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Developing the design skills of child development program students "From theory to practise"

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Abstract

It is very important that Child Development associate degree students understand applied pedagogy, both to equip them professionally and to adapt them to the environment in which they might find employment after graduation. To ensure that child development students have the scientific perspective and national qualifications that the age requires, a well-equipped and enriched physical environment is necessary throughout the educational process. In this context, the main purpose of the study is to uncover the shift in child development programs students' opinions on design and practice skills following the workshops. To uncover the effect, the study used the case study method, one of the qualitative research methods. The study group of the research consisted of seven students participating in the Koçarlı Vocational School Child Development Program. Criterion and convenience sampling, which belong to purposeful sampling methods, were used. Data were collected using a semi-structured interview form consisting of 5 open-ended questions prepared by the researchers. The data obtained were analyzed and interpreted using the descriptive analysis method. The findings that emerged from the descriptive analysis consisted of the themes of "competence, satisfaction, areas of development, practical problems and students' opinions". The study found that students' use of the applied workshop improved their perception of self-efficacy, increased their satisfaction with teaching, had a positive impact on their cognitive and social-emotional development, and improved their professional skills and sense of belonging to the school.

1 Introduction

Since the future of society depends on children, any investment in children is an investment in the future. Children constitute 26.9% of the population of approximately 84,680,243 in Turkey (TÜİK, 2021). One of the reasons for the general opinion that the early childhood period covers the period from birth to the age of eight (Bee & Boyd, 2020) is that the foundations of developmental areas begin to be laid during this period (Copple & Bredekamp, 2009). Given the importance of early childhood, candidate teachers who work with young children should have a holistic knowledge of

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developmental theory and practice and be able to identify and promote children's strengths in the learning process (Saracho & Spodek, 2007). When the student structure of preschool classes in our country is examined today, the fact that children of different ages and with different individual and sociocultural characteristics are in the same classes should also be taken into consideration. In this context, within these differences, children need to encounter versatile teachers who can recognize their competencies and strengths in all kinds of environments and conditions, see and respond to their interests and needs (Nieto, 2003).

Child development refers to growth and development, that is, the physical, cognitive, emotional, and social changes an individual experiences from infancy through adolescence (Levin, 2011). Creating a developmentally appropriate learning environment requires expertise in child development. The necessary training to become a child development specialist is provided by the university faculty and vocational schools that offer training in child development. The main objective of child development departments is to train qualified and well-equipped specialists. A child development specialist is an important professional who can work in the educational, health, and social sectors, looking at all children in the prenatal and postnatal stages from a holistic perspective, and performing very important tasks during this period (ÇUCEP, 2016). These professionals assess the child's cognitive, linguistic, physical, social, and emotional development as well as self-care; participate in the child's health monitoring; and serve the child, family, and society with innovative programs. The associate degree program in Child Development belongs to vocational schools. Students who complete this program can work in preschool institutions, special education and rehabilitation centers, children's homes, and hospitals. It is of great importance that graduates of the associate degree program in Child Development learn innovative practices that involve the child, as they have very close communication and interaction with children.

According to the Child Development National Core Education Program (ÇUCEP, 2016), the goals of child development education are as follows:

- Be able to develop tools and methods to assess child development,
- Be able to develop projects that meet the needs of children and families,
- Be able to innovate and develop in line with the changing and evolving needs of society and establish creative and effective communication,
- To contribute to the formation of a society that preserves its own culture, has universal values, and includes qualified people,
- To meet these requirements, it is necessary to train highly qualified child development professionals who can consider professional ethical principles, apply technological and scientific methods and techniques, and adopt an eclectic approach.
- In addition, according to the Child Development National Core Education Program (ÇUCEP, 2016), a child developer is expected to possess the following qualities.
- The ability to evaluate, interpret and develop knowledge about child development based on evidence,
- Knowledge of intervention/support/education programs, approaches, teaching methods and techniques, measurement, and assessment in the field of child development,
- Make a developmental definition by conducting developmental assessments of children with typical, atypical, and high-risk development using different methods, techniques, and instruments according to their expertise,

- Design intervention, support, and education programs according to their expertise, develop tools and equipment, organize the environment, implement, and evaluate the programs; be able to advise the family and/or other professionals working with the child,
- Have national qualifications, such as reflecting the philosophy, general characteristics, and requirements of each program element in their practice of programs related to the profession.

Therefore, there is a need for a well-equipped and enriching physical environment that can be used throughout the educational process to produce competent child development professionals at the national level who will pursue the above objectives. Child development education should include child development practices and the acquisition of targeted skills. Despite the importance of these aims in the literature, teacher training programs tend to be overly theoretical and lack real-world experiences for students (Bushweller, 1995). To address this issue, institutions offering child development education should conduct practice-oriented lessons in classrooms or workshops using the necessary equipment, as warned by Bushweller (1995). This approach will enable students to develop child development skills more effectively. Through practice-oriented courses held in well-equipped environments, students can plan, choose tools and methods, carry out the practice process, evaluate the results, and make decisions based on real-life interpretation of the practice results. When the course content of university child development programs is examined, it is seen that internships and application courses in preschool educational institutions are included in the program for practical purposes. While internship is a course that lasts 30 days, usually in the summer, practice in preschool education institutions is a course that is scheduled for a semester at some universities and a full semester at others (Yükseköğretimde Uygulamalı Eğitim Çerçeve Yönetmeliği [Framework Regulatıon on Applıed Traınıngs in Hıgher Education], 2021). Apart from these two courses, there are many other courses mentioned in the child development program that require practical application, such as drama, music, mathematics, science in preschool, and material design.

Design Skill Workshops and the importance given to vocational technical education in Education Vision 2023 show that the development of students' production skills is targeted (Erdem, 2019). Education should aim to develop vocational skills in students. Education should not only provide information in a certain field but also develop the student's personality in that field (Baltacıoğlu, 1995). Studies conducted as part of the School Development Program in the USA have shown that teachers need more information about child development and specific skills and strategies to apply this knowledge to classroom practices. To meet this need, efforts have been made to teach teachers how to apply their knowledge of child development to more effectively manage their classrooms (Comer & Maholmes, 1999).

Students in the Child Development program are expected to have the necessary manual skills, to be creative and productive, and to have the necessary knowledge and skills for the fine arts (such as music, painting, drama, and games). To meet this need, child development undergraduate and associate degree programs in Turkey train students in applied courses such as material design in preschool and special education, music and movement education in early childhood, math, and science education in preschool and creative drama. In addition to the theoretical knowledge required for the profession, practical courses play a crucial role in equipping individuals with practical skills (Alkan et al. 2001). Clearly, these courses do not provide the desired level of effectiveness in traditional classrooms (Bushweller 1995). For this reason, a well-equipped learning environment is essential to enhance the effectiveness of these hands-on courses in child development programs and to provide students with these skills. For the equipment needed in the

materials development course, the musical instruments needed in the music and movement education course, an area for concrete materials and experimental materials to be used in mathematics and science courses, and the lack of materials and furniture needed for the creative drama course. Lack of knowledge about these courses has a negative impact on the effective implementation of the objectives of these courses. Providing the necessary materials for all these courses, a suitable floor, that is, an enriched physical environment, direct interaction with concrete materials, and practices will help the students to complete the child development program. If workshops are conducted interactively and integrated into lessons, this can be seen as an important step in terms of hands-on teaching (Gülhan, 2021). Workshops and laboratory practices are crucial components of a student's professional education, and the combination of theoretical and practical teaching methods enhances the knowledge and skills gained by the student (Uçar, 2008).

It is common knowledge that candidate teachers need more support in practice. In addition, care should be taken to ensure that teaching practices are consistent with information on child development (Comer & Maholmes, 1999). Although students are scientifically competent in the education system, knowing where and how to use these competencies is called a skill (Eskici & Özsevgeç, 2018). First, it is thought that candidate teachers have a set of life skills that they should have to support the development of their life skills (Bolat & Balaman, 2017). It is becoming increasingly important for people who interact with children in different work environments to have skills such as making decisions, empathy, problem solving, creative thinking, and communication among life skills. It is believed that this study will contribute to students' self-efficacy perceptions, and therefore, the academic success of students who develop a sense of efficacy will also increase. It is thought that students with high academic self-efficacy will be more successful in their courses and exams (Barutçu Yıldırım & Demir, 2017).

Reviewing the literature, we find that there are studies that examine some child development skills of bachelor 'sand associate students in a national context (Bakırhan & Çiftçi, 2023; Yakar, 2020; Arslan, 2019; Paksoy & Liman, 2018; Alagöz, Tarkoçin, & Taze, 2019; Taşgın & Korucuk, 2018). However, no study has been found in the literature on the development of design and practice skills of students in an associate degree program in child development through infrastructure.

The primary aim of the study was to uncover the shift in child development program students' opinions on design and practice skills following the workshops. The research questions related to this objective are as follows.

1. What effects does the workshop have on students' perceptions of their competence and inadequacy?
2. What effect does the workshop have on student satisfaction regarding their learning environment?
3. How does the teaching of lessons in the workshop affect students' development areas?
4. What difficulties do students face in courses involving practical work?
5. What is the opinion of students regarding the workshop on design skills development?

These research questions also constituted the themes of the study during the data analysis process.

2 Research design

The case study qualitative research method was used in this study. The case study is employed when examining 'how' and 'why' questions, particularly in situations where the researcher has minimal control over events, and the focus is on investigating a contemporary phenomenon within

a real-life context (Yin, 2003). This method was preferred in this study because it examined how student opinions changed after the workshops.

2.1 Study group

The study group consisted of seven students studying at the Koçarlı Vocational School Child Development Program in the spring semester of the academic year 2022-2023. Criteria and convenience sampling, which are purposeful sampling methods, were used to determine the study group. In the criterion sampling method, all cases that met a predetermined set of criteria were studied (Creswell & Poth, 2016). In this context, the criterion for participants to be included in the study group was that they had studied for at least one semester at the school where the workshop was established. Convenience sampling, another method, requires that the sample be selected from accessible and suitable units because of limited time, budget, and labor resources (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2023). The sampling method was chosen based on convenience and speed. As this research coincided with the earthquake in Turkey in February and the subsequent decision to stop compulsory attendance at universities, it was deemed appropriate to conduct the implementation with seven students who could continue face-to-face education. The participants were one male and six female students. One student was 20 years old, two were 18 years old, and four were 19 years old. Additionally, two of the participating students were in the 2nd semester of the program and five were in the 4th semester.

2.2 Data collection tools

Data were collected using a semi-structured interview form prepared by the researchers. Expert opinions were obtained from three faculty members regarding the interview questions. The interview form consisted of 5 open-ended questions. (resp. What are the points at which you feel competent and inadequate in the child development program? Can you talk about them?Can you tell us how satisfied you are with the application-oriented courses in the physical infrastructure-related child development program?How does the physical infrastructure of child development programs affect cognitive and social-emotional development?What problems do you encounter in implementing projects, practices, activities, etc., under the child development program? Can you describe them? and evaluate the Child Development Program's Design Skill Development Workshop. In your evaluation, compare the old conditions with the new conditions.) The participants took an average of 30 minutes to complete the questionnaire. Interviews with the study group were conducted face to face and recorded.

2.3 Data collection process

The interview questions were applied to the study group as a data collection tool prior to implementation. The workshops, which aimed to determine the impact of the research questions, lasted for six weeks during the spring semester of the 2022-2023 academic year. The workshops were carried out within the scope of practical-content semester courses (e.g., Mathematics and Science Education in Preschool Period; Music and Movement Education in Early Childhood) by the instructors who conducted the course and are also the authors of this research. During this process, faculty members played a guiding role in the workshop and conducted their lessons in a way that gave students the opportunity to design and implement materials and equipment in the workshop. The workshop was created to restructure a classroom in a vocational school building,

enabling students to participate more effectively and efficiently in theoretical courses that require practical application. To achieve this, a workshop was designed to replicate the infrastructure of a preschool classroom (Appendix I). After the workshops, data were collected through interviews with participating students using the same tool.

2.4 Data Analysis

The data obtained in the study were analyzed using descriptive statistics. Descriptive analysis aims to present the data obtained from the interviews and observations to the reader in an ordered and interpreted form. The data were classified, summarized, and interpreted based on the given themes. We established cause-effect relationships between the findings and comparisons between events where appropriate (Yıldırım & Şimşek, 2021). In descriptive analysis, direct quotations are often used to impressively reflect the statements of the interviewed or observed persons. In this study, data analysis was conducted in four phases of descriptive analysis: establishing a framework, processing the data according to the thematic framework, defining the findings, and interpreting the findings. A framework was first created based on the research questions, and the theme under which the data were to be presented was defined. Then, based on the created framework, we determined which data were important and which should be excluded. The organized data were then coded and defined, and the findings were supported by quotes from the participants' answers to the questions. Finally, the findings are explained and compared with their associations.

Verbal consent was obtained before the interview commenced. After the interviews were transcribed, they were read twice by two researchers and analyzed separately. During the analysis, the codes revealed by the researchers were merged and compared. Coding consistency was determined using Rolling's consistency formula (Rolling, 1981). Given two sets of items A and B, Rolling calculates the agreement as 2C/(A + B). In this formula, A represents a set of items 1, B represents a set of items 2, and C represents a set of common items. The coding consistency of these two coders on all items was found to be 1 (one), which shows identical consistency. Themes and their associated codes were tabulated based on their frequency. In addition, direct quotes from participants' answers were reproduced according to the findings.

3 Findings

The data obtained in this study were analyzed and interpreted using descriptive statistics. The findings that emerged from the descriptive analysis were composed of the themes of "competence, satisfaction, areas of development (including two sub-themes: social emotional development and cognitive development), practical problems, and students' opinions". In presenting the findings, students' opinions were reproduced using direct quotations. While students' opinions were presented, the opinions of the same students were included in each theme to better reveal the differences in opinions before and after the workshop applications. However, quotes regarding all the students' opinions were included in the findings. The findings of the first three themes were divided into before and after the workshop, and themes and codes were tabulated. However, for the fourth theme, the data were only presented in a single table before the workshop, as the students did not indicate that they had any problems with the practice after the workshop. Finally, comments on the comparative analysis before and after the workshop are presented. The findings for the fifth theme were presented in a single table before and after the workshop, depending on the theme's content.

3.1 Findings from students' opinions on competence

The findings obtained from the students' opinions on the theme of competence before the workshop are presented in Table 1.

Table 1 Findings from the students' opinions on competence before the workshop

Theme	Codes	f
Competence	Inadequacies in practice-oriented theoretical courses	5
	Competencies in practical courses	3
	Inadequacies in drama courses	2
	Competencies in theoretical courses	2

Students were asked to indicate subjects in which they felt competent and inadequate in the program when they thought of the physical infrastructure. When the responses were examined along these lines, four codes under the theme of competence appeared in the table. Most students (5) indicated that they felt inadequate in practically oriented courses. In addition, they stated that they considered themselves competent in the practical courses they completed in preschool educational institutions and private educational institutions, as well as in the context of their internships in these institutions. In this context, it is noteworthy that the students' perception of self-efficacy improved in the lessons in which they could practice on the spot, make direct observations, and have concrete experiences. In this direction, it can be said that they feel inadequate in practice-oriented theoretical courses of the program due to the poor infrastructure of the department. Below are some of the students' (S7 and S5) direct quotations on this theme before the workshop practices:

> **S7:** "In the internships and pre-school educational institutions where I work, I can do studies for children myself. But I feel inadequate if I do not practise in theoretical courses, such as drama courses."

> **S5:** "Our school has a limited field of practice. I feel inadequate in applying my practical skills because there is no practical part of some courses. I feel sufficient in the theory courses."

The findings obtained from the students' opinions on the theme of competence after the workshop are presented in Table 2.

Table 2 Findings from the students' opinions on competence after the workshop

Theme	Codes	f
Competence	Competencies in practice-oriented theoretical courses	6
	Memorability	1
	Be active	1
	Tangible experience	1

After the workshop exercises, the students were asked to name the points at which they felt competent and inadequate when thinking about the physical infrastructure in the child development program. When students' responses were examined, four codes appeared in the table under the theme of competence. Most students (6) indicated that they felt competent in practical courses. They also indicated that what they learned during their workshop experiences was more memorable, that they could be more active in practice, and that their experiential opportunities increased. In summary, the opportunity to make direct observations and have tangible experiences in the theoretical courses of the programme that require practice leads to an increase in students' perceptions of self-efficacy. Below are some of the students' (S7 and S5) direct quotations on this theme after the workshop:

> **S7:** "After our workshop was built, we started our work. We hold our theoretical lessons there as well as practical ones. After the lessons, I began to believe that I could manage on my own in all areas of special education and child development."
>
> **S5:** "After the workshop was held in our school, we had the opportunity to experience many things in practise. Through these experiences I felt more competent in some practical skills."

3.1.1 Comparative analysis and interpretation of the students' views before and after the workshop in relation to the theme of competence

When examining the self-efficacy perceptions of participating students before and after the design skills development workshop, it is noteworthy that students mostly felt inadequate in the practise-based theory courses, but indicated that their self-efficacy perceptions in these theory courses improved after the workshop was set up.

3.2 Findings from students' opinions on satisfaction

The findings obtained from the students' opinions on the theme of satisfaction before the workshop are presented in Table 3.

Table 3 Findings from the students' opinions on satisfaction before the workshop

Theme	Codes	f
Satisfaction	Limitation in practice	7
	Material problems	2
	Inefficiency	1

When reflecting on the physical infrastructure of the program, the students were asked to provide information about their satisfaction with practice-oriented courses. When students' answers were examined in this direction, three codes appeared in the table under the theme of satisfaction. All the students stated that they encountered some limitations because the teaching in the school was conducted in the classroom. They expressed these limitations as dissatisfaction with not having enough experience and opportunities to apply what they had learned. In addition, some of the students stated that they could not use the courses efficiently enough because there were only a few areas where they could practice outside the classroom and that they had difficulties finding and carrying the materials they found with them. Below are some of the students' (S2 and S4) direct quotations on this theme before the workshop:

> **S2:** "We always must carry the necessary materials for the lessons. We were unable to find a reliable place to use. I am dissatisfied with this situation. In addition, the opportunities for use in the school for our practise-oriented courses are very limited."
>
> **S4:** "I find it difficult to find an opportunity to implement the tasks set by teachers. While we prepare the task, we prepare it by considering the possibilities of the class, which is not useful."

The findings obtained from the students' opinions on the theme of satisfaction after the workshop are presented in Table 4.

Table 4 Findings from the students' opinions on satisfaction after the workshop

Theme	Codes	f
Satisfaction	Group interaction	3
	Opportunity for experience	2
	Efficient and enjoyable	2
	Availability of materials	2

After the workshop practice, the students were asked to provide information about their satisfaction with the lessons that had to be practiced in the context of physical infrastructure in

the child development program. Four codes appeared in the table under the theme of satisfaction when students' responses were examined along these lines. Some of the students indicated that the interaction with their classmates increased and the lessons were more fun because the lessons to be practiced were in the workshop, while others indicated that they had more experience thanks to the practice opportunities provided by the workshop. They also stated that they could easily access the materials for the course content and that they had access to a secure area where they could access the materials they had brought with them. Below are some of the students' (S2 and S4) direct quotations on this theme after the workshop:

> **S2:** "We achieve our material requirements more easily. We can also leave the materials that we brought from outside the workshop. In addition, my interactions with my classmates improved in the lessons taught in the workshop. This has made the lessons more fun for me."
>
> **S4:** "We started with the theoretical lessons to be practiced in the workshop. The workshop environment increased intimacy. Having our own large workshop where we can assess each area makes teaching more fun and gives us the opportunity to gain experience."

3.2.1 Comparative analysis and interpretation of the students' views before and after the workshop in relation to the theme of satisfaction

While the satisfaction level of students was low before the establishment of the design skills development workshop because of limited practice opportunities in the courses, it is noteworthy that the satisfaction level increased because they had the opportunity to practice a lot after the establishment of the workshop. In addition, the students stated that they were not satisfied that they could not find the materials they needed in the school before the workshop, but had to get them from outside and carry them around the whole time. However, after the workshop was set up, it seemed that the variety of materials in the workshop and the presence of a safe area where students could put the materials they brought with them increased student satisfaction.

3.3 Findings from students' opinions on areas of development

The findings obtained from the students' opinions on the theme of the areas of development before the workshop are shown in Table 5.

Table 5 Findings from the students' opinions on areas of development before the workshop

Theme		Codes	f
Areas of development	Cognitive Development	Lack of practice support for theoretical knowledge	5
		Impermanence of knowledge	2
		Inability to transfer theoretical knowledge to real life	3
	Social-Emotional Development	Lack of social interaction and communication	3
		Concern about professional competence	2
		Monotony	2

When considering the physical infrastructure within the child development program, students were asked to provide information on the impact of their progress on courses requiring practice in their areas of development. When the students' responses were examined along these lines, two categories (cognitive and social-emotional) appeared in the table under the theme of the areas of development. Both categories contain three codes. When examining the cognitive category, most students stated that they could not internalize the information because the theoretical knowledge they had learned in the practical courses of the program was not supported by examples of practice. Additionally, some students (3) stated that the information they learned could not be permanent for the same reason. In turn, two students stated that they would have

difficulties using this information when they become teachers and come into the classroom because they have not experienced theoretical knowledge from the course in a practical setting. This situation was reflected in the findings as an inability to transfer theoretical knowledge to real-life situations.

In relation to the category of social-emotional development, some (3) students stated that theory classes are usually conducted by the lecturer using the oral expression method; thus, peer interaction in the classroom is limited and this situation has a negative impact on their communication with their friends. In addition, two students stated that they felt professionally inadequate because they could not back up their knowledge from the theory courses with practical examples, and this situation led them to worry about their professional lives. Finally, two students stated that theory classes in the study program are usually conducted in such a way that the lecturer explains the topic of the lesson and the student listens, so that the class follows a monotonous structure and, in this case, they experience feelings of boredom during the class. Below are some of the students' (S1 and S6) direct quotations on this theme before the workshop:

> **S1:** "Most of the lessons I learned in school occur in the classroom. The theoretical knowledge we have learned is very important and very good, but since we do not have the opportunity to experience this knowledge in practice, I find that after a while, I forget what I have learned. Especially in exam times." (Category of cognitive development)

> **S6:** "In the hours we spend in the classroom, we learn very good information from our teachers. However, in general, our teachers talk and listen. Occasionally, group work may occur. We love this work very much, but because of the physical structure of the environment, everyone usually forms a group with their deskmates and people around them. Difficult to work with the whole class or with different friends, which has a negative effect on the dynamics in the class." (Category of social-emotional development)

The findings obtained from the students' opinions on the theme of the areas of development after the workshop are shown in Table 6.

Table 6 Findings from the students' opinions on areas of development after the workshop

Theme		Codes	f
Areas of development	Cognitive Development	Acquisition of professional experience	6
		Internalization of knowledge	4
		Transfer of theoretical knowledge to real life	2
		Memorability	2
	Social-Emotional Development	Interaction and communication between peers	5
		Confidence in professional competence	2
		Relationship with children	1
		Be active	1

In examining the students' expressions about the effects of conducting the courses according to the workshop practices, two categories (cognitive and social-emotional) emerged under the theme of areas of development, as shown in the table. Both categories contain four codes. In terms of the cognitive category, almost all (6) students indicated that the opportunity to experience theoretical knowledge during the program's courses in the workshop improved their professional knowledge and enabled them to gain professional experience. In addition, most students (4) stated that they were able to internalize the theoretical knowledge they had learned for the same reason through practice, and this situation increased their success in the course.

When examining the category of social-emotional development, the majority of students (5) stated that as a result of the theoretical lessons requiring practice, they improved their interaction,

communication, and sharing with their friends in group work thanks to the convenience of the workshop's physical structure. Remarkably, one of the students said that they perceived the child-centered structure of the program better, thanks to the practices they did in the workshop. Below are some of the students' (S1 and S6) direct quotations on this theme after the workshop:

> **S1:** "In the workshop we have the opportunity to practise a lot with different materials or materials we have developed. This situation has a positive effect on the skills required for a professional life. By applying the professional knowledge, we have learned theoretically in the workshop, we gain experience." (Category of cognitive development)

> **S6:** "Our new workshop provides a spacious environment where we can work with all my friends. Thank you for this environment, and we greatly enjoy group work. During these studies, I have noticed that I have not only learned something, but that my communication and exchange with my friends has also improved." (Category of social-emotional development)

3.3.1 Comparative analysis and interpretation of the students' views before and after the workshop in relation to the theme of areas of development

In terms of cognitive development, prior to the establishment of the design skills development workshop, students indicated that they were unable to back up the theoretical knowledge they had learned in class with practice, which made it difficult to apply the knowledge in real life. However, it is noteworthy that after the introduction of the workshop in the child development program, the students indicated that internalizing the information they had learned in the theoretical lessons in the workshop made it easier for them to retain it in their memories and apply it in real life.

In terms of social-emotional development, students stated that their communication with peers was impaired because the classroom before the workshop was not suitable for group work due to its structure. However, after the workshop was set up, it was noted that they indicated that even large group activities could be carried out easily because of the opportunities the space offered in terms of use, which increased intimacy and interaction in the classroom. Finally, although the students indicated that they were worried about their professional lives due to the limited practice opportunities before the workshop, their responses that their confidence in their professional skills had improved after the workshop attracted attention.

3.4 Findings from students' opinions on practical problems

The findings obtained from the students' opinions on the theme of practical problems before the workshop are presented in Table 7.

Table 7 Findings from the students' opinions on practical problems before the workshop

Theme	Codes	f
Practical problems	Limitation of the practice	5
	Inefficiency due to limited experience	4
	Limitation of material	3
	Limitation of classroom interaction	2
	Inability to concretize information	2
	Distraction due to limitation of practice	2
	Inability to transfer theoretical knowledge to real life	1

Students were asked to provide details of the problems they encountered in practice-based teaching when thinking about the physical infrastructure of the child development program. When students' answers were examined in this direction, seven codes appeared in the table under the

theme of practical problems. Most students (5) stated that the lack of a practical area in the course was a problem in teaching theoretical courses. Apart from this, it was noted by students that teaching can be inefficient due to lack of experience in theoretical courses, difficulty in finding materials to practice, ineffective group work due to the physical infrastructure of classrooms, theoretical information remaining abstract due to limited practice, and lectures being mostly oral, leading to distraction. Below are some of the students' (S1 and S4) direct quotations on this theme before the workshop:

> **S1:** "We had a problem because we did not have our own practice area. The exercises we performed in the classroom were inefficient. Most of the time, I had difficulty concentrating. Since we did not have a proper classroom environment, we had to pretend. Therefore, what we were learning remained abstract most of the time."

> **S4:** "With the activities we must make in class, the areas of practice in school are not enough. This situation limits interactions in the classroom. Group work was limited. And since we do not have an practice area, we must look for the materials needed for the activities ourselves and take them with us every time."

After the workshop exercises on the theme of "practical problems," all the students stated that they had not encountered any problems in the courses that had to be practiced according to the structure of the workshop.

3.5 Findings from post-workshop students' opinions on design skills development workshop

The findings obtained from the students' opinions on design skills are shown in Table 8.

Table 8 Findings from the students' opinions on design skills development workshop

Theme	Codes	f
Students' opinions	Various practices	5
	Development of vocational skills	5
	Varied material	4
	Entertaining course processes	3
	Development of a sense of belonging	2
	Interaction among peers	2

Students were asked to evaluate the design skills development workshop of the child development program by comparing the old physical infrastructure of the program with the new physical infrastructure. When the students' responses were examined in this direction, six codes appeared in the table among the students' opinions on the design skills development workshop. The majority of students (5) stated that the workshop offers a variety of uses in terms of physical structure, size, furniture, and materials. Again, the majority of students (5) stated that the activities and exercises they were able to perform in the workshop developed the skills they should have for the profession. Additionally, some students (3) stated that the classes in the workshop were much more pleasant than the classrooms they had used in the past. It was also noteworthy that two students stated that their sense of belonging to the school and department had developed thanks to the workshop. Below are some of the students' (S1, S4, and S7) direct quotations on this theme after the workshop:

> **S1:** "In our new workshop we have a large area where we can use every part of it effectively. Previously, when we only used classrooms, lessons were boring and information was hung in the air. It was also difficult to organize the classroom. In our new workshop, we can easily use learning centers. We can design this ourselves. Our opportunities to gain experience have improved a lot."

S4: "In the past, we have learnt very important information in class, but we hardly had the opportunity to apply the information because we lacked space. After we had our workshop, we started to spend most of our time here so that through a lot of practises we develop some skills that we need in our professional life."

S7: "Since we had our own workshop outside the classroom, I was able to interact better with our teachers and friends. In the past, class days were rather monotonous, so it had already become difficult to come to school. After the workshop, my desire to attend school increased, and as soon as I arrived, I immediately went to the workshop. I started to adopt the school and my department."

4 Discussion and conclusion

In this study, a semi-structured interview consisting of five questions was administered to seven child-development students. The findings obtained from the data were analysed and interpreted using the descriptive analysis method. The findings covered the themes of competence, satisfaction, areas of development, practical problems and opinions of the students.

The study concluded that while students felt inadequate in practical theory classes, their self-efficacy perceptions improved in many areas thanks to experiential opportunities after they had a practice area. According to the Child Development National Core Education Program (ÇUCEP, 2016), child development specialists are expected to develop tools, organize the environment, implement programs, and evaluate programs based on their expertise. It is emphasized that a positive change in teachers' attitudes and self-efficacy beliefs is very important and that they feel comfortable teaching the content when they trust pedagogy (Yabaş & Bozoğlu, 2022).

The study concluded that conducting theoretical courses in a child development program in a qualified and equipped practice area in school and having the opportunity to apply the knowledge learned in theory has a positive impact on the students' cognitive and social-emotional skills, both in terms of internalization and permanence of the information and in terms of interaction with peers. According to Tunç et al. (2018), students with positive thoughts about school perform better in relation to school, demonstrate both academic and social skills more successfully, and achieve positive outcomes. In addition, this study found that although student satisfaction was low because they could not back up the theoretical lessons with practice before the design skills development workshop was set up, the fact that they had a usable domain in many ways after the workshop increased student satisfaction.

The study found that the experience of applying theoretical knowledge learned in class in a field with wide-ranging opportunities, such as workshops, increased students' confidence in the profession. It is important to support the development of personality and self-awareness while preparing academically to become an educator (Aslan & Çelik, 2019). On the other hand, university education can be evaluated as a period in which an individual's self and self-confidence can be shaped quickly (Karagözoğlu, 2008). It is thought that child development associated with the degree of students' professional self-confidence will increase their success (Bursal & Paznokas, 2006).

The results showed that the presence of a practice area belonging to the child development program where students can spend an enjoyable, interactive, and productive time strengthens their sense of belonging to the school and department. A sense of belonging to one's workplace, culture, and environment is an important factor for people to find meaning in their life (Mavili et al., 2014).

The study concluded that classroom teaching was not conducive to group work because of the physical structure present and therefore had a negative impact on students' communication and interaction with their classmates. After the design skills development workshop was set up as part of the study, it was found that the area improved communication and interaction between students because of the opportunities provided in terms of usability. According to Apaydın Demirci and İkiz (2017), more comprehensive studies should be conducted in universities to develop students' communication skills, and a democratic and reliable school environment should be created to improve individuals' communication skills. Another result of the research is that conducting the courses in a practice workshop provides an opportunity to experience theoretical knowledge, thus improving students' professional skills and enabling them to gain work experience. According to Baltacıoğlu (1995), education should aim to develop students' professional skills and foster their personality. Uçar (2008), in his thesis investigating the effect of applied course environments in vocational education institutions, revealed that giving courses in practice and theory increases students' professional knowledge and skill acquisition.

The fact that the theory courses in the Child Development program are conducted in a specific practice area prepared in accordance with the program gains has a positive impact on the student in many ways (professional skills, academic success, social development, etc.). In cases where workshops are integrated interactively into the classroom, this can be seen as an important step in practice-based education (Gülhan, 2021).

Finally, as a result of this research, the problems encountered by students in theory courses that require practice (themes of practical problems) are listed below:

- Lack of practice in the program has a negative impact on the flow of theory courses.
- Lessons can be inefficient because of the lack of experience in theory classes.
- It is difficult to find and transport materials in practice.
- Group work is not sufficiently effective because of the physical infrastructure of classrooms.
- Theoretical information remains abstract because of practical limitations.
- Distractions may occur, because teaching is mostly in the form of oral lectures.

The main reason for the problems encountered in this study is interpreted as the limitation of practice support in theory courses. According to Comer and Maholmes (1999), pre-service candidates need more practical support. This study showed that all problems mentioned by students before the implementation of the workshop were significantly resolved after the use of the workshop. In this context, the importance of an area that students can actively use in the child development departments of universities was confirmed, both in terms of professional, social, and cognitive skill development.

4.1Limitations and future directions

- This study was conducted at Aydın Adnan Menderes University Koçarlı Vocational School. Similar studies on infrastructure and its effectiveness can be conducted for child development programs offered at universities in different cities.
- This study was conducted with students pursuing an associate's degree program in child development. Similar studies can be conducted using undergraduate programs in Child Development or other programs within the Faculty of Education as samples.
- In this study, the intended situation was examined using a qualitative approach. Similar studies can be conducted using a quantitative approach by expanding the study population and sample size.
- This study aims to create an infrastructure. In different studies, the effects of such infrastructure can be examined in relation to different variables.

- Finally, workshops, labs, and so on. It is recommended that lecturers in programs with infrastructural facilities be trained to use these facilities.
- This study, which was conducted with a limited number of students due to the earthquake in Turkey, can be replicated with a larger group of participants.

5 Statement of researchers

In this section, you are expected to declare the following information regarding the titles:

5.1 Researchers contribution rate statement

The authors contributed to the study.

5.2 Conflict statement

The authors declare no potential conflicts of interest.

5.3 Support and thanks

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Appendix I

Figure 1 Design skill development workshop

Figure 2 Students at the design skill development workshop