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Supervision Committee for Evaluation Studies for Education Reform for Knowledge Economy Project (ERfKE I)

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Evaluation Study of the Early Childhood Development Program

Education Reform for the Knowledge Economy (ERfKE I)

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Under the Education Reform for Knowledge Economy (ERfKE) Project

Executive Summary

STUDY OBJECTIVES

The purpose of the current study is to evaluate the quality of early childhood development (ECD) programs Under the Education Reform for Knowledge Economy (ERfKE) Project. More specifically, the study aimed at answering the following main questions:

1. What is the quality of public KG environment in Jordan?
2. What is the existing teaching and learning process in public KGs in Jordan?
3. What is the perception of parents, teachers, and principals regarding KGs in Jordan?

METHODOLOGY

Sample

The sample of the present study was identified and selected by the National Center for Human Resources Development (NCHRD) from the Ministry of Education database. A stratified random sample was selected to represent: region (north, middle, south), rural/urban, and type of provider (MOE, private). A sample was selected to represent the public kindergartens (n=84), another sample (n=23) was selected of mainstream private KGs that are located around the same geographical Locations of the sample of public KGs. These private KGs are not representative of all private KGs and do not include the high-end private KGs which are usually located in Amman.

The school/KG principals, teachers, and parents were asked to participate in this study in order to know their perceptions regarding the KG. The sample included 107, 107, and 192, principals, teachers, and parents, respectively.

Research Instruments

To assess the quality of KG learning environment, the Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) was used after being translated and adopted to Arabic. The ECERS-R, an instrument used to rate the global quality of early childhood educational environments, is comprised of 470 individual indicators, organized into 43 items under seven subscales: Space and Furnishings, Personal Care, Language-Reasoning, Activities, Interaction, Program Structure, and Parents and Staff. The instrument is used primarily to assess the

quality in classrooms serving children in preschool settings. Each of the 43 items has individual indicators that are used to determine a classroom's score on that item.

The ECERS-R consists of 43 items organized into 7 subscales:

1. Space and Furnishings (e.g. indoor space, furniture for routine care, play and learning, furnishings for relaxation and comfort, room arrangement for play , space for privacy, child-related display, space for gross motor play, gross motor equipment).
2. Personal Care Routines (e.g. greeting/departing, meals/snacks, nap/rest, toileting/diapering, health practices, safety practices.).
3. Language-Reasoning (e.g. books and pictures, encouraging children to communicate, using language to develop reasoning skill, informal use of language).
4. Activities (e.g. fine motor, art, music/movement, blocks, sand/water, dramatic play, nature/science, math/number, use of computers, videos).
5. Interactions (e.g. supervision of gross motor activities, General supervision of children (other than gross motor), discipline, staff-child interactions, interactions among children).
6. Program Structure (e.g. schedule, free play, group time, provisions for children with disabilities).
7. Parents and Staff (e.g. provisions for parents, provisions for personal needs of staff, provisions for professional needs of staff , staff interaction and cooperation, supervision and evaluation of staff, opportunities for professional growth).

Definitions of the different quality levels of KG environment

1. Inadequate: the KG environment is lacking the basic requirements and resources/materials indicating a lack of care that is not good for children's development.

2. Minimal: the KG environment has the minimum basic requirements and resources indicating type of care that meets to some small degree basic developmental needs.

3. Good: the KG environment has adequate and suitable requirements and resources indicating that the basic tenets of developmentally appropriate care exist.

4. Excellent: the KG environment has outstanding requirements and resources which provide high quality care that expands children's experiences, extends their learning, and provides warm and caring support.

The Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) is ranked from 1 to 7. A ranking of 1 describes inadequate conditions while a ranking of 7 describes excellent conditions. The indicators are grouped under four scale

points, 1, 3, 5, and 7, representing anchors of Inadequate, Minimal, Good, and Excellent. Each indicator, beginning with the ones under the inadequate anchor, is scored as present or not by the observer. All of the indicators under ECERS-R anchors are positively worded except for the indicators under the "Inadequate" anchor, which are always negatively worded. Checking "yes" for any of the indicators under "1" is equivalent to checking "no" for any of the indicators under "3", "5", or "7", and leads to discontinuing scoring the item. The field researchers observed the KG classrooms for at least three hours, followed by a brief teacher interview to answer questions about items that were not observed. The parents, teachers, and principals were interviewed by the field researchers to obtain the required information which included qualitative and quantitative type of questions. The researchers developed three separate surveys, in Arabic, to measure the perceptions of parents of children who attend KGs, KG teachers, and school/KG principals. Parents questionnaire consisted of 13 fixed response items as well as three open ended questions, while teachers and principals questionnaires included 11 fixed response items and three open ended questions.

FINDINGS

The quality of public KGs environment in Jordan

Data analysis revealed that the quality of 13.1% of public KGs environment in Jordan is considered "inadequate" (i.e. lack of space and furnishing; poor personal care routines, few reading material available; few developmentally appropriate fine motor material available; poor programs structure; and poor parents involvement). Around 43% of the KGs are considered "minimal" (i.e., have the minimum basic requirements and resources needed for activities, space and furnishing, language and reasoning, interaction, and minimal parental involvement). On the other hand, the results revealed that the quality of around 43% KG's environment is considered "good" (i.e. have adequate and suitable requirements and resources in terms of space and furnishing, personal care, equipments needed for play and activities, and good program structure and parental involvement). Finally, it is found that quality of only 1.2% of KG's environment is considered "excellent" (i.e., have an outstanding requirements and resources needed, excellent space and furnishing, high parental involvement, availability of high quality toileting and hygiene material).

Looking at the findings of the **subscales**, it was clearly demonstrated that the best aspects of public KG's environment were interaction, program structure, personal care routines, and language-reasoning. **The interaction** aspect of KG environment scored the highest and included general supervision of children, discipline, staff-child interaction, and interaction among children. **The program structure** aspect of KG environment included schedule, free play, and group time. **The personal**

care routines aspect of KG environment included greeting/departing, meals/snacks, nap/rest, toileting, health practices, and safety practices. **The language and reasoning** aspect of KG environment included books and pictures, encouraging children to communicate, using language to develop reasoning skills, and informal use of language.

On the other hand, the lowest scores were recorded on the following aspects of KG's environment demonstrating low quality: parents and staff, activities, and space and furnishing respectively. **The parent and staff** aspect included provision for parents, provision for personal needs of staff, provisions for professional needs of staff, staff interaction and cooperation, supervision and evaluation of staff, and opportunities for professional growth. **The activities** aspect of GK environment included fine motor, art, music/movement, blocks, sand/water, dramatic play, nature, science, math/number, and use of TV, video, and/or computers. **The space and furnishing** aspect of KG environment included indoor space, furniture for routine care, play and learning, furnishings for relaxation and comfort, room arrangement for play, space for privacy, child-related display, space for gross motor play, and gross motor equipment. In general we can conclude that the quality of physical aspect of KG environment (space, furnishing, and materials) and the availability and use of technology is consider low and need urgent intervention in order to improve the quality of kindergarten programs especially in the aspects mentioned earlier to better serve Jordanian children and to improve their school readiness.

When comparing the **quality of public and private KGs** environment, the findings revealed that there are significant differences between the quality of public KGs environment and private KGs in favor of public KGs environment. Moreover, more "good" quality KGs are found in public sector than among private sector. Despite the fact that was demonstrated by the findings that around 50% of public KGs need improvements and some need immediate interventions, it was found that most of the private KGs (around 60%) have the minimum requirements and around 20% need even more urgent improvements and interventions as they considered ""inadequate"", taking into consideration the growing number of children who are being served by these KGs.

When comparing **the findings of the subscales between public and private KGs**, it was revealed that there were no differences between public and private KGs on the following aspects of KG environment: space and furnishing, personal care routines, and parents and staff. On the other hand, significant differences were found between public and private KGs on the following aspects of KG environment: language-reasoning, activities, interaction, and program structure. It can be concluded here that the physical environment in public and private KGs is almost have same quality knowing that more KGs in public and private sectors either have the minimum requirements or lacking the basic requirements and resources with respect to space and furnishing. Here, we are talking about indoor space, furniture

for play and learning, furniture for relaxation and comfort, room arrangement for play, space for privacy, child-related display, space for gross motor play, and gross motor equipment. Other aspect that is also similar between public and private KGs is personal care routines which include greetings, meals, rest, toileting, health practices, and safety practices. It worth to note here that most of the quality of public and private KGs with respect to personal care routines are considered either "good" or "excellent", and that reflects "good" practices but still we need to work on the KGs that considered "inadequate" or "minimal" with respect to that aspect of KG environment in order to insure that all Jordanian children are getting quality early childhood programs either they are enrolled in a public or private KG. What also worth to note here is that the aspect of parent and staff provision was found to be the lowest in quality in both public and private KGs. Most of public and private KGs were found to be "inadequate" or "minimal" with respect to provision for parents and provision for staff. More attention should be brought to staff personal and professional needs in addition to parents' involvement.

In order to assess **teaching and learning process**, many aspects of KG environment were taken into consideration such as, using books and pictures, encouraging children to communicate, informal use of language and using language to develop reasoning skills, activities (art, music, blocks, sand/water, dramatic play, use of technology including TV, computer), interaction between teacher and children and among children, in addition to, schedule, and group time. Using ECERS-R, the researchers decided to group the four subscales (language-reasoning, activities, interaction, and program structure) in order to assess and evaluate the teaching and learning process in KG's classrooms. The findings revealed that only 7.2% of public KGs have "inadequate" quality of teaching and learning. When compared to private KGs, it was demonstrated clearly that public KGs have better quality of teaching and learning taking into consideration that around 26% of private KGs have "inadequate" quality of teaching and learning; which is an important aspect, if not the most important, in KG environment. The findings revealed as well that the quality of teaching and learning in about half of public KGs are considered either "good" or "excellent" compared to only 17% in private KGs without any private KG that considered having "excellent" quality of teaching and learning as measured by ECERS-R.

When linking these findings to **teacher training**, it was demonstrated clearly that the quality of KG environment improved when KG teachers were trained. It was found that most of public KG teachers were trained on one or more of different early childhood programs such as, Wisconsin program, the Interactive Curriculum, Parental Involvement, and Kidsmart, while few private KG teachers were trained. When exploring the relationship between the quality of teaching and learning in KGs and teacher training, it was found that there were a significant relationship between the quality of teaching and learning when the teachers were trained and

the quality of teaching and learning when the teachers were not trained in favor of trained teachers.
When investigating if there were any **significant differences** in the quality of public KGs according to residential Location or geographical region, the findings revealed that the quality of public KGs in urban and rural Locations are similar. On the other hand, some significant differences were found in the quality of public KGs according to geographical region especially between the north region and the south in favor of the south. It seems here that the quality of public KGs that are located in the south is better than the quality of KGs located in the north; perhaps more attention had been given to KGs located in the south. Otherwise, all other KGs in the different locations have almost same quality.

Parents, teachers, and principals Satisfaction of KGs

One hundred and seven principals from the private and public KGs participated in this study. It is found that both principals are satisfied with the effectiveness of the KG they work in. However, those in the private KGs are more satisfied than their counterparts in the public ones. The major concern of public KGs **principals** is the facilities and equipments available for playing and learning. Almost 78% of them perceive it inadequate. The second concern is the space available for children; 44% of them perceive it unsuitable.
Despite this positive perception, principals still face many challenges. On the top of these is the large number of children in the classroom, inadequate resources and facilities, and not having separate toilets for KGs. Few principals felt challenged because they did not receive sufficient training on how to manage KGs.
Collaboration from the supervisors is another challenge mentioned in all the geographical Locations. Another challenge but less prevailing is the lack of full-time teachers- since teachers are either substitute or hired as part-time.
Eighty four **teachers** from the public kindergarten and 23 teachers from the private kindergarten participated in this study. The results showed that in general, 88.6% of public KG teachers are satisfied with the KGs and perceive it effective compared with 92.0% at the private ones. Teachers at public KGs were highly satisfied with the management, the interactive curriculum, and less satisfied with the facilities and equipments, and space available for children. Those in the private ones were highly satisfied with the management of the KG, with their job (i.e., being a KG teacher, and with the safety available for children in the KG. They are less satisfied with the facilities and equipment available for playing and for learning. The results showed no significance differences exist between teachers' perceptions of KG effectiveness whether they are public or private.
The main challenges facing KG teachers are the large number of children in the classroom, lack of resources, not having separate toilets for the KG. To a lesser degree, some teachers believe they are not ready and not well-trained to be a KG teacher, or even they can not teach English to KG children.

Two hundred and twenty one **parents** participated in this study. The study showed that parents who have children in the public or private KGs are very satisfied with their children KG. However parents at the private one have a very slightly higher rate of satisfaction (100% compared with 93.3%). Parents highly believe that the public KGs teach their children discipline, and help them develop their social skills, and prepare their children for success in the school. Parents who have children in the private KGs seem more satisfied with their children's KG. However, they almost high satisfied with the similar statements as the parents who have children in the public KGs.

The study also showed that parents have good communication channels with the KG and with their children's teachers. They mainly communicate through visits and phone. Another channel is the reports that teachers send for parents with the children.

It seems that parents are highly aware of the benefits of sending their children to the KG. They believe that the KG will teach their children how to read and write, prepare them for the school, teach them discipline, and hone children's behavior and social interaction.

Parents who send their children to private KGs pay between JD 110-250 per year in tuition. Other costs may include transportation, books, and uniform. For the majority of parents, it seems that this cost is affordable and balanced with the service the KG is providing for their children.

RECOMMENDATIONS

1. The study showed that principals, teachers, and parents are less satisfied with the **facilities** available for their children. This perception came consistent with the quality level of the physical environment-space and furnishing, personal care routines, and activities, as measured by the ECESR-R. In many cases teachers, parents, and principals complained about the lack of an age-appropriate toilets for children who have to share these facilities with older students. It is also crucial to improve the educational and recreational materials and equipments available for children.
2. Class size is a very important factor in providing a high quality learning environment for children. This study showed that parents, teachers, and principals are not satisfied with the current **space** available for their children. Therefore, it is important to reduce the number of students in the classroom, enlarge the current classrooms, if possible, and hire more teachers/assistant teachers to ensure individualized instruction and a balanced child-teacher ratio.
3. Despite the fact that more than 70% of teachers have received training on Wisconsin, Kidsmart, and Parental Involvement programs, and on the interactive curriculum, the study showed that teachers felt incompetent and

ask for more professional development opportunities. The study also revealed that the quality of teaching and learning in KGs is influenced by the nature of training that teachers received. This implies that the ministry of education should continue with the **in-service training** programs for KG teachers. Principals in some KGs shared the same feeling (i.e., they are not well-trained to manage or teach in the KG). Therefore, it is important to improve the professional development opportunities for the principals.

4. The study showed that **parents' involvement** in their children's learning process is still insufficient. It is recommended that KGs should be able to organize more awareness campaigns for parents and build on partnerships with the community to strengthen the existing rate of parental involvement. A quick and efficient way to do that is to expand the Ministry's parental involvement program.
5. It was clearly demonstrated in this study that the **public KGs** outperformed the **private** ones in the kind of training offered to teachers, program structures, interactions, activities, and in language and reasoning domain. This indicates that the public KGs are better preparing children for school. It is important that the Ministry of Education should pay more attention to the private KG environment in order to improve it.
6. It is still evident that the private sector is enrolling almost 90% of the total KG students. The ministry of education needs to double its efforts in order to expand access to public KGs.

ملخص تنفيذي

أهداف الدراسة

هدفت الدراسة الحالية إلى تقييم نوعية برامج الطفولة المبكرة ضمن مشروع التطوير التربوي نحو الاقتصاد المعرفي. وبالتحديد هدفت الدراسة بشكل رئيسي إلى الإجابة عن الأسئلة التالية:

1. ما نوعية بيئة رياض الأطفال الحكومية في الأردن؟
2. ما هي نوعية العملية التعليمية والتعليمية الموجودة في رياض الأطفال الحكومية في الأردن؟
3. ما هي تصورات أولياء الأمور والمعلمين ومدراء المدارس/رياض الأطفال حول رياض الأطفال في الأردن؟

الطريقة والإجراءات

تم تحديد واختيار عينة الدراسة من قبل وحدة المتابعة والتقييم في المركز الوطني لتنمية الموارد البشرية من خلال قاعدة البيانات التابعة لوزارة التربية والتعليم. تم اختيار عينة عنقودية عشوائية ممثلة للمنطقة الجغرافية (وسط، شمال، جنوب)، والموقع (مدينة وريف)، ونوع مقدم الخدمة (حكومية، خاصة). وبالتالي اشتملت العينة على 84 روضة أطفال حكومية، و23 روضة أطفال خاصة تم اختيارها من بين رياض الأطفال التي تقع جغرافيا بالقرب من رياض الأطفال الحكومية وتجدر الإشارة هنا إلى أن رياض الأطفال الخاصة هذه لا تمثل جميع رياض الأطفال الخاصة في الأردن وخاصة رياض الأطفال ذات المستوى المتقدم والتي عادة ما تكون موجودة في عمان. لقد تم الطلب من مدراء المدارس/رياض الأطفال والمعلمون وأولياء الأمور المشاركة في هذه الدراسة للتعرف على تصوراتهم حول رياض الأطفال، وتكونت العينة من 107 مديراً ومديرة و 107 معلماً ومعلمة و192 ولي أمر.

ولتقييم بيئة رياض الأطفال فقد تم استخدام النسخة المعدلة من مقياس بيئة الطفولة المبكرة (ECERS-R) وتشتمل هذه الأداة على 7 مقاييس فرعية هي:

1. ***السعة والأثاث*** (المساحة الداخلية، التجهيزات اللازمة للعناية اليومية واللعب والتعلم، التجهيزات اللازمة للاسترخاء والراحة، ترتيب الغرفة، مساحة للخصوصية، عرض أشياء خاصة بالأطفال، مساحة لأنشطة الحركات الكبيرة، أدوات خاصة بالحركات الكبيرة)

2. ***الرعاية الشخصية*** (التحية/المغادرة، الوجبات، القيلولة، المرافق الصحية، الممارسات الصحية، ممارسات الأمان)
3. ***اللغة والتفكير المنطقي*** (الكتب والصور، تشجيع الأطفال على التواصل، استخدام اللغة لتطوير مهارات التفكير المنطقي، الاستخدام غير الرسمي للغة)
4. ***الأنشطة*** (الحركات الصغيرة، الفنون، الموسيقى، المكعبات، الرمل/الماء، التمثيل الدرامي، الطبيعة/العلوم، الرياضيات/الأعداد، استخدام التلفاز والفيديو والحاسوب، تشجيع تقبل الاختلافات)
5. ***التفاعل*** (الإشراف على أنشطة الحركات الكبيرة، الإشراف العام على الأطفال، الانضباط، تفاعل المعلم والأطفال، التفاعل بين الأطفال)
6. ***تنظيم البرنامج*** (الجدول، اللعب الحر، وقت المجموعة، ترتيبات خاصة بالأطفال ذوي الاحتياجات الخاصة)
7. ***أولياء الأمور والمعلمة*** (ترتيبات خاصة بأولياء الأمور، ترتيبات خاصة بالحاجات الشخصية للمعلمة، ترتيبات مهنية خاصة بالمعلمة، تفاعل المعلمات وتعاونهم، تقييم المعلمة والإشراف عليها، فرص النمو المهني)

وتشتمل الأداة على أربع مستويات مختلفة لقياس نوعية بيئة رياض الأطفال:

1. ***غير كاف***: وتعني أن روضة الأطفال تفتقر إلى المتطلبات الأساسية الواجب توفرها وبالتالي تعتبر ذات نوعية متدنية.
2. ***أقل ملائمة***: وتعني انه يتوافر في روضة الأطفال الحد الأدنى من الموارد والمتطلبات الأساسية .
3. ***جيد***: وتعني أن روضة الأطفال لديها متطلبات وموارد مناسبة وكافية.
4. ***ممتاز:*** وتعني أن روضة الأطفال لديها متطلبات وموارد وفيرة وذات نوعية عالية.

أما فيما يتعلق بتصورات المدراء والمعلمين وأولياء الأمور فقد تم تطوير ثلاث استبيانات تضمنت أسئلة مفتوحة وأخرى مغلقة لقياس هذه التصورات.

النتائج

أشارت النتائج إلى أن 13.1% من بيئة رياض الأطفال الحكومية تعتبر "غير كافية" بمعنى أنها تفتقر إلى المتطلبات الأساسية الواجب توفرها، وأن 43% من بيئة رياض الأطفال الحكومية تعتبر "أقل ملائمة" بمعنى انه يتوافر فيها الحد الأدنى من الموارد والمتطلبات الأساسية، وبالمقابل فإن 43% من بيئة رياض

الأطفال الحكومية تعتبر ذات نوعية "جيدة" بمعنى أنه يتوفر لدى الروضة متطلبات وموارد مناسبة وكافية، وأخيرا فإن 1.2% من بيئة رياض الأطفال الحكومية تعتبر ذات نوعية ممتازة بمعنى أنه يتوافر لدى الروضة متطلبات وموارد وفيرة وذات نوعية عالية.

وبالنظر إلى الأبعاد الفرعية للمقياس فقد أشارت النتائج إلى أن أفضل الأبعاد في بيئة رياض الأطفال الحكومية كانت التفاعل، وتنظيم البرنامج، والرعاية الشخصية، و اللغة والتفكير المنطقي. وكان أفضل هذه الأبعاد هو بعد التفاعل والذي يتضمن الإشراف على أنشطة الحركات الكبيرة، والإشراف العام على الأطفال، والانضباط، وتفاعل المعلم والأطفال، والتفاعل بين الأطفال. ويتضمن بعد تنظيم البرنامج الجدول، واللعب الحر، ووقت المجموعة، وترتيبات خاصة بالأطفال ذوي الاحتياجات الخاصة. ويتضمن بعد الرعاية الشخصية التحية/المغادرة، والوجبات، والقيلولة، والمرافق الصحية، والممارسات الصحية، وممارسات الأمان. ويتضمن بعد اللغة والتفكير المنطقي الكتب والصور، وتشجيع الأطفال على التواصل، واستخدام اللغة لتطوير مهارات التفكير المنطقي، والاستخدام غير الرسمي للغة. أما فيما يتعلق بالأبعاد التي حصلت على أقل الدرجات لبيئة رياض الأطفال الحكومية فقد كانت بالترتيب أولياء الأمور والمعلمة، والأنشطة، والسعة والأثاث. ويتضمن بعد أولياء الأمور والمعلمة ترتيبات خاصة بأولياء الأمور، وترتيبات خاصة بالحاجات الشخصية للمعلمة، وترتيبات مهنية خاصة بالمعلمة، وتفاعل المعلمات وتعاونهم، وتقييم المعلمة والإشراف عليها، وفرص النمو المهني. ويتضمن بعد الأنشطة على الحركات الصغيرة، والفنون، والموسيقى، والمكعبات، والرمل/الماء، والتمثيل الدرامي، والطبيعة/العلوم، والرياضيات/الأعداد، واستخدام التلفاز والفيديو والحاسوب، وتشجيع تقبل الاختلافات. ويتضمن بعد السعة والأثاث المساحة الداخلية، والتجهيزات اللازمة للعناية اليومية واللعب والتعلم، والتجهيزات اللازمة للاسترخاء والراحة، وترتيب الغرفة، ومساحة للخصوصية، وعرض أشياء خاصة بالأطفال، ومساحة لأنشطة الحركات الكبيرة، وأدوات خاصة بالحركات الكبيرة.

وعند مقارنة رياض الأطفال الحكومية بعينة رياض الأطفال الخاصة فقد أشارت النتائج إلى أن هناك فروقاً دالة بين نوعية بيئة رياض الأطفال الحكومية ونوعية بيئة رياض الأطفال الخاصة لصالح بيئة رياض الأطفال الحكومية. وعند مقارنة الأبعاد الفرعية فقد أشارت النتائج إلى انه لا يوجد فروق ذات دلالة بين رياض الأطفال الحكومية والخاصة على الأبعاد التالية: السعة والأثاث، و والرعاية الشخصية، وأولياء الأمور والمعلمة. بالمقابل فقد كان هناك فروقا ذات دلالة بين بيئة رياض الأطفال الحكومية وبيئة

رياض الأطفال الخاصة لصالح بيئة رياض الأطفال الحكومية على الأبعاد التالية: اللغة التفكير المنطقي، والأنشطة، والتفاعل، وتنظيم البرنامج.

أما فيما يتعلق بتقييم عملية التعلم والتعليم فقد تم تجميع أربعة أبعاد فرعية تمثل الأنشطة المتضمنة في عملية التعلم والتعليم وهي اللغة والتفكير المنطقي، والأنشطة، والتفاعل، وتنظيم البرنامج وتحليلها كوحدة واحدة. أشارت النتائج إلى عملية التعلم والتعليم في 7.2% فقط من رياض الأطفال الحكومية تعتبر غير كافية، وبالمقابل فأن عملية التعلم والتعليم في حوالي نصف رياض الأطفال الحكومية تعتبر إما جيدة أو ممتازة. عند مقارنة هذه النتائج برياض الأطفال الخاصة نجد أن رياض الأطفال الحكومية تفوقت في عملية التعلم والتعليم.

وعند ربط هذه النتائج بالتدريب الذي تلقته المعلمات (مثل المنهاج التفاعلي، وسكاونسن، إشراك الأهل، (Kidsmart) فقد أشارت النتائج إلى نوعية بيئة الأطفال كانت أفضل عندما كانت المعلمات مدربات.

وعند التحقق من وجود أي فروقا في نوعية رياض الأطفال الحكومية يعود إلى الموقع (مدينة وريف) أو إلى المنطقة (وسط، شمال، جنوب)، فقد أشرات النتائج إلى عدم وجود أية فروق ذات دلالة يعود للموقع، في حين كان هناك فرقا ذو دلالة في المنطقة حيث كانت نوعية رياض الأطفال الحكومية في الجنوب أفضل منها في الشمال ولم توجد فروق بين الوسط والشمال والوسط الجنوب.

فيما يتعلق بنتائج تصورات أولياء الأمور والمدراء والمعلمين ودرجة رضاهم عن رياض الأطفال الحكومية والخاصة فقد أشارت النتائج إلى أن جميع المدراء لديهم رضا عن فاعلية رياض الأطفال بشكل عام. لقد كان عدم رضا المدراء في رياض الأطفال الحكومية ينبع في الدرجة الأولى من محدودية توفر الأدوات والمواد الخاصة باللعب والتعلم، 78% من المدراء نظروا لهذا الأمر على انه غير كاف. وأتى في الدرجة الثانية المساحة المتوفرة للأطفال حيث أشار 44% منهم إلى أنها غير ملائمة.

وبالرغم من تصوراتهم الايجابية فلا يزال يواجه المدراء عدة تحديات على رأسها العدد الكبير للطلبة في الصفوف وعدم كفاية وملائمة التجهيزات والمواد وعدم توفر حمامات خاصة ومنفصلة للأطفال في الروضة.

أشارت النتائج أيضا إلى أن 88% من معلمي رياض الأطفال الحكومية راضين عن الرياض. كما أشارت النتائج أيضا إلى أن المعلمين في رياض الأطفال الحكومية راضين بشكل كبير عن الإدارة والمنهاج التفاعلي واقل رضا فيما يتعلق بالتسهيلات والمعدات والمساحة المتوفرة للأطفال.

أما فيما يتعلق بتصورات أولياء الأمور فقد أشارت النتائج إلى أنهم راضين عن رياض الأطفال حيث أنهم يؤمنون بأن هذه الرياض تعلم أبنائهم الانضباط وتساعدهم على تطوير المهارات الاجتماعية وتعدهم للنجاح في المدرسة. وقد أظهرت النتائج أيضا أن أولياء الأمور يتواصلون مع الرياض ومع معلمي أطفالهم بقنوات مختلفة أهمها الزيارات والهاتف.

التوصيات

توصلت الدراسة إلى عدد من التوصيات أهمها:

- تحسين الوسائل التعليمية والترفيهية والأدوات الواجب توفرها للأطفال.
- تخفيض عدد الأطفال في غرفة الصف الواحد وتوسيع الغرف القائمة إن أمكن وكذلك تعيين معلمين أو معلمين مساعدين من اجل تفريد التعليم قدر الإمكان.
- أن تستمر وزارة التربية والتعليم في برامج تدريب معلمي رياض الأطفال أثناء الخدمة وكذلك خلق فرص تنمية مهنية لمدراء رياض الأطفال.
- القيام بحملات توعية لأولياء الأمور لتوعيتهم بأهمية مشاركتهم في عملية تعلم أطفالهم وتوعية رياض الأطفال بأهمية بناء شراكات مع المجتمع لتعزيز دور المجتمع والأهالي في العملية التعليمية ويمكن القيام بذلك عن طريق التوسع في برنامج إشراك الأهل.
- أن تعمل وزارة التربية والتعليم على زيادة أعداد الطلبة الملتحقين برياض الأطفال الحكومية وذلك بالاستمرار في عملية التوسع في إنشاء رياض أطفال جديدة في جميع أنحاء المملكة.

1. INTRODUCTION

It is evident that the early years in children's life are vital to brain development and academic achievement. Brain develops according to the quantity and quality of the stimuli it receives. Literature of early childhood interventions show that children who attended such programs display greater motivation to learn, higher achievement, and higher self-esteem than children who did not attended such programs. Early childhood experiences have powerful effects on the development of children's physical and emotional abilities and influence their intellectual development in Locations such as, math, logic, language, and music. High quality early education can help children to:

- understand and use language
- control aggression
- play and work with other children
- accept adult direction; and
- focus attention and do things independently

It is a fact that quality early education experiences in families, childcare, preschool, and early elementary settings help prepare children to success later in school (Meisels, 1999; NRC, 2001; Shonkoff and Phillips, 2000). School readiness influenced by the degree to which classroom experiences provided for the child in kindergarten and first grade effectively build on competencies he or she brings to school (Love, Aber, & Brooks-Gunn, 1992; Pianta & Walsh, 1996; Meisels, 1999).

1.1. Preschool Learning Environment

Studies on learning, cognitive development and teaching have highlighted the importance of learning based on the relationship among individuals and the learning environment (context). Knowledge emerges as a result of activities engaged

and shared in an environment that connects individuals, materials, cultural tools, and symbol systems (Strozzi, 2001; National Research Council, 2000).

Knowledge and understanding are constructed through social interactions. Classrooms are inherently social places wherein teachers and children negotiate the curriculum together. The aim is to construct a teaching and learning environment in which children and teachers are given opportunities to make decisions, pursue authentic questions and concerns, connect what is known to the unknown, and be successful as they explore, test ideas, and discover through play, informal learning activities, and projects. Guided participation in the activities of children is the primary role of the teacher, and play and the expression of ideas through interactions with adults, peers, and the environment are the primary business of children (Hill, Fu, & Stremmel, in press; Fu, Stremmel, & Hill, 2002).

Teachers play an important role in planning, supporting and guiding children to learn about math and science pre-concepts through the use of various teaching strategies that scaffold the children in process. All of these begin with the teacher observing and listening carefully to the children's interests, and understanding how children learn in order to plan activities that are real and meaningful in the lives of the children. In scaffolding the children in activity settings, teachers may use a variety of techniques such as asking the open-ended questions of what, how, and why; modeling; giving feedback; and cognitive structuring (providing structure for acting and thinking). In short, preschool children should learn by engaging in activities that are real and meaningful to them - activities that encourage the development of skills, knowledge, ways of thinking and learning, and a disposition for learning. It is important to remember that preschools teach children the early skills for literacy and science and mathematics development in an environment that encourages learning through social relationships.

Effective preschool classrooms are places where children feel well cared for and safe. They are places where children are valued as individuals and where their needs for attention, approval, and affection are supported. They are also places where children can be helped to acquire a strong foundation in the knowledge and skills needed for school success.

A child's experience in a classroom is made up of different types of interactions: interactions with the caregiver(s), interactions with other children, interactions with the physical space, interactions with available materials, etc. Such interactions can be of a social, academic, behavioral, or routine nature. There are many easily-measured characteristics that can be objectively observed that some may think of as representing quality in classrooms or programs. For instance, the number and type of materials in a classroom, the ratio of teachers to children, and the educational attainment of the staff are often used as components of a classroom's quality assessment. But such characteristics are only indirect measures of quality through which high-quality interactions between teachers and children may or may not occur. Alternatively, one can look directly at those interactive behaviors inside of the classroom, to develop a picture of classroom quality, but this alternate method can often be more time consuming, as well as more subjective.
Promoting school readiness is a national priority which guarantee that all Jordanian children will have access to high-quality early childhood programs to help prepare them for the next level of schooling. The national goals acknowledge the value of parental participation in promoting the social, emotional, and academic growth of children. A vital role for parents lies in the careful selection of a KG to ensure that the program gives the child the right start.

1.2. Education Reform in Jordan

To address the vision of King Abdullah in making Jordan the IT hub in the region and in developing the human capital for the knowledge economy, the MOE has launched a five year education reform for the knowledge economy project (ERfKE I) in July 2003 and ERfKE II will be launched in 2009. Enormous funds are being secured to address His Majesty's vision and to help the Ministry of Education undertake educational reform at the governance, program, and facility quality levels, in order to achieve sustainable learning outcomes relevant to a knowledge economy. This project is the first of its kind in the Region. Four major components were identified for investment: (1) Re-orienting education policy objectives and strategies and reforming governance and administrative systems; (2) Transforming education programs and practices to achieve the learning outcomes relevant to the knowledge economy; (3) Supporting the provision of quality physical learning environments; and importantly (4) Promoting learning readiness through expanded early childhood education (MOE, 2002).

The fourth component is about implementing a comprehensive approach to improving the scope and quality of essential early childhood services. This component aims at increasing institutional capacity building (curriculum framework, licensing standards for kindergarten), building the capacity of kindergarten teachers and administrators, expanding kindergartens for the poor (construction, furnishing and equipping kindergarten classrooms in the most disadvantaged communities), and encouraging parent and community participation (MOE, 2002).

1.3. Kindergartens in numbers

Table 1 shows the number of KG students, number of sections, and number of teachers in all KGs in Jordan. Based on the 2007/2008 statistics, the total number of KG students is 99111. The majority of them (89171) are enrolling in private KGs

while only 9828 enroll in the public ones. These students are taught by 5007 teachers of whom only 506 are teaching at the public KGs. The table also shows that there are 4663 KG sections.

Table (1). The distribution of KG students, sections, and teachers according to the supervisory body and gender in the school year 2007/2008.

Supervisory body	No. of Students			No. of Sections				No. of Teachers		
	M	F	T	M	F	both	T	M	F	T
MOE	4490	5338	9828	4	11	517	532	0	506	506
Other Government	51	61	112	0	0	4	4	0	4	4
Private	47362	41809	89171	0	0	4127	4127	12	4485	4497
Total	**99111**			**4663**				**5007**		

1.4. Study Objectives

Early childhood development programs need to be evaluated in terms of their associations with and effects on different aspects of children's intellectual development that are crucial for education and the development of knowledge related to math, logic, language, etc. Quality of programs need to be assessed by the degree in which it helps children in understanding and using language; communicate with other children, develop positive communication, follow guidance and direction, do things independently and start inquiring and focusing attention to details. Also, in relation to ERfKE, quality of ECD will be assessed in terms of its effect on easing the transition from home to school. In general, the study will answer the following research questions:

1. What is the quality of public KG environment in Jordan?
2. Does the quality of Kindergarten environment differ significantly at .05 level of significance according to KG type (public and private)?
3. Does the quality of public Kindergarten environment differ significantly at .05 level of significance according to residential Location (urban, rural)?
4. Does the quality of public Kindergarten environment differ significantly at .05 level of significance according to geographical region (north, middle, south)?
5. What is the existing teaching and learning process in public KGs in Jordan?
6. What is the perception of parents, teachers, and principals regarding KGs?

2. METHODOLOGY

2.1 Sample

The sample of the present study was identified and selected by the National Center for Human Resources Development (NCHRD) from the Ministry of Education database. A stratified random sample of KGs was selected to represent: region (north, middle, south), rural/urban, and type of provider (MoE, and private). A sample was selected to represent the public kindergartens (n=84), another comparative sample (n=23) was selected of mainstream private KGs (table 2). These are private KGs that are located around the same geographical Locations of the sample of public KGs. These private KGs are not representative of all private KGs and do not include the high-end private KGs which are usually located in Amman (middle region).

The school/KG principals and teachers were asked to participate in order to know their perceptions regarding the KG. In addition to that, two parents who have children enrolled in the sample KGs where asked to participate in the study (the

sample characteristics is shown under the discussion of the perceptions on pages 41 and 44.

Table (2). Distribution of KG Sample According to the Study Variables

Variable	Public		Private	
	Frequency	Percent	Frequency	Percent
Location				
Urban	17	20.2	14	60.9
Rural	67	79.8	9	39.1
Region				
North	32	38.1	9	39.1
Middle	27	32.1	9	39.1
South	25	29.8	5	21.7

2.2. Field Researchers

The field researchers were qualified personnel who were hired to carry out the entitled task. All of them have a university degree in education or related fields. In addition, they had a specialized training in early childhood education. There were 25 field researchers distributed among the three regions north, middle, and south. Most of the field researchers participated as a field researchers in other national survey, thus having the expertise needed to conduct this study. A one day training workshop was organized at the NCHRD for the purpose of training them on administering and scoring the research instrument. They were provided with all the required materials. Each field researcher was assigned a number of KGs (4-5).

2.3. Research Instruments

2.3.1. Early Childhood Environment Rating Scale-Revised Edition (ECERS-R)

To assess the quality of KG learning environment, the Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) was used after being translated by the researchers into Arabic. The ECERS-R was developed at the Frank Porter Graham Child Development Institute of the University of North Carolina by Thelma Harms, Richard Clifford and Debby Cryer. The (ECERS-R) provides an overall picture of the surroundings that have been created for the children and adults who share an early childhood setting. The ECERS-R, an instrument used to rate the global quality of early childhood educational environments, is comprised of 470 individual indicators, organized into 43 items under seven subscales: Space and Furnishings, Personal Care, Language-Reasoning, Activities, Interaction, Program Structure, and Parents and Staff. The ECERS-R is the revision of the original ECERS instrument. The instrument is used primarily to assess the quality in classrooms serving children in preschool settings. Each of the 43 items has individual indicators that are used to determine a classroom's score on that item.

The ECERS-R is a reliable, valid instrument for measuring the quality of early childhood settings. It consists of 43 items organized into 7 subscales:

1. Space and Furnishings (e.g. indoor space, furniture for routine care, play and learning, furnishings for relaxation and comfort, room arrangement for play , space for privacy, child-related display, space for gross motor play, gross motor equipment).
2. Personal Care Routines (e.g. greeting/departing, meals/snacks, nap/rest, toileting/diapering, health practices, safety practices.).

3. Language-Reasoning (e.g. books and pictures, encouraging children to communicate, using language to develop reasoning skill, informal use of language).
4. Activities (e.g. fine motor, art, music/movement, blocks, sand/water, dramatic play, nature/science, math/number, use of computers, videos).
5. Interactions (e.g. supervision of gross motor activities, General supervision of children (other than gross motor), discipline, staff-child interactions, interactions among children).
6. Program Structure (e.g. schedule, free play, group time, provisions for children with disabilities).
7. Parents and Staff (e.g. provisions for parents, provisions for personal needs of staff, provisions for professional needs of staff , staff interaction and cooperation, supervision and evaluation of staff, opportunities for professional growth).

The first section of the instrument includes information for possible investigation of the type of KG (public, private), Location, and geographical region. It also includes information regarding teacher's quality of education, specialization, and experience in KG, age, and training courses. In addition, information about number of children in the classroom, the existence of academic and medical files for the children, and evaluation for the children were also collected.

2.3.2. Perceptions of Parents, Teachers, and Principals Survey

The researchers developed three separate questionnaires, in Arabic, to measure the perceptions of parents of children who attend KGs, KG teachers, and school/KG principals. Parents questionnaire consisted of 13 fixed response items as well as three open ended questions, while teachers and principals questionnaires included 11 fixed response items and three open ended questions.

2.4. Scoring and recording procedures

The Early Childhood Environment Rating Scale, Revised Edition (ECERS-R) is ranked from 1 to 7. A ranking of 1 describes inadequate conditions while a ranking of 7 describes excellent conditions. The indicators are grouped under four scale points, 1, 3, 5, and 7, representing anchors of Inadequate, Minimal, Good, and Excellent. Each indicator, beginning with the ones under the inadequate anchor, are scored as present or not by the observer. All of the indicators under ECERS-R anchors are positively worded except for the indicators under the "Inadequate" anchor, which are always negatively worded. Checking "yes" for any of the indicators under "1" is equivalent to checking "no" for any of the indicators under "3", "5", or "7", and leads to discontinuing scoring the item. A classroom receives a score on an item based on the anchor under which the first negatively-scored indicator appears. For example, if all of the indicators under "1" are absent (which is positive) and all of the indicators under "3" are present (which is positive) but only half of the indicators under "5" are present, a classroom cannot receive a higher score than a 4 for that item. Item scores under each subscale are averaged for subscale scores and, ultimately, total quality scores that range on an interval scale from one to seven. The field researchers observed the KG classrooms for at least three hours, followed by a brief teacher interview to answer questions about items that were not observed. The parents, teachers, and principals were interviewed by the field researchers to obtain the required information which included qualitative and quantitative type of questions.

2.5. Instrument Reliability and Validity

After data collection and analysis, the reliability coefficient (Cronbach Alpha) was calculated for each subscale and for the total scale. The reliability data is presented in Table (3).

Table (3). Reliability Coefficients for ECERS-R Subscales

Subscale	No. of items	Alpha
Space and Furnishing	8	0.83
Personal Care	6	0.69
Language and Reasoning	4	0.80
Activities	10	0.84
Interactions	5	0.79
Program Structure	4	0.68
Parents and Staff	6	0.63
Total Scale	43	0.94

Table 3 shows the reliability coefficient for each subscale and for the total scale. The reliability of the subscales ranged between 0.63 and 0.84; these values were considered acceptable for this study. The reliability for the total scale was 0.94, which indicate a high reliability value.

To calculate inter-rater reliability of the instrument, eighteen KGs were observed by two well-trained researchers. After data collection and analysis, the reliability coefficient (Cronbach Alpha) was calculated for inter-rater reliability. The reliability data is presented in Table (4). The value of the calculated reliability was approximately 0.50 which is statistically significant (P <.05)

Table (4). Reliability Coefficient for Test-retest

		INT1	**INT2**
INT1	Pearson Correlation	1	.495*
	Sig. (2-tailed)	.	.037
	N	18	18

* Correlation is significant at the 0.05 level (2-tailed)

To ensure the validity of the instrument, after the instrument was translated to Arabic language, it was given to a group of professionals in the fields of early childhood education and evaluation and measurement in order to validate the instrument's language clarity and the suitability of the item to what is measuring especially in the Jordanian context. The feedback received took into consideration and some modifications were made to some items of the instrument to become more sensitive to the culture.

2.6. Data Collection

The data for this national study was collected by the end of the school year 2007/2008. The field researchers collected the data from KGs that were identified for their Location (rural, urban) and Region (middle, north, south). These distributions were obtained from the Ministry of Education's data base through NCHRD. The data collected through direct observation for the KG environment including the interaction between teacher(s) and children. Each KG was observed for one school day.

2.7. Data Analysis

To answer the questions of this study the total score was converted to a 7.00 point scale as the instrument suggested. The data was analyzed using descriptive statistics (frequencies and percentages), in addition to t-test, analysis of variance (ANOVA), correlation coefficient. The qualitative data collected to measure the perceptions were analyzed by categorizing them into themes around the research questions.

3. FINDINGS

This study aimed at achieving different objectives through answering specific questions. Therefore, the findings of this study are presented for those questions. Regarding the first question, the total score was converted to a 7.00 point scale as the instrument suggested. The quality levels were defined according to the average score on a certain subscale or the whole scale. Accordingly, the quality of KGs environment in Jordan was classified to four groups. Table 5 shows the cut points that were used to achieve the mentioned goal.

Table (5). Mean scores corresponding to each quality level of KG environment

Mean score	Quality of KG Environment
< 2	Inadequate
2 ≤ - < 4	Minimal
4 ≤ - < 6	Good
≥ 6	Excellent

3.1. Definitions of the different quality levels of KG environment

1. Inadequate: the KG environment is lacking the basic requirements and resources/materials indicating a lack of care that is not good for children's development.

2. Minimal: the KG environment has the minimum basic requirements and resources indicating type of care that meets to some small degree basic developmental needs.

3. Good: the KG environment has adequate and suitable requirements and resources indicating that the basic tenets of developmentally appropriate care exist.

4. Excellent: the KG environment has outstanding requirements and resources which provide high quality care that expands children's experiences, extends their learning, and provides warm and caring support.

Table 5 shows that mean score that is less than 2 is considered as inadequate, KGs that got mean score equal or larger than 2 and less than 4 is considered as minimal, KGs who got mean score equal or larger than 4 and less than 6 is considered as good, and KGs who got mean score equal or larger than 6 is considered as excellent.

3.2. The quality of public KGs environment in Jordan

Table 6 shows that 13.1% of public KGs environment in Jordan are considered inadequate; 42.9% are considered minimal; 42.9% are considered good; and 1.2% are considered excellent.

Table (6). Frequencies and percentages of the four quality levels of KG Environment

Quality of KG Environment	Frequency	Valid Percent
Inadequate	11	13.1
Minimal	36	42.9
Good	36	42.9
Excellent	1	1.2
Total	84	100.0

The table also shows that only 1.2% of public KGs environment can be described as excellent and high quality. Similarly, 42.9% of public KGs environment can be described as good and adequate. However, 42.9% of the KGs can be described as minimal and less adequate. Table 6 shows also that 13.1% public KGs are considered inadequate.

Table 7 shows the mean scores for the overall ECERS-R and the 7 subscales. As shown, interaction subscale has the highest mean score (5.48) followed by language and reasoning (4.45) and the lowest mean score was for the activities subscale (2.99) followed by space and furnishing (3.19).

Table (7). ECERS-R Total and Subscale Mean Scores across public KGs in Jordan

ECERS-R Subscale	***Means (n=84)***
Space and Furnishing	3.19
Personal Care	4.30
Language and Reasoning	4.45
Activities	2.99
Interactions	5.48
Program Structure	4.51
Parents and Staff	3.35
Overall ECERS-R Score	***4.03***

3.2.1. Subscale (1): Space and Furnishings

Table 8 shows that only 6% of public KGs environment can be described as excellent and high quality with respect to space and furnishing. Similarly, 27.7% of public KGs environment with respect to space and furnishing can be described as good and adequate. However, 27.7% can be described as minimal and less adequate, 38.6% of public KGs are considered inadequate with respect to space and furnishing.

Table (8). Frequencies and percentages of the four quality levels of KG environment with respect to space and furnishing

Quality of KG Environment	**Frequency**	**Valid Percent**
Inadequate	32	38.6
Minimal	23	27.7
Good	23	27.7
Excellent	5	6.0
Total	83	100.0

Table 9 shows that within space and furnishing subscale the Furniture for routine care, play and learning has the highest mean (3.76) while space for gross motor play and equipments have the lowest means (2.51) and (2.64) respectively.

Table (9). Means and standard deviations of space and furnishing subscale items

Subscale: Space and Furnishing	Mean*	St Deviation
Furniture for routine care, play and learning	3.76	2.492
Room arrangement for play	3.69	2.488
Child- related display	3.48	2.235
Indoor Space	3.35	2.609
Space for privacy	2.96	2.297
Furnishing for relaxation and comfort	2.95	2.532
Gross motor equipment	2.64	2.438
Space for gross motor play	2.51	2.075

* The minimum score is 1 and the maximum is 7

3.2.2. Subscale (2): Personal Care Routines

Table 10 shows that 13.3% of public KGs environment can be described as excellent and high quality with respect to personal care routines. Similarly, 42.2% of public KGs environment with respect to personal care routines can be described as good and adequate. However, 34.9% can be described as minimal and less adequate and only 9.6% of public KGs are considered inadequate with respect to personal care routines.

Table (10). Frequencies and percentages of the four quality levels of KG Environment with respect to personal care routines

Quality of KG Environment	Frequency	Valid Percent
Inadequate	8	9.6
Minimal	29	34.9
Good	35	42.2
Excellent	11	13.3
Total	83	100.0

Table 11 shows that within personal care routines subscale Greeting/departing has the highest mean (5.48) while nap/rest and toileting/diapering have the lowest means (2.17) and (2.64) respectively.

Table (11). Means and standard deviations of personal care routines subscale items

Subscale: Personal Care Routine	Mean*	St. Deviation
Greeting/departing	5.48	2.122
Health practices	5.44	2.194
Meals/snacks	4.49	2.431
Safety practices	4.09	2.616
Toileting/diapering	2.64	2.325
Nap/rest	2.17	2.329

* The minimum score is 1 and the maximum is 7

3.2.3. Subscale (3): Language and Reasoning

Table 12 shows that 22.9% of public KGs environment can be described as excellent and high quality with respect to language and reasoning. Similarly, 31.3% of public KGs environment with respect to language and reasoning can be described as good and adequate. However, 32.5% can be described as minimal and less adequate and 13.3% of public KGs are considered inadequate with respect to language and reasoning.

Table (12). Frequencies and percentages of the four quality levels of KG Environment with respect to language and reasoning

Quality of KG Environment	Frequency	Valid Percent
Inadequate	11	13.3
Minimal	27	32.5
Good	26	31.3
Excellent	19	22.9
Total	83	100.0

Table 13 shows that within language and reasoning subscale using language to develop reasoning skills has the highest mean (5.46) while books and pictures has the lowest mean (3.69).

Table (13). Means and standard deviations of language and reasoning subscale items

Subscale: Language-Reasoning	Mean*	St. Deviation
Using language to develop reasoning skills	5.46	2.019
Encouraging children to communicate	4.56	2.480
Informal use of language	4.34	2.672
Books and pictures	3.69	2.464

* The minimum score is 1 and the maximum is 7

3.2.4. Subscale (4): Activities

Table 14 shows that none of public KGs environment can be described as excellent and high quality with respect to activities. While only 24.1% of public KGs environment with respect to activities can be described as good and adequate. However, 39.8% can be described as minimal and less adequate and 36.1% of public KGs are considered inadequate with respect to activities.

Table (14). Frequencies and percentages of the four quality levels of KG Environment with respect to activities

Quality of KG Environment	Frequency	Percent
Inadequate	30	36.1
Minimal	33	39.8
Good	20	24.1
Excellent	0	0.0
Total	83	100.0

Table 15 shows that within activities subscale Use of TV, video, and/or computers has the highest mean (4.33) while dramatic play, music/movement, and sand/water have the lowest means (1.31), (1.97), and (2.44) respectively.

Table (15). Means and standard deviations of activities subscale items

Subscale: Activities	Mean*	St. Deviation
Use of TV, video, and/or computers	4.33	2.579
Art	3.92	2.304
Fine motor	3.52	2.465
Blocks	3.36	2.476
Music/movement	1.97	1.357
Promoting acceptance of diversity	3.05	2.313
Nature/science	3.05	2.358
Math/number	3.00	2.368
Sand/water	2.44	2.068
Dramatic play	1.31	.891

* The minimum score is 1 and the maximum is 7

3.2.5. Subscale (5): Interaction

Table 16 shows that 43.4% of public KGs environment can be described as excellent and high quality with respect to interaction. Similarly, 39.8% of public KGs environment with respect to interaction can be described as good and adequate. However, 12% can be described as minimal and less adequate and only 4.8% of public KGs are considered inadequate with respect to interaction.

Table (16). Frequencies and percentages of the four quality levels of KG Environment with respect to Interaction

Quality of KG Environment	Frequency	Valid Percent
Inadequate	4	4.8
Minimal	10	12.0
Good	33	39.8
Excellent	36	43.4
Total	83	100.0

Table 17 shows that within interaction subscale interactions among children has the highest mean (5.99), while Supervision of gross motor activities has the lowest mean (4.87).

Table (17). Means and standard deviations of interaction subscale items

Subscale: Interaction	Mean*	St. Deviation
Interactions among children	5.99	1.899
General supervision of children (other than gross motor)	5.77	1.817
Staff-child interactions	5.60	2.261
Discipline	5.04	2.035
Supervision of gross motor activities	4.87	2.325

* The minimum score is 1 and the maximum is 7

3.2.6. Subscale (6): Program Structure

Table 18 shows that 31.3% of public KGs environment can be described as excellent and high quality with respect to program structure. Similarly, 26.5% of public KGs environment with respect to program structure can be described as good and adequate. However, 22.9% can be described as minimal and less adequate and 19.3% of public KGs are considered inadequate with respect to program structure.

Table (18). Frequencies and percentages of the four quality levels of KG Environment with respect to program structure

Quality of KG Environment	Frequency	Valid Percent
Inadequate	16	19.3
Minimal	19	22.9
Good	22	26.5
Excellent	26	31.3
Total	83	100.0

Table 19 shows that within program structure subscale schedule has the highest mean (5.28), while provisions for children with disabilities has the lowest mean (1.20).

Table (19). Means and standard deviations of program structure subscale items

Subscale: Program Structure	Mean*	St. Deviation
Schedule	5.28	2.254
Group time	4.95	2.594
Free play	3.47	2.491
Provisions for children with disabilities	1.20	.447

* The minimum score is 1 and the maximum is 7

3.2.7. Subscale (7): Parents and Staff

Table 20 shows that only 2.4% of public KGs environment can be described as excellent and high quality with respect to parents and staff subscale. Similarly, 16.9% of public KGs environment with respect to parents and staff can be described as good and adequate. However, 67.5% can be described as minimal and less adequate and 13.3% of public KGs are considered inadequate with respect to parents and staff subscale.

Table (20). Frequencies and percentages of the four quality levels of KG Environment with respect to parents and staff

Quality of KG Environment	Frequency	Valid Percent
Inadequate	11	13.3
Minimal	56	67.5
Good	14	16.9
Excellent	2	2.4
Total	83	100.0

Table 21 shows that within parents and staff subscale supervision and evaluation of staff has the highest mean (5.39) while Provisions for personal needs of staff and Provisions for professional needs of staff have the lowest means (1.36) and (1.46) respectively.

Table (21). Means and standard deviations of parents and staff subscale items

Subscale: Parents and Staff	Mean*	St. Deviation
Supervision and evaluation of staff	5.39	2.035
Opportunities for professional growth	4.59	1.968
Provisions for parents	3.90	2.083
Staff interaction and cooperation	3.17	2.622
Provisions for professional needs of staff	1.46	1.337
Provisions for personal needs of staff	1.36	1.354

* The minimum score is 1 and the maximum is 7

3.3. The quality of Kindergarten environment according to KG type

Table 22 indicates 1.2% of public KGs environment can be described as excellent and high quality, while none of private KGs can be describes as such. Similarly, 42.9% of public KGs environment can be described as good and adequate, while 17.4% of private KGs can be described as such. However, 42.9% of public KGs can be described as limited and less adequate, while 60.9% of private KGs can be described as such. Table 15 shows also that 13.1% public KGs are considered inadequate, while 21.7% of private KGs can be described as inadequate.

Table (22). Frequencies and percentages of the four quality levels of KG Environment according to KG Type

KG type / Quality	Public		Private	
	Frequency	Valid Percent	Frequency	Valid Percent
Inadequate	11	13.1	5	21.7
Minimal	36	42.9	14	60.9
Good	36	42.9	4	17.4
Excellent	1	1.2	0	0.0
Total	84	100.0	23	100.0

To ensure whether there are significant differences between KGs environment's quality according to KG type on the total score, t-test was performed. As shown in table 23, there are significant differences ($P < .05$) between the two means of KG type (public, private).

Table (23). Mean, standard deviations, and t-test values of KG Type

KG Type	N	Mean	Std. Dev.	t	df	Significance
Public	84	145.4	51.098	2.558	105	0.012
Private	23	114.5	52.409			

Table 24 shows the total and subscale mean scores for public and private KGs. As shows in the table, the mean score of all the subscales, except for personal care, is higher in the public KGs compared with the private ones.

Table (24). ECERS-R Total and Subscale Mean Scores across Public and Private KGs

ECERS-R Subscale	Public (n=84)	Private (n=23)
Space and Furnishing	3.19	2.63
Personal Care	4.30	4.41
Language and Reasoning	4.45	3.02
Activities	2.99	1.94
Interactions	5.48	4.47
Program Structure	4.51	2.86
Parents and Staff	3.35	2.69
Overall ECERS-R Score	***4.03***	***3.14***

3.4. The quality of Kindergarten environment subscale according to KG type

Table 25 shows that 38.6% of public KGs have "inadequate" space and furnishing compared with 47.8% of private KGs. Only 6% of public KGs have "excellent" space and furnishing compared with 4.3% of private KGs. The table also shows that only 9.6% of public KGs have "inadequate" personal care routines while 42.2% have "good" personal care routines compared with 21.7% of private KGs with "inadequate" care routines and 26.1% with "excellent" routines.

Almost 40% of the public KGs have "minimal' activities while most of the private ones have "inadequate" activities. Regarding the interaction subscale, the table shows that 43.4% of public KGs have "excellent" interaction compared with 21.7% of private KGs. When it comes to the program structure subscale, 26.5% and 31.3% of

public KGs are "good" and "excellent" respectively. Finally, most of the public as well as private KGs have "minimal" level in terms of parents and staff subscale.

Table (25). Percentages of the four quality levels of KG Environment with respect to the subscales according to KG Type

Quality /KG Type / Subscales	Inadequate		Minimal		Good		Excellent	
	public	private	public	private	public	private	public	private
Space and furnishing	38.6	47.8	27.7	30.4	27.7	17.4	6.0	4.3
Personal care routines	9.6	21.7	34.9	26.1	42.2	26.1	13.3	26.1
Language-reasoning	13.3	39.1	32.2	34.8	31.3	17.4	22.9	8.7
Activities	36.1	69.6	39.8	26.1	24.1	4.3	0.0	0.0
Interaction	4.8	17.4	12.0	21.7	39.8	39.1	43.4	21.7
Program structure	19.3	52.2	22.9	17.4	26.5	17.4	31.3	13.0
Parents and staff	13.3	30.4	67.5	60.9	16.9	4.3	2.4	4.3

To ensure whether there are significant differences between the quality of KG's environment with respect to the seven subscales according to KG type, t-test was performed. Table 26 indicates that there are significant differences ($P < .05$) exist between the quality of KG environment according to Kindergarten type with respect to language-reasoning, activities, interaction, and program structure. On the other hand, table 26 shows that there are no significant differences ($P < .05$) exist between the quality of KG environment according to Kindergarten type with respect to space and furnishing, personal care routines, and parents and staff.

Table (26). Means, standard deviations, and t-test values for KG Type

Subscale \ KG Type		N	Mean	Std. Dev.	t	df	Significance
Space and furnishing	Public	84	23.67	13.572	1.165	105	.247
	Private	23	20.04	12.009			
Personal care routines	Public	84	20.72	8.851	.383	105	.703
	Private	23	19.91	9.657			
Language-reasoning	Public	84	17.59	7.861	3.058	105	.003
	Private	23	11.95	7.737			
Activities	Public	84	25.92	14.350	2.788	105	.006
	Private	23	16.95	10.759			
Interaction	Public	84	26.14	8.36	2.260	105	.026
	Private	23	21.52	9.820			
Program structure	Public	84	13.48	6.104	3.199	105	.002
	Private	23	8.73	7.020			
Parents and staff	Public	84	17.84	7.440	1.357	105	.178
	Private	23	15.34	9.113			

3.5. The quality of public Kindergarten environment according to residential location (Urban, Rural)

To find out whether there are significant differences between the quality of KG's environment according to residential Location (urban, rural) on the total score, t-test was performed. Table 27 indicates that there are no significant differences ($P < .05$) exist between KG environment's quality according to residential Location (urban, rural).

Table (27). Means, standard deviations, and t-test values for residential Location

KG Type	N	Mean	Std. Dev.	t	df	Significance
Urban	17	147.1	47.2	-0.012	82	0.99
Rural	67	147.2	51.8			

3.6. The quality of public Kindergarten environment according to region

Analysis of variance (ANOVA) was performed to find out whether there are significant differences between the quality of KG environment according to geographical region on the total score. Table 28 reveals that the overall result for differences between the different quality levels according to geographical region was significant (P <.05).

Table (28). Analysis of Variance for Differences between Regions

	Sum of Squares	df	M. Square	F	Significance
Between Groups	24385.27	2	12192.63	5.135	.008
Within Groups	192331.0	81	2374.45		
Total	216716.2	83			

To explore the differences between each pair of the quality levels that included in the geographical region the multiple comparison procedure was used and table 29 shows these results.

According to Table 29 there are significant differences (P<.05) exist between north and south in favor of south, while there were no significant differences between north and middle and between middle and south.

Table (29). Multiple Comparisons between Regions

Dependent Variable	(I) region	(J) region	M. Differences	Significance
	North	Middle	-16.8	.188
		South	-39.3*	.003
	Middle	North	16.8	.188
		South	-22.4	.099
	South	North	39.3*	.003
		Middle	22.4	.099

3.7. The quality of teaching and learning process in public and private Kindergartens

In order to obtain the total score for the quality of teaching and learning at the KGs, four subscales of the (ECERS-R) were analyzed together. The four subscales are Language-reasoning, activities, interaction, and program structure. Table 30 shows the total score of the four subscales reflecting the quality of teaching and learning at the KGs as the instrument suggested.

Table (30). Frequencies and percentages of the four quality levels of KGs environment with respect to teaching and learning according to KG type

KG Type / Quality	Public		Private	
	Frequency	Percent	Frequency	Percent
Inadequate	6	7.2	6	26.1
Minimal	36	43.4	13	56.5
Good	36	43.4	4	17.4
Excellent	5	6.0	0	0.0
Total	83	100.0	23	100.0

The t- test was used to ensure whether there are significant differences between the quality of KG environment with respect to teaching and learning according to KG type on the total score. Table 31 indicates that there are significant differences ($P < .05$) exist between KG environment's quality with respect to teaching and learning according to KG type (public, private).

Table (31). Mean, standard deviations, and t score for KG Type

KG Type	N	Mean	Std. Dev.	t	df	Significance
Public	84	83.15	30.82	3.383	105	.001
Private	23	59.17	27.31			

3.8. The quality of teaching and learning process according to teacher training

To find out whether there are significant differences between quality of teaching and learning process according to teacher training (trained, not trained) on the total score in public KGs, t-test was used and Table 32 shows these results.

Table (32). Means, standard deviations, and t-test values for teacher training

Teacher Training	N	Mean	Std. Dev.	t	df	Significance
Trained	78	85.5	30.329	2.61	82	.011
Not Trained	6	52.5	19.806			

Table 32 indicates that there are significant differences ($P < .05$) exist between quality of teaching and learning process according to teacher's training.

3.9. The perception of principals, teachers, and parents

3.9.1. Perceptions of Principals

As table 33 shows, 107 principal from the public and the private sector responded to the questionnaire. Almost 97% of the participants from the public KGs were females compared with 100% in the private KGs. Most the public KG's principals have a higher diploma while those of private KGs have a bachelor degree. The majority of principals in the public KGs have less than 5 years of experience as principals in general or as KG principals while most of private KGs principals have more than 9 years of experience.

Except one statement that is related to facilities and equipment, the principals of public KGs seem very satisfied and have positive attitudes towards the KGs. The principals mostly agreed with the statement that asks about the safety, the existence of well-trained teachers, and on the effectiveness of the KG programs.

Those in the private KGs have positive attitude towards the effectiveness of KGs and they are highly satisfied. Principals showed a 100 percent agreement on several statements such as the existence of well-trained teachers, the safety of the KG, on the satisfaction of being principals of the KG, and the effectiveness of the programs (see table 34).

Table (33). Characteristics of the principals who participated in the study

Variable		**Public KG principals**	**Private KG principals**
Gender	Male	2	0
	Female	82	23
	Total	**84**	**23**
Education	Bachelor	22	16
	Higher Diploma	37	2
	Masters	15	0
	Doctorate	1	0
	Total	**75**	**18**
Experience as principal	Less than5 years	36	3
	5-10	20	7
	11-15	9	0
	More than 15	19	13
	Total	**84**	**23**
Experience as KG principal	Less than 5 years	60	4
	5-10	17	8
	11-15	2	2
	More than 15	0	9
	Total	**79**	**23**

Table (34). Percentage of public and private KG principals' agreement/disagreement on statements that measure the effectiveness of KGs

No.	statement	Public KGs		Private KGs	
		yes	no	yes	no
1	Is the space available for children suitable	55.8	44.2	91.3	8.2
2	Are the facilities and equipments for playing and learning adequate	31.2	68.8	78.3	21.7
3	Are the teachers well-trained to supervise children	93.2	6.8	100	0.0
4	Is the KG safe from inside for the children	97.4	2.6	100	0.0
5	Is the KG safe from outside for the children	63.6	36.4	91.3	8.7
6	Do the supervisors collaborate well with the KG	88.0	12.0	73.9	26.1
7	Are you satisfied of being a principal for the KG	89.5	10.5	100	0.0
8	Do parents collaborate with the KG	85.7	14.3	95.5	4.5
9	Do you think the KG program is effective and diversify	90.0	9.1	100	0.0
10	Are the facilities needed to teach the children available at the KG	68.4	31.6	82.6	17.4
11	Do you feel that the KG is another burden on the school management	29.3	70.7	39.1	60.9
12	Generally speaking, are you satisfied with the performance of the KG	88.2	11.8	95.7	4.3

To find out whether there are significant differences between principals perception of KG effectiveness according to KG type (public, private) on the total score, t-test was used. Table 35 indicates that there are significant differences ($P < .05$) exist between principals satisfaction of KGs according to KG type.

Table (35). Mean, standard deviations, and t score for principals satisfaction with the KGs

KG Type	N	Mean	Std. Dev.	t	df	Significance
Public	77	7.84	1.630	-4.471	98	.000
Private	23	9.47	1.162			

3.9.1.1. Challenges

Despite their high satisfaction and positive attitudes towards the kindergarten, the principals still encounter many challenges. The most important of these is the lack of adequate resources and facilities such as educational material, toys, computers, and carpeting (this was mentioned by 65% of principals). " Another challenge is the large number of children in the classroom and the small classroom size (this was mentioned by 35% of principals). As one principals mentioned "the most important challenge faces me is the large number of people in my region therefore two sections for the KG is not enough. Another important challenge is the Lack of private toilets for the KG students (this was mentioned by 28%) of principals. A less frequent challenge is the lack of playgrounds in the school. As one principal complained "there is no playground for the children, therefore, they have to share the playground with older students in the school." Finally, principals complained about the frequent change, transfer, and hiring substitute teachers for the KG.

In addition to the challenges mentioned above, principals in the North mentioned their lack of experience as a challenge. As one of them mentioned, "[I] do not know how to follow up the kindergarten teachers since it is different and I am not experienced in doing that." Principals in the south face, to a large extent, the same challenges. However, one point that was raised by these principals is the weak role of supervisors and lack of follow up from them too. Principals of the private kindergarten seem to face very few challenges and most of them claimed that "there are no challenges to [their work]. Everything is provided". However those who face challenge listed the lack of facilities, computers, and carpeting. Another challenge is how to get tuition from parents

3.9.1.2. Improving the services

In order to improve the services provided in the kindergartens, principals suggested the following:

- Provide facilities and equip the KG with needed material, toys, and provide playground.
- Provide a well-trained full time (not substitute) teachers, supervisors, and assistant teachers
- The KG should be designed based on different educational corners (i.e., play, toys, reading, computer, etc…)
- Provide computers for the teachers
- Provide shelters for the playgrounds especially in the sunny days
- Expand the existing classrooms or establish new large ones
- It is very important to provide a separate and age-appropriate toilet and sinks
- Train principals and provide them with professional development opportunities related to the management of KGs

Principals of the private kindergartens did not make any suggestions since they believe their kindergartens have all the services. The only suggestion came from two principals was to provide computers.

3.9.2. Perceptions of teachers

Eighty four teachers from the public kindergarten and 23 teachers from the private kindergarten participated in this study. As shown in table 36, almost 76% of public KG teachers have at least a bachelor degree compared with 21.7% of those in the private KGs. Also the majority of public KG teachers are between 20-29 years old while most of private kindergartens teachers are within the 30-39 age range. Most than 70% of public KG teachers have attended training compared with no more than 9 percent of those in the private KGs. The majority of teachers in both kindergartens have a degree in early childhood education.

Table (36). Characteristics of teachers who participated in the study.

Variable		Public KG teachers	Private KG teachers
Academic Qualification	Diploma/Junior college	18.1	78.3
	Bachelor	75.9	21.7
	Higher diploma	3.6	0
	Masters	1.2	0
	Doctorate	0.0	0
Age	20-29	65.1	34.8
	30-39	25.3	43.5
	40-49	8.4	21.7
	50 and above	0.0	0.0
Years of experience	Less than 5 years	75.3	17.4
	5-10	19.2	43.5
	11-15	3.6	26
	More than 15 years	1.2	13.2
Training	Wisconsin	75.9	0.0
	Interactive curricula	83.1	4.3
	Parents involvement	71.1	8.7
	KIDSMART	37.3	0.0
Field of study	Arabic	2.4	8.7
	Math	0.0	17.4
	Early childhood	93.9	78.3
	other	6.1	21.7

Table 37 shows teachers' perception of the effectiveness of the kindergartens they work in. It also measure their attitudes towards the service provided in these KGs. Teachers at public KGs are highly satisfied and positively perceive the interactive curriculum they use, the collaboration from the KG management and supervisors. They are less satisfied with the facilities and equipment, and space available for children.

Teachers is private kindergartens are highly satisfied with the collaboration of the KG management, with the safety provided for children, with parents collaboration, and of being teachers in their KGs. at the same time, those teachers were less

satisfied with the facilities and equipments and space available for children, and with the interactive curriculum.

Table (37). Percentage of public and private KG teachers' agreement/disagreement on statements that measure the effectiveness of KGs

No.	Item	Public KGs		Private KGs	
		yes	no	yes	no
1	Is the space available for children suitable	56.2	43.8	76.0	24.0
2	Does the facilities and equipments for playing and learning adequate	37.1	62.9	60.0	40.0
3	Is the KG management collaborative	95.5	4.5	96.0	4.0
4	Is the KG safe for the children from inside	88.8	11.2	100.0	0.0
5	Is the KG safe for the children from outside	58.4	41.6	88.0	12.0
6	Does the supervisors collaborate well with the KG	92.0	8.0	82.6	17.4
7	Are you satisfied of being a KG Teacher	73.9	26.1	96.0	4.0
8	Does parents collaborate with the KG	80.7	19.3	100.0	0.0
9	Do you use the interactive KG curriculum	100.0	0.0	56.0	44.0
10	Do you think the interactive KG curriculum is adequate and effective	93.1	6.9	73.7	26.3
11	Do you have enough freedom to select the suitable activities	85.2	14.8	88.0	12.0
12	Generally speaking, are you satisfied with the performance of the KG	88.6	11.4	92.0	8.0

To find out whether there are significant differences between teachers perception of KG effectiveness according to KG type (public, private) on the total score, t-test was used. Table 38 indicates that there are no significant differences ($P < .05$) exist between teachers satisfaction of KGs according to KG type.

Table (38). Means, standard deviations, and t-test values for Teachers satisfaction with the KGs

KG Type	N	Mean	Std. Dev.	t	df	Significance
Public	89	8.55	1.67	-0.866	112	0.389
Private	25	8.88	1.69			

3.9.2.1. Challenges

Despite the fact that 88.6% of teachers from the public kindergartens and 92.0% from the private kindergartens are satisfied with the performance of their kindergartens, they listed many challenges that they are encountering. This quotation from a teacher summarizes most of the prevailing challenges "the kindergarten is not equipped with toys and material. The room size is not suitable for the large number of children. The playground also is not good enough." Teachers from the different geographical Locations listed the following challenges:

- The large number of children
- Lack of resources including toys, playground, and educational materials
- Frequent interference from the KG management which affect their work
- The KG are not designed based on corners
- Difficulty to manage the behavior of kids, their aggressiveness which means there is a need for an assistant teacher
- Limited ability to teach English for children
- Not having a separate toilet for children.
- Parents are not collaborative with teachers
- Lack of professional development opportunities that prepare teachers to teach. As one teacher pointed out "I feel not competent because I am fresh graduate and I do not have the experience on the curriculum. I fee that the program needs too much time to be implemented."
- The condense daily schedule which leaves no break for teachers

Private KG's teachers listed the following challenges:

- The interference from the KG management
- Low salaries
- Large number of students in the classroom
- Not having a break
- Lack of professional development opportunities.

3.9.2.2. Improving the services

Teachers believe that many challenges they listed can be overcome by increasing the KG Location and provide it with indoor and outdoor facilities, by hiring assistant teachers, and by limiting the number of children in the classroom. Teachers also listed the following:

- Provide training and professional development opportunities for teachers.
- Modify the curriculum
- Provide an English teacher
- Increase parental involvement
- Provide more support from the supervisors
- Design the room according to corners
- Reduce the load and give teachers a break
- Provide toilets to the KG

3.9.3. Perceptions of Parents

Two hundred and twenty one parents participated in this study. The majority of them were mothers (192). As shown in table 39, most parents who send their children to public kindergartens have university degree while those who have children in the private kindergarten have a community college diploma. The table also shows that only 10.2% of parents who send their children to public KGs have an income between JD 600-900 compared with 92.3% of the parents who send their children to private KGs.

Table. (39). Characteristics of parents who participated in the study.

Variable		Public KGs	Private KGs
Gender	Male	22	7
	Female	148	44
Education	Illiterate	6.1%	1.9%
	Lower basic	4.5%	7.7%
	High basic education	11.2%	1.9%
	Secondary	13.4%	13.5%
	Community college diploma	22.3%	57.7%
	University degree	41.9%	17.3%
Income	Less than JD300	38.6%	48.1%
	JD300-599	50.6%	38.5%
	JD 600-900	10.2%	92.3%
	More than 900	0.6%	0.0%

When it comes to satisfaction of parents with the kindergarten both parents are satisfied with their children's KG (table 40). Parents of children in public and private kindergartens show almost similar attitudes towards the effectiveness of KGs. The only exception is that parents who have children at public KGs seems less satisfied with the physical activities provided for their children.

Table(40). Percentage of parents who agree/disagree with statements that measure the effectiveness of public and private KGs.

No.	Item	Public KGs		Private KGs	
		yes	no	yes	no
1	In general, are you satisfied with the KG	93.3	6.7	100.0	0.0
2	Does the KG provide good activities for your child	84.7	14.8	98.1	1.9
3	Does the KG provide a sate environment for your child	93.4	6.6	100.0	0.0
4	Does the KG provide a diversified educational activities for your child	88.4	11.6	94.1	5.9
5	Does the KG teach your child discipline	98.9	1.1	100.0	0.0
6	Does the KG help developing your child's social skills such as playing with others and making friends	98.3	1.7	100.0	0.0
7	Does the KG prepare your child for success in the school	95.5	4.5	100.0	0.0
8	Does the KG meets the educational needs of your child	85.9	14.1	94.1	5.9
9	Does the KG provides physical activities for your child	72.5	27.5	90.2	9.8

10	Do you think that the academic skills your child is gaining at the KG are adequate and suitable	86.1	13.9	92.2	7.8
11	Do you think that the teacher is doing her job appropriately	95.5	4.5	98.1	1.9
12	Does the amount and the quality of food provided to your child at the KG suitable	86.0	14.0	82.5	17.5
13	Do you pay any expenses as a result of enrolling your child in the KG	17.8	82.2	55.8	42.3

The t-test was performed to find out whether there are significant differences between parents perception of KG effectiveness according to KG type (public, private) on the total score. As shown in table 41, the t-test shows a significant difference ($P < .05$) exist between parents of children in public and private KGs.

Table (41). Means, standard deviations, and t-test values for parents satisfaction with the KGs

KG Type	N	Mean	Std. Dev.	t	df	Significance
Public	167	11.02	2.119	-3.127	203	.002
Private	38	12.13	1.069			

3.9.3.1. Improving the services

Parents believe that in order to improve the service provided to their children in the KG, the following should be done:

- Provide indoor and outdoor facilities including toys, playground, shelter, carpet, suitable furniture, computers
- Separate and age appropriate toilets
- Hire a full time teacher in all KGs
- Organize meetings between parents and the school and make an open day at least once a semester.
- Increase the number of KG classrooms.
- Provide training for teachers.

3.9.3.2. Communication with the school/teachers

It is found that parents communicate with the school and with the teacher regarding their children in different ways. The majority of parents communicate in more than one channel. The most frequent one is by making visits to the school. The second method of communication is via phone. And to a lesser extent parents communicate with school/teachers via the reports send with their children.

3.9.3.3. The benefits for Children

Parents believe that several benefits acquire to their children because of attending the KG. These include the following: (according to importance)

- Social benefits including social interaction and creating friendships and improvements of social behavior and manner
- Learn discipline, better behavior and good manners
- Learning reading and writing, and basic math
- Prepare the child for the school
- Teaching the child independency and self reliance
- Develop cognitive skills
- Religious education

3.9.3.4. Costs

The costs of sending the child to a private KG includes the tuition parents pay to these KGs and transportation, and uniform. The range of tuition paid by parents in this study is between JD110-350. In most cases parents do not pay any other tuitions or costs. However, those who pay the minimum seem also paying for books and uniform. Some cases parents also have to pay for transportation.

Parents are very satisfied with the services these KGs are offering and believe that the fees are suitable. Only 3 out of 19 parents are not satisfied with the services and believe that the tuition they pay should be reduced.

4. SUMMARY AND CONCLUSIONS

The aim of this study was to assess and describe the quality of public KGs learning environment including physical, education (teaching and learning), interaction, provision for parents and staff. In addition, it investigated some related variables, such as, residential Location, geographical region, and teacher training. The study also aimed at comparing the quality of public KGs environment with the quality of similar private KGs. On the other hand, the study aimed to assess the perceptions of parents, teachers, and principals regarding KG's effectiveness. To achieve the objectives of the study the ECERS-R was used in addition to questionnaires to assess the perceptions.

This study attempted to answer several questions related to variables that might influence the quality of KG's environment such as, residential Location (rural, urban), geographical region, and teacher training.

4.1. The quality of public KGs environment in Jordan

Data analysis revealed that the quality of 13.1% of public KGs environment in Jordan is considered "inadequate" (i.e. lack of space and furnishing; poor personal care routines, few reading material available; few developmentally appropriate fine motor material available; poor programs structure; and poor parents involvement). Around 43% of the KGs are considered "minimal" (i.e., have the minimum basic requirements and resources needed for activities, space and furnishing, language and reasoning, interaction, and minimal parental involvement). On the other hand, the results revealed that the quality of around 43% KG's environment is considered "good" (i.e. have adequate and suitable requirements and resources in terms of space and furnishing, personal care, equipments needed for play and activities, and good program structure and parental involvement). Finally, it is found that quality of only 1.2% of KG's environment is considered "excellent" (i.e., have an outstanding

requirements and resources needed, excellent space and furnishing, high parental involvement, availability of high quality toileting and hygiene material). It was demonstrated in this study that the quality of less than half of public KGs (45%) considered a very "good" learning environment for the children, in general, including the physical and the interaction aspects of the environment which promotes the development and learning readiness. On the other hand, around 43% of public KGs are limited in their resources and has the minimum requirements, these KGs need to be improved and to be provided with suitable and adequate materials, requirements, and resources to ensure high quality programs that sit the stage for successful experiences for the children. The findings showed that the quality of around 13% of public KGs are considered "inadequate" and not suitable, these KGs are lacking even the basic requirements so they need specific attention and immediate interventions. Research demonstrated that the low quality KG's environment and programs have negative influence on children's development that affect school success and sometimes last the lifetime.

Looking at the findings of the subscales we see that it was clearly demonstrated that the best aspects of public KG's environment were interaction, program structure, personal care routines, and language-reasoning. The interaction aspect of KG environment scored the highest and included general supervision of children, discipline, staff-child interaction, and interaction among children. The program structure aspect of KG environment included schedule, free play, and group time. The personal care routines aspect of KG environment included greeting/departing, meals/snacks, nap/rest, toileting, health practices, and safety practices. The language and reasoning aspect of KG environment included books and pictures, encouraging children to communicate, using language to develop reasoning skills, and informal use of language.

On the other hand, the lowest scores were obtained on the following aspects of KG's environment demonstrating low quality: parents and staff, activities, and space and

furnishing respectively. The parent and staff aspect included provision for parents, provision for personal needs of staff, provisions for professional needs of staff, staff interaction and cooperation, supervision and evaluation of staff, and opportunities for professional growth. The activities aspect of KG environment included fine motor, art, music/movement, blocks, sand/water, dramatic play, nature, science, math/number, and use of TV, video, and/or computers. The space and furnishing aspect of KG environment included indoor space, furniture for routine care, play and learning, furnishings for relaxation and comfort, room arrangement for play, space for privacy, child-related display, space for gross motor play, and gross motor equipment. In general we can conclude that the quality of physical aspect of KG environment (space, furnishing, and materials) and the availability and use of technology is consider low and need urgent intervention in order to improve the quality of kindergarten programs especially in the aspects mentioned earlier to better serve Jordanian children and to improve their school readiness.

When comparing the quality of public and private KGs environment, the findings revealed that there are significant differences between the quality of public KGs environment and private KGs in favor of public KGs environment. Moreover, more "good" quality KGs are found in public sector than among private sector. Despite the fact that was demonstrated by the findings that around 50% of public KGs need improvements and some need immediate interventions, it was found that most of the private KGs (around 60%) have the minimum requirements and around 20% need even more urgent improvements and interventions as they considered "inadequate", taking into consideration the growing number of children who are being served by these KGs.

When comparing the findings of the subscales between public and private KGs, it was revealed that there were no differences between public and private KGs on the following aspects of KG environment: space and furnishing, personal care routines, and parents and staff. On the other hand, significant differences were found

between public and private KGs on the following aspects of KG environment: language-reasoning, activities, interaction, and program structure. It can be concluded here that the physical environment in public and private KGs is almost have same quality knowing that more KGs in public and private sectors either have the minimum requirements or lacking the basic requirements and resources with respect to space and furnishing. Here, we are talking about indoor space, furniture for play and learning, furniture for relaxation and comfort, room arrangement for play, space for privacy, child-related display, space for gross motor play, and gross motor equipment. Other aspect that is also similar between public and private KGs is personal care routines which include greetings, meals, rest, toileting, health practices, and safety practices. It worth to note here that most of the quality of public and private KGs with respect to personal care routines are considered either "good" or "excellent", and that reflects "good" practices but still we need to work on the KGs that considered "inadequate" or "minimal" with respect to that aspect of KG environment in order to insure that all Jordanian children are getting quality early childhood programs either they are enrolled in a public or private KG. What also worth to note here is that the aspect of parent and staff provision was found to be the lowest in quality in both public and private KGs. Most of public and private KGs were found to be "inadequate" or "minimal" with respect to provision for parents and provision for staff. More attention should be brought to staff personal and professional needs in addition to parents' involvement.

In order to assess teaching and learning process, many aspects of KG environment were taken into consideration such as, using books and pictures, encouraging children to communicate, informal use of language and using language to develop reasoning skills, activities (art, music, blocks, sand/water, dramatic play, use of technology including TV, computer), interaction between teacher and children and among children, in addition to, schedule, and group time. Using ECERS-R, the researchers decided to group the four subscales (language-reasoning, activities,

interaction, and program structure) in order to assess and evaluate the teaching and learning process in KG's classrooms. The findings revealed that only 7.2% of public KGs have "inadequate" quality of teaching and learning. When compared to private KGs, it was demonstrated clearly that public KGs have better quality of teaching and learning taking into consideration that around 26% of private KGs have "inadequate" quality of teaching and learning; which is an important aspect, if not the most important, in KG environment. The findings revealed as well that the quality of teaching and learning in about half of public KGs are considered either "good" or "excellent" compared to only 17% in private KGs without any private KG that considered having "excellent" quality of teaching and learning as measured by ECERS-R.

When linking these findings to teacher training, it was demonstrated clearly that the quality of KG environment improved when KG teachers were trained. It was found that most of public KG teachers were trained on one or more of different early childhood programs such as, Wisconsin program, the Interactive Curriculum, Parents Involvement, and Kidsmart, while few private KG teachers were trained. When exploring the relationship between the quality of teaching and learning in KGs and teacher training, it was found that there were a significant relationship between the quality of teaching and learning when the teachers were trained and the quality of teaching and learning when the teachers were not trained in favor of trained teachers.

When investigating if there were any significant differences in the quality of public KGs according to residential Location or geographical region, the findings revealed that the quality of public KGs in urban and rural Locations are similar. On the other hand, some significant differences were found in the quality of public KGs according to geographical region especially between the north region and the south in favor of the south. It seems here that the quality of public KGs that are located in the south is better than the quality of KGs located in the north; perhaps more attention had been

given to KGs located in the south. Otherwise, all other KGs in the different locations have almost same quality.

Although there are several cultural, social, and economic differences, it might be beneficial to compare the current findings with the Abbot Preschool Program in New Jersey. Abbot program began in 1999-2000 to measure the quality of preschool programs in New Jersy and they use the ECERS-R as one of the three tools used to measure the quality of the program (Frde, Jung, Barnett, Lamy, and Figeras, 2007; and Lamy and Frede, 2005). Table 42 reports the ECERS-R average subscale scores and the average total score for the sample from public KGs in Jordan and in New Jersey. The subscale means scores range from a low of 2.99 for Activities to a high of 5.48 for Interactions in Jordan while in New Jersey it range from 4.00 for Personal Care to 5.88 for Interaction in the year 2007. It is evident from the table that the quality of public KG environment in Jordan in 2008 is better in the Personal Care subscale while the quality is not far behind those of New Jersey in the Language and Reasoning, Program Structure, and Interactions. The main back draw is in the space and Furnishing and in the Activities subscales. Keeping in mind that it took New Jersey 7 years to gain better quality since the initiation of the Abbot program (see the average score in the year 2000), then we may conclude that Jordan has gone far in establishing a good quality KG system in the last five years (i.e., beginning of ERfKE).

Table (42). ECERS-R Total and Subscale Scores across public KGs in Jordan and New Jersey

ECERS-R Subscale	*Jordan 2008*	*New Jersey 2000*	*New Jersey 2007*
Space and Furnishing	3.19	3.86	4.88
Personal Care	4.30	3.98	4.00
Language and Reasoning	4.45	3.74	4.98
Activities	2.99	3.19	4.28
Interactions	5.48	4.47	5.88
Program Structure	4.51	3.81	4.88
Parents and Staff	3.35	4.59	5.58
Overall ECERS-R Score	***4.03***	***3.86***	***4.48***

4.2. Parents, teachers, and principals Satisfaction of KGs

One hundred and seven principals from the private and public KGs participated in this study. It is found that both principals are satisfied with the effectiveness of the KG they work in. However, those in the private KGs are more satisfied than their counterparts in the public ones. The major concern of public KGs principals is the facilities and equipments available for playing and learning. Almost 78% of them perceive it inadequate. The second concern is the space available for children; 44% of them perceive it unsuitable.

Despite this positive perception, principals still face many challenges. On the top of these is the large number of children in the classroom, inadequate resources and facilities, and separate toilets. Few principals felt challenged because they did not receive sufficient training on how to manage KGs. Collaboration from the supervisors in another challenge mentioned in all the geographical Locations. Another challenge but less prevailing is the lack of full-time teachers- since teachers are either substitute or hired as part-time.

Eighty four teachers from the public kindergarten and 23 teachers from the private kindergarten participated in this study. The results showed that in general, 88.6% of public KG teachers are satisfied with the KGs and perceive it effective compared with 92.0% at the private ones. Teachers at public KGs were highly satisfied with the management, the interactive curriculum, and less satisfied with the facilities and equipments, and space available for children. Those in the private ones were highly satisfied with the management of the KG, with their job (i.e., being a KG teacher, and with the safety available for children in the KG. They are less satisfied with the facilities and equipment available for playing and for learning. The results showed no significance differences exist between teachers' perceptions of KG effectiveness whether they are public or private.

The main challenges facing KG teachers are the large number of children in the classroom, lack of resources, not having separate toilets for the KG. To a lesser degree, some teachers believe they are not ready and not well-trained to be a KG teacher, or even they can not teach English to KG children.

Two hundred and twenty one parents participated in this study. The study showed that parents who have children in the public or private KGs are very satisfied with their children KG. However parents at the private one have a very slightly higher rate of satisfaction (100% compared with 93.3%). Parents highly believe that the public KGs teach their children discipline, and help them develop their social skills, and prepare their children for success in the school. Parents who have children in the private KGs seem more satisfied with their children's KG. However, they almost high satisfied with the similar statements as their parents who have children in the public KGs.

The study also showed that parents have good communication channels with the KG and with their children's teachers. They mainly communicate through visits and phone. Another channel is the reports that teachers send for parents with the children. It seems that parents are highly aware of the benefits of sending their

children to the KG. They believe that the KG will teach their children how to read and write, prepare them for the school, teach them discipline, and make hone children's behavior and social interaction.

Parents who send their children to private KGs pay between JD 110-250 per year in tuition. Other costs may include transportation, books, and uniform. For the majority of parents, it seems that this cost is affordable and balanced with the service the KG is providing for their children.

5. RECOMMENDATIONS

In this section we present recommendations that might help the Ministry of Education in its efforts in expanding early childhood programs.

1. The study showed that principals, teachers, and parents are less satisfied with the facilities available for their children. This perception came consistent with the quality level of the physical environment-space and furnishing, personal care routines, and activities, as measured by the ECESR-R. In many cases teachers, parents, and principals complained about the lack of an age-appropriate toilets for children who have to share these facilities with older students. It is also crucial to improve the educational and recreational materials and equipments available for children.
2. Class size is a very important factor in providing a high quality learning environment for children. This study showed that parents, teachers, and principals are not satisfied with the current space available for their children. Therefore, it is important to reduce the number of students in the classroom, enlarge the current classrooms, if possible, and hire more teachers/assistant teachers to ensure individualized instruction and a balanced child-teacher ratio.
3. Despite the fact that more than 70% of teachers have received training on Wisconsin program, Kidsmart, parental involvement, and on the interactive curriculum, the study showed that teachers felt incompetent and ask for more professional development opportunities. The study also revealed that the quality of teaching and learning in KGs is influenced by the nature of training that teachers received. This implies that the ministry of education should continue with the in-

service training programs for KG teachers. Principals in some KGs shared the same feeling (i.e., they are not well-trained to manage or teach in the KG). Therefore, it is important to improve the professional development opportunities for the principals.

4. The study showed that parents' involvement in their children's learning process is still insufficient. It is recommended that KGs should be able to organize more awareness campaigns for parents and build on partnerships with the community to strengthen the existing rate of parental involvement. A quick and efficient way to do that is to expand the Ministry's parental involvement program.
5. The role of supervisors should be more effective. This study recommends a more training for the supervisors as well as making sure that they follow up with KG teachers and principals.
6. It was clearly demonstrated in this study that the public KGs outperformed the private ones in the kind of training offered to teachers, program structures, interactions, activities, and in language and reasoning domain. This indicates that the public KGs are better preparing children for school. It is important that the Ministry of Education should pay more attention to the private KG environment in order to improve it.
7. It is still evident that the private sector is enrolling almost 90% of the total KG students. The ministry of education needs to double its efforts in order to expand access to public KGs.
8. The study showed that there are no male teachers at public KGs (and private KGs too). This may limit access to KG in Locations where there are no female schools. In some cases there are male schools with better facilities and are more ready for KGs compared with female schools in the same Location. Taking into consideration that the universities in

Jordan which have specialties in early childhood education have male students who will be deprived of such an opportunity.

9. The researchers recommend a replication of this study periodically in order to monitor and capture the progress in the quality of KG learning environment similar to the well known Abbot program in New Jersey, USA.

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