 and 5 in public schools, with no ECE, one year of ECE and two years of ECE. The results showed consistent association between ECE and greater academic achievement though no additional effect on performance was found for an extra year of ECE.

A Chilean long-term study by [Cortázar \(2015\)](#) examined the impact of public early childhood education on the academic achievement of 4<sup>th</sup> grade students as measured by the country's National Education Quality Measurement System (SIMCE). The study analyzed the performance of all the 4<sup>th</sup> graders who were evaluated on SIMCE reading, math and social studies in the year 2008. The results found a positive correlation between ECCE and academic achievement in all the three subject tests against the control group who did not attend any early childhood education program at all. Boys performed better and children from middle to low socio-economic sections benefitted the most from the ECCE ([Cortázar, 2015](#)).

### *2.4. Early Childhood Education Research in the Gulf Region and the Middle-East*

In spite of a common language, religion and other characteristics, the Middle Eastern countries differ from each other in linguistic and cultural terms and the value they give to education ([Jabbour, Livingstone, & Daou, 2017](#)). However, in the last couple of decades, there has been a strong involvement in preschool education in the Arab world and focus has been on setting up kindergartens and designing the curriculum that would prepare the child for the first few years of primary education ([Al-Mogbel, 2014](#)). Focusing on the pre-primary and primary years, there is a need to examine the relevant educational experiences of the Arab countries as well.

In the past, early childhood education in Saudi Arabia and Kuwait was in the form of 'khatibs' which were run in the mosques and were meant for learning the Quran centered around Islamic education ([Aljabreen & Lash, 2016](#); [Nashif, 1985](#)). The first preschool in Saudi Arabia with the purpose of developmental learning was set up in 1966

whereas in Kuwait it was founded in 1954 (Nashif, 1985). Over the years, the transition from 'Ktatib' to accelerated curriculum change was also more inclusive of academic learning among its other goals (Al-Mogbel, 2014).

On the whole, Saudi Arabia has seen positive changes in early childhood education in terms of setting up specific curriculum goals, approaches and teacher training. In future, while integrating the proven concepts of ECE and international accreditation to Islamic based values, preschool education will also need to support the parenting needs of working-class Saudi mothers (Aljabreen & Lash, 2016).

Al-Mogbel (2014) also compared and analyzed the preschool programs of South Korea and Malaysia with that of Saudi Arabia, both former countries being similar in social and cultural progress. The author recommended adapting their educational philosophy model, child-centered techniques, technology integration and collaboration with the private sector in Saudi Arabia for the improvement of pre-primary education.

Over the years, with better affordability of the cost of education by parents, awareness and involvement in child upbringing, the focus of preschools in Kuwait has also shifted from health, hygiene and meals to academic learning. A research paper published by Burney, Johnes, Al-Enezi, and Al-Musallam (2013) based on a long-term study investigated the technical and financial efficiencies of public schools in Kuwait during two periods, 1999/2000 and 2004/2005 at four levels – kindergarten, primary, intermediate and secondary. The authors found kindergartens to be more efficient in a larger region with a relatively smaller population.

Another recent study on integration of digital technologies into play-based pedagogy in Kuwaiti early childhood education reports that to a great extent digital technology is introduced in ECE classrooms with multi-functional equipment and devices including internet connectivity, although teachers are still hesitant to integrate them into curriculum practices due to ideological divide (Aldhafeeri, Palaiologou, & Folorunsho, 2016).

According to Jabbour et al. (2017) Early Childhood Education programs in the middle-eastern countries have hugely benefitted from international donor agencies like UNICEF, UNESCO, the World Bank and many others in enhancing youth literacy rates. Integrating the ECE program into their educational planning systems and providing financial support are the initiatives taken by some countries like Jordan, Egypt and Iran that have shown positive results (p.51).

A study was conducted in Jordan where over the past decade kindergarten education was dominated by the private sector before the Ministry of Education initiated the government funded kindergarten program. The study compared the Jordanian preschool program practices in public and private sectors with developmentally appropriate practices using NAEYC guidelines (AbuTaleb, 2013). The results found significant differences showing that government-run kindergartens were highly regulated with uniform curriculum, compulsory teacher training and classroom environment as per international standards (AbuTaleb, 2013). These results are supported by another Jordanian study in which 500 teachers participated and a revised version of the Early Childhood Environment Rating Scale (Harms, Clifford, & Cryer, 1998) was used. The study found high level quality in government preschools in two of the seven subscales i.e. interaction and program structure (ALdarab'h, Alrub, & Al-Mohtadi, 2015). It is quite apparent from the above reviews of the Gulf and Middle-Eastern countries that, in spite of more infrastructural support for public preschool education, funding by donor agencies, provision of high quality teacher training and research as per the international norms, a lot more needs to be done in the area of streamlining research and development.

### *2.5. Early Childhood Education Research in Bahrain*

According to the World Data on Education (2010-2011) compiled by United Nations Educational Scientific and Cultural Organization and International Bureau of Education (UNESCO and IBE), the objectives of pre-primary education in Bahrain are listed as below:

- Developing the child's attitude and behaviors in accordance with Islamic religion, belief and heritage.
- Promoting the child's mental, psychological, social and physical development.
- Establishing the principles of the child's self-sufficiency.
- Developing the child's skills and abilities.
- Encouraging the child's creativity.
- Preparing the child for school.

To achieve these objectives, the Ministry of Education in Bahrain prepared a unified curriculum document, divided into educational units, and distributed it among all kindergartens, requiring it to be implemented in the 2005-06 academic year.

The first and second cycles of basic education include compulsory common subjects, namely Islamic education, Arabic language, English language, Science and Technology, Mathematics, Social Studies, Physical Education, Family Education, Art, Music and Songs (World Data on Education, 2010-2011).

An impact research in the area of preschool education in Bahrain was reported by Hadeed and Sylva (1999). They compared the effects of three preschool settings – care-oriented, educationally-oriented and home - in terms of socio-emotional and cognitive development, using culturally adapted and translated tools with four-year-old children. The important predictors of the study were age, type of center, gender and family background. The results showed that among older children, boys performed better than girls in language outcomes, perception, counting and emotional conduct problems. Among younger children, those from education-oriented centers performed better than their peers at care-oriented centers or at home. Family background was not found to be significantly related. The latter finding has been supported by a recently published study conducted by Fateel, Mukalid, and Arora (2021). This study investigates the effects of socioeconomic status and preschool education on the academic achievement of students in Bahraini government elementary schools. The findings report no impact of socioeconomic status on students' academic achievement. The important implication of the study is to expand students' experience by restructuring the curriculum based on global changes which are inevitable, with increased enrollment seen in pre-primary education centers.

On the basis of the above review of literature, it is imperative to consider the following measures with regards to the effects of preschool experience on the academic achievement of students:

- a) Study the implications of research focusing on preschool education and English language learning outcomes among bilingual communities across the world, in different countries and more specifically in the Gulf and Middle East due to their proximity to Bahrain.
- b) Examine the patterns in interaction between different variables and identify if there are any significant differences.
- c) Explore the potential for making policy recommendations to run preschools in Bahrain with higher levels of regulation as well as support.

### 3. Methodology

The current study adopted a quantitative research design, aiming to investigate the effects of preschool experience on language learning outcomes in the lower grades of government primary schools in the Kingdom of Bahrain. The researchers identified language learning in preschool and preschool education as the independent variables; the average academic achievement of the students based on the final examination results of the academic year 2017-2018 in the primary level from grades 1 to 3 was the dependent variable. The results of grades 1, 2 and 3 students were collected individually and analyzed.

The statistical information on the sample size of 402 elementary school students for the study was provided by the Ministry of Education, Bahrain, out of which 268 students (66.7%) had attended a preschool facility while the remaining 134 students (33.3%) did not go to any preschool. The controlled variables of the study were the type of school, the grade level and the source of data. Only government primary schools representing all the four governorates of the country were included in the study, namely the Capital, the Northern, the Southern and Muharraq territories. The data collected were limited to average academic scores in language learning of students at the end of grades 1, 2 and 3, collected from the Ministry of Education administrative center.

The researchers used SPSS and descriptive statistics to analyze the demographic data and the mean values of students' subject scores. One-way ANOVA, t-test and mean scores of the Grades 1, 2 and 3 students in their English language tests were selected for analyzing the data and drawing significant conclusions. The Table 1 represents the list of tests and their purposes.

**Table 1.** List and purpose of statistical tests used for data analysis.

No.	Test	Purpose
1	Mean scores	To find the overall mean scores of the Grades 1, 2 and 3 students in their English Language results.
2	t-test	To analyze significant differences (if any) in the mean scores of pupils in English language learning in Grades 1, 2 and 3 with respect to preschool education as the independent variable.
3	One Way ANOVA	To find significant differences (if any) in students' mean academic achievement scores with respect to English language learning in Grades 1, 2 and 3.

### 4. Findings

The findings of the investigation correspond to the three research questions of the study stated earlier. The level of achievement in English language learning at the end of grades 1, 2 and 3 among Bahraini elementary school students was obtained through the mean scores and standard deviations for the total number of student sample. These are reported in Table 2.

**Table 2.** Overall mean scores for Grades 1, 2 and 3 Students in English language learning.

Level	N	Mean	Std. Deviation
Grade1	83	88.807	11.871
Grade2	136	88.368	11.845
Grade3	183	88.874	12.356
Total	402	88.689	12.058

The mean scores obtained in English language are 88.81, 88.37 and 88.87 for grades 1, 2 and 3 students respectively. Since the differences in the mean scores for all three grade levels are less than 1%, there is no significant statistical difference in the mean scores of these three grades.

Further statistical analysis was performed to find out if there were any significant differences in mean scores in English language at the end of each grade level of 1, 2 and 3 between Bahraini students who attended preschool and those who did not. Table 3 reports for each grade level.

**Table 3.** T-test on language learning outcomes of students in grades 1, 2 and 3, with and without preschool experience.

Level	Preschool	N	Mean	Std. deviation	t	df	Sig. (2-tailed)
Grade 1	Yes	54	91.426	10.140	2.860	81	0.005
	No	29	83.931	13.424			
Grade 2	Yes	92	91.685	10.042	5.149	134	0.000
	No	44	81.432	12.424			
Grade 3	Yes	122	90.705	11.322	2.722	181	0.008
	No	61	85.213	13.571			

Table 3 reveals significant differences in the government elementary school pupils' academic achievements in grades 1, 2 and 3 in relation to preschool education. The results imply that the level of academic achievement of those who had preschool education was higher than those who had no preschool education.

Overall, for all the three grade levels, the Bahraini pupils who attended preschool consistently scored higher than those who did not. In order to find any significant interaction between preschool experience and English language learning outcomes against other grade levels and also within each grade level of Bahraini elementary

school students, the average academic scores of pupils from each grade level were then examined using analysis of variance (ANOVA) test and the results of the same were further interpreted as shown in Table 4.

**Table 4.** F-Test (ANOVA) of academic achievement results by grade 1, 2 and 3 students.

Source of variation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	21.489	2	10.745	0.074	0.929
Within Groups	58282.643	399	146.072		
Total	58304.132	401			

Table 4 shows no significant differences in the academic achievement results of government elementary school pupils when compared within a grade level or among grades 1, 2 and 3. The “F” value of academic achievement in language learning is 0.074, whose significance value of 0.929 is higher than  $\alpha = 0.05$ . Therefore, it can be concluded that there is no significant difference in academic scores in English language learning when compared between grades or within a grade. Since no significant differences were noted through ANOVA, no further t-test was reported.

## 5. Discussion

From the above review of literature and the findings of the present investigation, three distinct themes emerge in the context of preschool experience and English language learning outcomes in Bahrain, which are discussed in detail and supported with outcomes of relevant research.

### 5.1. Bilingualism and Learning a Second Language in Early Years

The present investigation was conducted in the Kingdom of Bahrain and the data were collected from government elementary schools where the majority of the children from Bahraini families and naturalized expatriate families learn English as a second language. English is introduced in these public schools beginning in grade 1 along with Arabic, which is the native language of Bahraini students.

The findings of the study clearly demonstrate a better performance at all three grade levels of 1, 2 and 3 by students who had attended a preschool before joining elementary school. This result concurs with the results of another study on Arabic speaking Israeli children conducted by [Arafat et al. \(2017\)](#). It concluded that children’s early literacy skills in preschool had significant direct effects on literacy achievements in first grade while other factors like age and family’s socio-economic status played their parts indirectly.

Bilingualism is also supported by scientific evidence from a US study by [Espinosa \(2015\)](#) on dual language learners, emphasizing their capability for learning multiple languages during early childhood years. Based on Espinosa’s research, there is another study by [Miler \(2016\)](#) examining the school readiness skills of Spanish-speaking dual language learners in the Head Start early childhood education program in the US. The findings of this study conclude that bilingual subjects’ vocabulary in English language was seen to have improved significantly in the standardized test, PPVT (Peabody Picture Vocabulary Test) (p.3). On the other hand, [Walk et al. \(2015\)](#) in their study (mentioned earlier in literature review) on comparing language outcomes of monolingual English-speaking children and bilingual children, claimed that teacher relationship variables were more important for bilingual children in their language acquisition in early years.

In a similar cultural context, prospects of bilingual education explored in a Turkish study by [Ozfidan and Aydin \(2017\)](#) also maintain the findings of the current study. Assessing the significance of bilingual education, the authors also indicate the necessity for bilingual education curriculum for the education system in Turkey. In the context of the findings of the present study, the significantly and consistently high scores at all three grade levels of 1, 2 and 3 of students who had preschool experience point to the benefits of early literacy skills acquired by dual language learners and also their capability for achieving better outcomes in English language learning. Evidently, the language processing skills developed through learning two or more languages benefit them socially as well as cognitively.

### 5.2. Positive Versus Fade-Out Effect

In the current study, English language learning outcomes (in terms of test scores) of the representative sample of Grade 1, 2 and 3 students from Bahrain elementary schools who attended preschool are consistently and considerably high and the mean scores of the three grades range from 90.70 to 91.68. This may also support the positive effects of preschool education on a long-term basis. Such positive effects have been reported by several longitudinal studies conducted on a large scale across many countries, based on a variety of samples ([Lamb & Ahnert, 2006](#); [Suggate et al., 2018](#); [Yoshikawa et al., 2013](#)). However, many other more recent studies like those of [Mokrova et al. \(2015\)](#); [McCormick et al. \(2017\)](#) and [Gove et al. \(2017\)](#) have indicated the presence of the ‘fade out’ effect over time. Since no significant differences were observed in the findings of the present study among the three grades or within a grade level, there is no valid evidence in this regard. In addition, taking into account the performance of a sample of subjects consistently for a longer period of time and observing the correlation between other factors influencing the performance may provide more conclusive results.

### 5.3. The Independent Variable (Preschool) and its Forms

One pertinent feature of the current study is that the data collected from the source do not carry details on the type and duration of preschool attended by the elementary level students. This controlled variable may be considered a limitation of the research at first glance. Nevertheless, considering the fact that this study is an attempt to bridge the gap of several years of sparse information published on preschool education in Bahrain, it may also be considered a small step in the right direction.

The positive effects of preschool experience alone on academic outcomes, in spite of such a limitation, is supported by a 3-year study by [Ezati et al. \(2018\)](#). They present an NGO (non-governmental organization) model in Uganda (LBE) where children from lower socio-economic status families got only informal early childhood

education and care, and yet showed improved performance in literacy by the time they reached the 3<sup>rd</sup> year of primary education. They performed better than those who had started school directly from home. This LBE theory of change strongly advocates the importance of preschool experience.

This brings us around to the debate over kindergartens between developmentalists and academic advocates presented in a 39-page policy document (Little & Cohen-Vogel, 2016) and also to comparisons between a Nordic model (child-centered and holistic approach) and a Danish model (academically oriented compulsory approach) of ECE discussed by Sommer (2019). In the context of Bahrain, a couple of decades ago, Hadeed and Sylva (1999) examined the three types of preschool settings in Bahrain, viz care-oriented, educationally-oriented and home, in their study on center care and education in Bahrain. The authors found educationally-oriented preschools performing better in Bahrain than the other two types.

In a nutshell, even if the present study is limited in certain aspects and correlations, the importance of preschool experience in achieving better language learning outcomes is well documented.

## 6. Conclusion

In conclusion, this research investigates preschool experience and language learning outcomes of pupils in Grades 1, 2 and 3. Data from a representative sample in the Kingdom of Bahrain were statistically analyzed and the findings are discussed in view of similar research conducted earlier in Bahrain, in the Middle East and in other countries. The three themes that emerge from the findings are bilingualism in public elementary schools; positive versus fade out effect of early childhood education and preschool as an independent variable. Considering the consistently high academic outcomes and the significance of preschool experience, further rigorous research in this area will be beneficial. The other variables related to this area of research can also be examined, such as type, duration and quality of preschool attended, professional teacher training received, socio-economic status, learning outcomes in other subjects as well as later on in middle school and other predictors of academic success. Affiliation of preschools to government run basic compulsory education systems are also recommended to address issues on disparity in affordability, parents' perception and attitude towards preschool education and taking advantage of early years in realizing the potential of young learners. A quality, cost-effective education and well-equipped preschool with government support will help make way for a better future for the nation.

## 7. Recommendations and Limitations

Based on the implications of the current study derived from the findings as well as limitations, the following recommendations are made:

- a) In Appreciation of the high level of language learning outcomes of elementary school students in Bahrain, more robust research in this area should be carried out with a larger sample, on a larger scale and for a longer duration to derive more conclusive results.
- b) In recognizing the significance of preschool education, it should officially be integrated into the public primary school system as endorsed by studies conducted in Brazil (Cardinal-Pizato et al., 2012); Jordon (AbuTaleb, 2013; ALdarab'h et al., 2015) and more recently in Nigeria (Akinrotimi & Olowe, 2016).
- c) The curriculum, policies and other support provided to preschools should be monitored by the Bahrain Quality Assurance system agency to maintain high quality preschool education and professional teacher training and research as reported and supported by a Chilean study describing National Quality Measurement System Research (Cortázar, 2015).

As regards the limitations, the language learning outcomes as the independent variables for this investigation were limited to reading and writing only, since the data were analyzed from the final exam results of the Ministry of Education for Grades 1, 2 and 3. The results did not comprise listening and speaking components of language learning. Also, as mentioned earlier, there was no data analysis on the types of preschool attended by the subjects of this study.

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