Field Experience Make Difference: Early Childhood Student-Teachers’ Beliefs about Best Practices for Jordanian Kindergarten Children

Abstract

The separation between academic knowledge gained from university courses and practical knowledge gained from field experiences is an ongoing problem in teacher education. This research investigated the impact of field experiences on early childhood student-teacher’s beliefs regarding the best practices (Developmentally Appropriate Practice [DAP]) at kindergarten setting in Jordan. The quantitative methods utilizing pre-and post-surveys were employed. The respondents consisted of (65) students who agreed to be part of the study and filled out the surveys before and after attending the practicum program at the school of education during the first semester of the (2018/2019) school year. The survey consisted of (48) items that evaluated the early childhood education student-teachers’ beliefs regarding the best practices for kindergarten children. The results revealed that the overall mean of the early childhood student-teachers’ beliefs regarding DAP in the kindergarten setting in Jordan before field experience was (2.79), which means they had a moderate belief level of DAP. Furthermore, the researchers found that there are a “statistically significant differences” (at α = 0.05) in early childhood student-teachers’ beliefs regarding DAP before and after attending the practicum program in all domains favoring the post survey, except the “reciprocal relationships with families” domain. Focusing more on the inclusion of developmental practices in theoretical courses during the teacher education programs in university are recommended.

Keywords: Best Practices, Early Childhood student-teacher; Kindergarten; Practicum Program, DAP.

Introduction

From birth to the age of eight, children get early childhood education, which is a critical stage in terms of children’s emotional, social, psychomotor, cognitive, and physical growth. All these skills and habits grow and improve in this period, as well as when children acquire their individual personalities (Al-Hamad et al., 2020). Thus, professionals must be prepared to assess and meet students’ needs in early childhood education setting (Ministry of Education law no 3, 2002).

For professionals to be prepared to teach children, they must be properly trained and equipped to succeed. Research discussed some common features of new teacher education programs that help student teachers to confront...
the challenges of the practical field. For example, providing field experience, using appropriate teaching and learning methods, and appropriate assessment and evaluation tools (Darling-Hammond, 2006). In addition, determining the appropriate method in instruction for young children continues to be debated in research. So, using developmentally appropriate practices (DAP) approach helps the student teachers succeed and let the children to be student-centered in teaching and learning processes (Copple & Bredekamp, 2009). Student teachers’ perceptions about DAP pertains to their experiences in teaching that influence child development in various domains (Akin, 2013; Kim, 2011; Rababah, 2015).

Moreover, teachers’ and student teachers’ beliefs are essential aspects of the teaching and learning process (Skott, 2015) and are affected by the teachers’ strategies and methods that ultimately impact students’ learning (vartuli, 2005). Much research has further shown that preservice and in-service teacher beliefs are impacted by early childhood classroom practices and strategies (Hu, Fan, Yang, & Neitzel, 2017). Although, research has shown that teachers tended to use more practices that focus on children in theory but employed less of these practices in their classroom. As well as an early childhood teacher who are knowledgeable and have experience on child development (Gauvain & Perez, 2015), are more likely to be ready to teach, plan, and create various activities that are developmentally appropriate for children’s learning needs and individual differences (Horowitz et al., 2005).

The purpose of DAP is to enhance quality in early childhood education programs by supplying a good basis for the best practices. DAP is about enhancing child development and learning, creating a safe and supportive environment, designing a suitable curriculum, and improving relationships between children, schools, and parents (Copple & Bredekamp, 2009; Kostelink et al, 2004).

The DAP guidelines have become the basic approach to early childhood teachers in preschools’, kindergartens’, and the first three grades’ teaching as it enhances children learning and motivation (Kim, 2011). Developmentally appropriate practice (DAP) derives its roots from cognitive theory in psychology and more specifically from the constructivist approach (Miranda, 2004).

**Practicum Education Program at Yarmouk University**

The practicum education program was established through college of education programs in Jordanian universities. The practicum education program aims to develop the level of the student teacher through practical training. It provides the opportunity for student teachers to apply educational ideas and theories that they studied in theoretical courses, and to acquire teaching skills in actual situations, through direct interaction with students and school curricula.

University supervisors oversee and work directly with student-teachers during this practical training. Their job is to facilitate the training of students and help them develop teaching skills and competences (Altahat & Atan, 2018). They visit each student-teacher at least three times and organize weekly workshops to help solve problems that they encounter in the field. They also attend some lessons, observe their performances, and give a final grade at the end of the semester. Student-teachers generally practice teaching and learning for four months during the practicum program. In the remaining period, student-teachers are helping the cooperating teachers with different tasks and observing in their classes to develop different teaching skills (i.e., classroom management, evaluating student performance, meeting individual needs, etc.). Moreover, student-teachers can support the children and help them in solving any problems they may face.

**Statement of the Problem**

Child development in all its areas such as emotional, cognitive, behavioral, and social development are each critical subjects, especially for parents and teachers (Rababah & Abu Alrub, 2018). However, due to this being such a vast topic, the current study aimed to narrow it down by focusing on the beliefs of student teachers about DAP practices in the practicum field. Additionally, while DAP guidelines and curricula have been widely adopted and accepted in the early childhood setting, empirical research on their significance within those settings is limited. This is particularly the case when looking at pre-service teachers and DAP research in Jordan. The research on pre-service teachers’ DAP perception is moderately new, but there is already evidence that developmentally appropriate practices are the best methods of teaching (Akin, 2013; Kim, 2011).

Moreover, the need for this study comes from the experiences of the researchers in supervision, it is important to apply the theoretical stuff the students learn in courses to a practical application. In addition to the above, reviewing the research indicates that teachers’ beliefs and practices impact their ways and relations with their students, and how to deal with new methods of learning and teaching.
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(Barlow & Cates, 2007). Witcher, et al, (2001) emphasized that values, attitudes, and beliefs are reflected in the way the teachers practice and represents their educational process.

Significance of the Study

The Ministry of Education in Jordan (1988) has considered the Education Practicum Program a vital part of helping student teachers to acquire the abilities and skills to be a good and professional teacher for decades (Al tahat & Alsafadi, 2021). However, more research in this area of student-teacher education needs to be done in Jordan. There is a scarcity of research in this area relative to how important it is considered to the ministry. Numerous researchers have investigated teacher education but looking at the DAP of student teachers has not been systematically conducted prior to the present study. Moreover, several studies examined in-service teachers and their teaching skills; none looked at pre-service teachers and their attitudes regarding DAP before and during the training field. Therefore, this research is significant in comprehending and examining the beliefs of pre-service teachers regarding DAP.

This path of reasoning led the researchers to conduct the present study that investigated the impact of field experiences on early childhood student-teachers’ beliefs regarding DAP in the kindergarten setting in Jordan. More precisely, this current research aimed to address these following questions:

1- What beliefs do early childhood student-teachers hold regarding DAP in the kindergarten setting in Jordan before their field experience?
2- Does attending the practicum program positively affect the early childhood student-teachers’ beliefs regarding DAP in the kindergarten setting in Jordan?
3- Is there a significant difference at (p= 0.05) in early childhood student-teachers’ beliefs regarding DAP after attending the practicum program due to the study variables (school type, cumulative average)?

Literature Review

Early Childhood Education in Jordan

Several plans have started recently in Jordan to support early childhood education programs, for example, the creation of a nationwide interactive curriculum, preparing training courses to “pre-service” and “in-service” teachers in schools, organizing with “Jordanian universities” to involve early childhood education majors in their undergraduate and graduate programs, and providing supportive and safe environment for children in preschools and kindergartens (Ministry of Education, MOE 2002; Rababah, 2011). Also, to support this early childhood program, Queen Rania Academy Institution was established 2008 to prepare and train teachers (UNESCO, 2006).

While the importance of strong training is universally agreed, exactly how to strengthen early childhood teachers remains a big debate in education programs. Chen and McNamee (2006) emphasized the balance between content knowledge and field experience that student teachers hold from the first year to the end of four years. They argue that content knowledge is insufficiently particular to enable student teachers or teachers to be effective and provide high-quality services in teaching. Student teachers and teachers in preschool and kindergarten classrooms may know that forcing children to learn at this early age is unsuitable, but what do they do as an alternative? It’s clear that providing the best practices and activities about DAP in such programs is significant regarding educational quality.

Developmentally Appropriate Practice (DAP)

Developmentally appropriate practice is developed based on an understanding of the best ways for children to develop and learn in their social life. It is a broad term that relates to various developmental domains for children from preschool-age up to eight years old. The DAP guidelines, issued and organized by the “National Association for the Education of Young Children” (NAEYC) (Bredekamp & Copple, 1997), include the work of Piaget, Gardner, Bronfenbrenner, Vygotsky, Erikson, and Maslow. These frameworks focus on three important areas of age, individual, and social and cultural contexts. The NAEYC's position statement contains 12 principles that are designed to educate and direct caregivers and teachers who work with children from birth until the age of eight (Bredekamp & Copple, 1997).

NAEYC’s principles emphasize that young children learn actively, through interacting with the surrounding environment to construct their own understandings of it. NAEYC has adopted the concept of grounded learning development and work to develop it in line with the changes that the world has witnessed in the past forty years. It has directly and indirectly affected early education. Education based on DAP depends on an infinite commitment to work in the interest of children and to choose the appropriate educational decisions based on a thorough understanding of childhood growth and development and the cultural context in which they are brought up (Essa, 2017).
Past studies suggest that participation in DAP programs correlates with high levels of achievement (Parker & Neuharth-Pritchett, 2006). Also, research suggests that students in developmentally appropriate classrooms have high motivation for learning.

**Student Teachers’ Beliefs Regarding DAP**

Some past research has occurred on teachers’ beliefs related to their thoughts and attitudes influencing their practices (Isenberg, 1990; Cassidy & Lawrence, 2000). This line of research has shown a positive relation between teachers’ practices and beliefs (Kowalski et al., 2001; West, 2001). Hegde and Cassidy (2009) evaluated the beliefs, stated practices, and real practices regarding DAP of forty kindergarten teachers in India. Only teachers who worked in English medium schools and are proficient in English were included in the study and interviewed. They had a middle to high income. The results indicated a positive relationship between “teachers’ beliefs” and stated actual practices. Additionally, the teachers believe in children’s overall skills and development, and they have a belief that the children should be given the chance to learn actively.

Aldemir and Sezer (2009) conducted a qualitative case study and quantitative method to examine early childhood pre-service teachers’ perceptions of themselves as early childhood educators and their attitudes about teaching at a Northeastern State University in USA. Their qualitative design revealed that teachers’ experiences with their children influenced their perceptions of early childhood teachers. Quantitative data also revealed the links between the teachers’ perceptions of early childhood teachers and their beliefs about the teaching process.

Tan and Rao (2017) carried out research related to beliefs and practices of English Language teachers in the Singapore non-profit kindergarten setting with a sample containing 167 teachers of 4-to 5-year-olds completed an online questionnaire on kindergarten teaching and learning. Their results indicated that Singaporean teachers prefer a child-centered approach in the kindergarten setting even if they use both child-centered and teacher-centered approaches. However, they appreciate a teacher-centered approach, which is often linked with traditional teaching approaches.

Betawi and Sinaria (2019) conducted a study at the university of Jordan to investigate the perceptions of pre-service teachers towards DAP with a sample of 189 student teachers in the five classes attending four-year-practicum program. The results showed that the practicum field experience has an influence on student teachers towards DAP in favor of less experienced students in practicum field. However, there was no significant difference in DAP because of student teachers demographics (age, academic major, GPA, college year).

Haws (2008) also, examined the practices and beliefs of 390 college students about DAP regarding toddlers and infants. Results indicated that the study variables (college major, the number of children and marital status) were not “statistically significantly” related to pretest belief scores. Furthermore, the results indicated that the beliefs and practices about DAP was slightly increased after the posttest comparing to the pretest scores.

However, findings from past research with different populations correlate less-developmentally appropriate classrooms with problem behaviors and higher incidences of stress. Researchers have also found lower levels of academic achievement in lower DAP classrooms (e.g., Hart, et.al, 1998; Mantizicoplous, & Neuharth-Pritchett, 1995). Moreover, past research indicated a high relationship and link between DAP and field experience (Betawi and Sinaria, 2019) as well as a high relationship between teachers’ beliefs and their actual practices in classroom (Hegde and Cassidy, 2009).

While the previous research that was done in Jordan utilized the questionnaire in its methodology, the current study utilized the quantitative technique using both pre-and post-surveys to examine the student teachers’ beliefs regarding the best practices in the kindergarten setting.

**Methodology**

The quantitative technique using both pre-and post-surveys was used to examine the student teachers’ beliefs regarding the best practices in the kindergarten setting both before and after engaging in the practicum program at Jordan’s Yarmouk University.

**Setting and Participants of the Study**

The research was carried out at Jordan’s Yarmouk University’s early childhood education program. A total of 81 early childhood education student-teachers enrolled in the practicum program were recruited. Sixty-seven students agreed to be part of the study and filled out the surveys before and after attending the practicum program at the school of education throughout the first semester of the (2018/2019) school year. The response rate of the participants who returned the surveys was 98%, with a total of (65) participants. These participants were
females (males are not allowed to enroll in the early childhood education specialization according to cultural issues and the Jordanian Ministry of Education rules); their average age was 21.4 years old. The characteristics of the participating student teachers are shown Table 1.

**Table 1.**

**Participants’ Characteristics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of school</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>50</td>
<td>76.9%</td>
</tr>
<tr>
<td>Public</td>
<td>15</td>
<td>23.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Cumulative Average</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good and below</td>
<td>28</td>
<td>43.1%</td>
</tr>
<tr>
<td>Very Good</td>
<td>25</td>
<td>38.4%</td>
</tr>
<tr>
<td>Excellent</td>
<td>12</td>
<td>18.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Instrument**

The researchers developed a survey to collect data regarding student-teachers’ beliefs by reviewing the previous literature (AbuJaber, et al., 2010; Copple & Bredekamp, 2009) and according to the NAEYC’s statement (Bredekamp & Copple, 1997). The final copy of the survey consisted of two parts. Part A of the survey requested information about early childhood education student teachers (age, type of school, and cumulative average). Part B consisted of (48) items that evaluated the early childhood education student-teachers’ beliefs regarding the best practices for kindergarten children, more specifically, DAP. Part B consisted of five domains, which are:

1. **Create a positive environment for children’s care (CP)** with 6 items (such as “I believe that it is important to encourage children to take care of each other”).
2. **Teaching to encourage learning and development (EL)** with 20 items (such as “I believe that using practice sheets and homework are not useful for children learning”).
3. **Design appropriate curriculum (DC)** with 9 items (such as “I believe that a good curriculum has to support the development of knowledge as well as the skills”).
4. **Evaluation learning and development (EL)** with 6 items (such as “I believe that it is important to use varied and appropriate evaluation methods such as observation, data collecting, and children’s works”).
5. **Reciprocal relationship with families (RR)** with 7 items (such as “I believe that it is very important to communicate with families to best understand the children”).

The respondents were asked to state their beliefs by choosing one of the “5-point Likert-type scale” (1 = strongly disagree), (2 = disagree), (3= slightly agree), (4 = agree), and (5 = strongly agree) to each item.

**Validity and Reliability**

To ensure the validity, of the research tool, the tool was presented to a number of professors that are experts specializing in education and psychology to judge the validity of the instrument.

They are determining the extent it is suitable and deleting or amending what they deemed inappropriate. The items that obtained an agreement percentage of (80%) or more were accepted, and thus (4) items were deleted that were not agreed upon as valid items. Construct validity also was calculated by applying the study tool to an exploratory sample consisting of (10) participants outside of the study sample.

The Pearson correlation was found to be (0.67-0.90). Also, the reliability was confirmed by calculating the stability coefficient using the “coefficient of internal consistency” according to the Cronbach Alpha ranged between (0.78-0.91), see Table 2 for more details.

**Table 2.**

**Reliability Statistics for all domain**

<table>
<thead>
<tr>
<th>Domain</th>
<th>N of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Creative a positive environment (CP)</td>
<td>6</td>
<td>0.86</td>
</tr>
<tr>
<td>2.Teaching to encourage learning and development (EL)</td>
<td>20</td>
<td>0.91</td>
</tr>
<tr>
<td>3.Design appropriate curriculum (DC)</td>
<td>9</td>
<td>0.90</td>
</tr>
<tr>
<td>4.Evaluation learning and development (EL)</td>
<td>6</td>
<td>0.78</td>
</tr>
<tr>
<td>5.Reciprocal relation with families (RR)</td>
<td>7</td>
<td>0.82</td>
</tr>
</tbody>
</table>
**Data Collection**

Undergraduate early childhood student-teachers who were currently enrolled in the practicum course at the school of education were notified and invited to take part in the research. At the start and end of the course, student teachers were asked to fill out the same survey. The questionnaires were distributed to early childhood student-teachers during the weekly workshops they attended during the practicum time in the kindergarten schools. Beforehand, the second researcher contacted them and explained the purpose of the study and confirmed that taking part in the study is completely voluntary.

**Data Analysis**

The latest SPSS version at the time of the study was employed to investigate the data. Means and standard deviation were used to answer the first study question, paired sample t-tests were calculated to answer the second question, and “analysis of variance” (ANOVA) was calculated to obtain an answer for the third study question. Also, Person correlation and Cronbach Alpha equations were used to ensure the reliability and validity of the study tool.

Proportional staging was used to identify frequency categories. To find high, moderate, and low categories, degrees of abundance were determined. The following equation was used to calculate this: (the highest value - the lowest value) dividing by the number of required categories. As a result, the length of the category was (1.33). Thus, the means less than (2.33) were considered low DAP beliefs, the means (2.34-3.67) were considered moderate DAP beliefs, and the means more than (3.68) were considered high DAP beliefs.

**Limitations of the Study**

There were some limitations that could possibly affect the results of the study. This current study investigated student-teacher beliefs only from the college of education in Yarmouk university who were enrolled in (2018-2019), which is a small sample from only one school, so these results cannot be generalized. Also, there was a possibility that the student-teachers’ beliefs were not varied, or precise representations, of the overall beliefs of teachers in today’s classrooms.

**Results**

Results are presented according to the study’s questions and alpha level of (0.05) was employed for all results. Thus, to answer the first question “What beliefs do early childhood student-teachers hold regarding Developmentally Appropriate Practice (DAP) in the kindergarten setting in Jordan before their field experience (practicum program)?”, means and standard deviations were calculated for all domains. See Table 3.

**Table 3.**

Mean and SD of early childhood student teacher’s beliefs Pre- attending program

<table>
<thead>
<tr>
<th>DAP’s Domains</th>
<th>N of items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a positive environment</td>
<td>6</td>
<td>2.41</td>
<td>0.62</td>
<td>moderate</td>
</tr>
<tr>
<td>Design appropriate curriculum</td>
<td>9</td>
<td>2.60</td>
<td>0.59</td>
<td>moderate</td>
</tr>
<tr>
<td>Reciprocal relationships with families</td>
<td>7</td>
<td>2.69</td>
<td>0.39</td>
<td>moderate</td>
</tr>
<tr>
<td>Teaching to encourage “learning and development”</td>
<td>20</td>
<td>2.83</td>
<td>0.49</td>
<td>moderate</td>
</tr>
<tr>
<td>Evaluation of “learning and development”</td>
<td>6</td>
<td>3.41</td>
<td>0.57</td>
<td>moderate</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>2.79</td>
<td>0.52</td>
<td>moderate</td>
</tr>
</tbody>
</table>

Table 3 above illustrates that the mean of the instrument domains range between (2.41-3.41), where the fifth domain “Evaluation learning and development” got the highest mean of (3.41) and a Std. deviation of (0.57). The first DAP beliefs’ domain “Create a positive environment” ended up with the lowest mean (2.41). Moreover, the overall mean of the “early childhood student-teachers’ beliefs” regarding DAP in the kindergarten setting in Jordan before field experience was (2.79) with standard deviation of (0.52), which means they had a moderate belief level of DAP. Despite the fact that these beliefs were not strong, the overall incoming beliefs were judged to be positive. These ratings are useful for establishing a baseline against which post-instruction performance can be compared.

To obtain an answer for the study’s second question “Does attending the practicum program...
positively affect the early childhood student-teachers’ beliefs regarding Developmentally Appropriate Practice (DAP) in the kindergarten setting in Jordan?”, means, Std. deviations, and (paired sample) t-tests of early childhood student-teachers’ beliefs regarding DAP in the kindergarten setting in Jordan before and after attending practicum program were calculated. Table 4 illustrates the findings.

**Table 4.**

Means, Std. deviations, paired sample t-tests of early childhood student teachers’ beliefs before and after attending practicum program

<table>
<thead>
<tr>
<th>DAP Domain</th>
<th>Pre M</th>
<th>Pre SD</th>
<th>Post M</th>
<th>Post SD</th>
<th>Paired t-test</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a positive environment</td>
<td>2.41</td>
<td>0.62</td>
<td>4.23</td>
<td>0.55</td>
<td>15.56</td>
<td>.000</td>
</tr>
<tr>
<td>Teaching to encourage “learning and development”</td>
<td>2.83</td>
<td>0.49</td>
<td>3.78</td>
<td>0.46</td>
<td>8.20</td>
<td>.000</td>
</tr>
<tr>
<td>Design appropriate curriculum</td>
<td>2.60</td>
<td>0.59</td>
<td>3.87</td>
<td>0.47</td>
<td>12.01</td>
<td>.000</td>
</tr>
<tr>
<td>Evaluation of “learning and development”</td>
<td>3.41</td>
<td>0.57</td>
<td>3.70</td>
<td>0.57</td>
<td>5.50</td>
<td>.000</td>
</tr>
<tr>
<td>Reciprocal relationships with families</td>
<td>2.69</td>
<td>0.39</td>
<td>2.78</td>
<td>0.33</td>
<td>1.83</td>
<td>.072</td>
</tr>
<tr>
<td>Total</td>
<td>2.79</td>
<td>0.52</td>
<td>3.70</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows that in each domain, means were higher in the post survey than in the pre survey, indicating that they were more positive and aligned with current practice. The means and standard deviations of early childhood student-teachers’ beliefs had a major difference from before and after the field experience. The overall early childhood student-teachers’ DAP beliefs increased from (2.79), with moderate level, to be (3.70) with a high belief level. The beliefs mean scores showed variability for the DAP domains at post-test, demonstrating that participants’ beliefs scores were changed to a high level after field experience.

Paired sample t-tests were calculated to examine if there were changes in the early childhood student-teachers’ beliefs regarding DAP before and after attending the practicum program. As seen in Table 4, paired sample t-test values reveal “statistically significant differences” (at α = 0.05) in early childhood student-teachers’ beliefs regarding DAP before and after attending the practicum program in all domains favoring the post survey, except the “reciprocal relationships with families” domain.

To answer the study’s third question “Is there a significant difference at (p = 0.05) in early childhood student-teachers’ beliefs regarding DAP after attending the practicum program due to the study variables (school type, cumulative average)?” the means and standard deviations of the early childhood student-teachers’ estimates were calculated on the fields of the beliefs regarding DAP scale according to whether the school the student-teacher attended was private or public (school type), and the cumulative average variable (good and below, very good, and excellent), see Table 5.

**Table 5.**

Means and Std. deviations of early childhood student teachers’ beliefs regarding DAP domains according to study variables

<table>
<thead>
<tr>
<th>variable</th>
<th>level</th>
<th>M and SD</th>
<th>DAP domains</th>
<th>Create P</th>
<th>Encourage L</th>
<th>Design C</th>
<th>Evaluation L</th>
<th>Reciprocal R</th>
</tr>
</thead>
<tbody>
<tr>
<td>cumulative average</td>
<td>good and below</td>
<td>M 4.25</td>
<td>3.73</td>
<td>3.88</td>
<td>3.63</td>
<td>2.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD 0.45</td>
<td>0.46</td>
<td>0.50</td>
<td>0.63</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>very good</td>
<td>M 4.22</td>
<td>3.87</td>
<td>3.91</td>
<td>3.78</td>
<td>2.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD 0.32</td>
<td>0.35</td>
<td>0.36</td>
<td>0.42</td>
<td>0.36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excellent</td>
<td>M 4.19</td>
<td>3.74</td>
<td>3.78</td>
<td>3.70</td>
<td>2.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD 0.82</td>
<td>0.64</td>
<td>0.59</td>
<td>0.71</td>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>school’s type</td>
<td>Private</td>
<td>M 4.19</td>
<td>3.75</td>
<td>3.86</td>
<td>3.70</td>
<td>2.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD 0.60</td>
<td>0.44</td>
<td>0.42</td>
<td>0.66</td>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>M 4.31</td>
<td>3.71</td>
<td>3.89</td>
<td>3.57</td>
<td>2.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SD 0.28</td>
<td>0.49</td>
<td>0.57</td>
<td>0.61</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>M 4.23</td>
<td>3.78</td>
<td>3.87</td>
<td>3.70</td>
<td>2.78</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is noted from Table (5) that there are apparent distinctions between the early childhood student-teachers’ estimated means regarding DAP beliefs scale according to the
study’s variables. Thus, to find out the significance of the differences between the means of “early childhood student teachers” regarding DAP beliefs that appeared in Table (5) according to the study variables, an analysis test was conducted with multiple variances at the level of significance (α = 0.05) as shown in Table (6).

Table 6.
Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>DAP Domains</th>
<th>Sum of square</th>
<th>(df)</th>
<th>Mean Square</th>
<th>(F)</th>
<th>(Sig.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative Average</td>
<td>Create a positive environment</td>
<td>.014</td>
<td>2</td>
<td>.007</td>
<td>0.022</td>
<td>.979</td>
</tr>
<tr>
<td></td>
<td>Teaching to encourage learning and develop</td>
<td>.186</td>
<td>2</td>
<td>.093</td>
<td>.422</td>
<td>.657</td>
</tr>
<tr>
<td></td>
<td>Design appropriate curriculum</td>
<td>.135</td>
<td>2</td>
<td>.068</td>
<td>.296</td>
<td>.745</td>
</tr>
<tr>
<td></td>
<td>Evaluation of learning and development</td>
<td>.080</td>
<td>2</td>
<td>.040</td>
<td>.119</td>
<td>.888</td>
</tr>
<tr>
<td></td>
<td>Reciprocal relationships with families</td>
<td>.043</td>
<td>2</td>
<td>.021</td>
<td>.186</td>
<td>.831</td>
</tr>
<tr>
<td>School’s Type</td>
<td>Create a positive environment</td>
<td>.098</td>
<td>1</td>
<td>.098</td>
<td>.307</td>
<td>.581</td>
</tr>
<tr>
<td></td>
<td>Teaching to encourage learning and develop</td>
<td>.011</td>
<td>1</td>
<td>.011</td>
<td>.052</td>
<td>.821</td>
</tr>
<tr>
<td></td>
<td>Design appropriate curriculum</td>
<td>.008</td>
<td>1</td>
<td>.008</td>
<td>.033</td>
<td>.856</td>
</tr>
<tr>
<td></td>
<td>Evaluation of learning and development</td>
<td>.113</td>
<td>1</td>
<td>.113</td>
<td>.336</td>
<td>.564</td>
</tr>
<tr>
<td></td>
<td>Reciprocal relationships with families</td>
<td>.002</td>
<td>1</td>
<td>.002</td>
<td>.014</td>
<td>.905</td>
</tr>
</tbody>
</table>

Table 6 above illustrates that there were no “statistically significant differences” (α = 0.05) between the early childhood student teachers’ means regarding DAP beliefs according to either of the study’s variables. Results indicated that the means of beliefs’ scores did not show a difference, thus demonstrating that a cumulative average and/or school type did not play a role in student-teachers’ post-test scores.

Discussion

1. Student Teacher’s Beliefs Toward DAP Prior to Attending Practicum Program

The study examined student-teachers’ beliefs toward DAP before enrolling in the practicum program. The results revealed a moderate level of beliefs toward DAP. The student-teachers who were moderate in their beliefs about DAP showed a fair level of knowledge about the principles and guidelines of DAP. This level of belief might be interpreted as due to the theoretical courses in the university that are focused on DAP and the importance of the best practices that should be applied by student-teachers when they enroll in the education practicum program. Specifically, the results showed that the domain “evaluation of learning and development” came in the first place with the highest mean. This might be interpreted as the student teachers have a positive belief about the evaluation tools and child development that they took in the courses, and this is integrated to having high beliefs of it.

However, the domain “create a positive environment” came in last place with the lowest mean. The reason for this result may be due to the fact that the courses do not focus on teaching student-teachers about classroom environments and how to control the classroom effectively, which this is reflected in their belief scores.

A possible explanation for the last finding is that student-teachers are ineffectively ready to instruct young children in a positive and safe environment before any field experiences, which is important in working with children in their early years. Also, student teachers might lack the skills needed to build a relationship with children.

This is dissimilar to Betawi and Jabbar (2018) and Kim (2011), which indicated that the student-teachers have high mean scores on perceptions and beliefs of the DAP scale.

2. Student Teacher’s Beliefs toward DAP Post Attending and Demographic Variables

The study examined the influence of field experiences (practicum program) on the beliefs of “early childhood student-teachers” regarding DAP in the kindergarten setting in Jordan. The results revealed a higher mean value of belief level of DAP after attending the practicum program. Also, the results may have been influenced by the nature of the workshops that
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occurred in the practicum program. Almost all the professors in the workshops and practice syllabus descriptions focused on training pre-service teachers how to evaluate learning and development. This result is supported by another past research (Raftery, 2016; Akin, 2013).

It may indicate that student teachers at Yarmouk University recognize the importance of DAP that meet the children’s needs and apply the child-center in the field practice after getting the experience from the practicum program. This is clear from the high mean of (4.23, 3.87, 3.78) on the DAP scale.

Moreover, the results showed “statistically significant differences” in the early childhood student-teachers’ beliefs regarding DAP before and after attending the practicum program in all domains in favor of the post survey except in the “Reciprocal relationships with families” domain. This might be interpreted that the program did not impact well the beliefs of early childhood student-teachers concerning the reciprocal relationships with families. Such a result might be due to the fact that the workshops that the early childhood student teachers attended during the practicum program did not focus on this issue. Also, it could be due to early childhood student-teachers not engaging with parents and not attending the meetings with parents in the field experiences, which indicates the important function of parents in the “learning and development” of their children, because parents may let teachers know their children’s potential interests (Al-Barakat & Bataineh, 2011).

The final result of the study showed no statistically significant differences between the early childhood student-teachers’ means regarding DAP beliefs after attending the practicum program according to the type of school and cumulative average. It is notable that the two variables studied did not impact DAP belief scores. This indicates that similar DAP beliefs are linked to field experiences, not necessarily from course work. Also, another potential explanation is that the participants all had similar coursework, and knowledge up to their practicum program course, the school type and the cumulative average did not make enough of a difference. This final result is supported by Weshah and Haroun (2009).

3. Conclusion and Recommendations

The overall objective of this research was to inspect “student-teachers’ beliefs” about DAP in the kindergarten setting as well as the influence of a practicum program on their DAP beliefs. Assessing the beliefs of student-teachers towards the DAP after completing the practicum program was the major goal of this study. The findings revealed that student teachers had moderate levels of beliefs toward DAP before attending the practicum program but had overall higher levels of beliefs toward DAP after the program.

Some interesting implications arise from these findings, including the following: Focusing more on the inclusion of developmental practices in theoretical courses during the four years in university, it would be worth it to have strong beliefs rather than moderate beliefs, especially when student-teachers first start teaching in schools as beginner teachers, where they may confront a variety of beliefs, as well as challenges to their own beliefs and difficulty in putting DAP into practice. Even though student-teachers have powerful beliefs about DAP, they might have struggles between recognizing the significance of adopting these practices, the academic achievement pressure, and their other courses in university. Considering these results, the study recommends the following include this pedagogy (DAP) in early childhood programs at the university college level. Research on the beliefs of “student teachers” in early childhood education about DAP has to be expanded to handle a wider range of variables as well as the relationships between them, such as the major, academic level and teaching experience. Moreover, future research could be conducted regarding how coursework and practical experience are associated using a sample that is more representative since this study was focused on a small sample. In this study, only self-reported data was employed as a method of data collection, of student-teacher DAP beliefs. It would be useful in the future to have qualitative research that includes observations of what happens in the classroom and interviews in line with the self-reports.

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