



## Using Storigami as an Instructional Technique: Preschool Teachers' Perceptions

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### ABSTRACT

As an instructional technique, the use of storigami (telling stories through origami) has been spreading all around the world in the last decade. In order to apply this alternative technique which is suggested to be more applicable in the preschool period, preschool teachers' perceptions are of utmost importance. This study aims to elicit preschool teachers' perceptions regarding the use of storigami in their activities. Twenty preschool teachers working in kindergarten participated in this qualitative study. All participants were asked to watch three different videos modelling the application of storigami in the classroom. After they watched the videos, they were required to answer some written questions to identify strengths, weaknesses, opportunities and threats of this alternative technique. Data gathered via SWOT analysis questions were coded by the help of content analysis technique. Findings showed that storigami was accepted as a new technique to increase the interest, attention, motivation and cognitive skills of preschoolers. Additionally, it was also perceived as a great professional development technique for the in-service preschool teachers. On the contrary, the difficulty of this technique for both students and young learners because of the necessity of some specific skills were stated to be considered.

### KEYWORDS

Storigami; instructional technique; preschool education; teachers' perceptions.

## INTRODUCTION

Children begin to recognize, understand, and form connections with the world during the early childhood period, which begins with crying and continues with the child discovering himself/herself and the people and objects around them. While doing these things, the opportunities provided by adults serve as the focal point (Tanju Aslışen, 2021).

In this period when their curiosity, interest and attention is at the highest level, the presentation of creative-supportive learning environments and materials encourages children to research, question, learn and apply what they have learned, and involve them in a rapid developmental change process. Therefore, the environment and materials provided by the parents, who are the adults that children first interact with, and the teachers they meet during the education-teaching process, have great importance (Tanju Aslışen, 2021). This environment and materials contribute to the formation and development of seven basic life skills, which are examined under the sub-titles of communication, critical thinking, lifelong learning, overcoming difficulties, gaining perspective, making connections, focusing and self-control (Galinsky, 2010; Galinsky, 2016).

21st century skills, (P21 in the literature) which are learning and innovation skills, information, media and technology skills, and life and career skills – are similar to these seven basic life skills (Partnership for 21st Century Learning, 2015), critical thinking and problem solving, communication, collaboration and creativity. Learning and innovation skills, which consist of sub-skills, indicate life skills emphasized by Galinsky (2016). Supporting these skills can be provided with different activities and materials, and stories are among the activities that can be used to provide children with unique learning experiences (Tanju Aslışen, 2021). Students who are actively involved in storytelling activities through origami not only develop their critical thinking skills but also problem solving skills which in turn support children's basic life skills such as how to get dressed, find food, explain needs and what to do when ask for something.

Mol et al. (2009) discovered that "an interactive exposure to storybooks can be considered as an effective stimulant for the development of two pillars of learning to read: oral language and print knowledge." Additionally, Golub and Reid (1989) stated that "learning is not so much individual production of acquired knowledge as it is social construction of new knowledge." This kind of social formation is supported by an interactive environment where learning from one another is actively encouraged. Preschool children expressed their enjoyment of various activities that allowed them to express their creativity and collaborate in small groups through hands-on activities. They thought that this gave them a solid foundation for critical thinking because these activities gave them a place to voice their opinions. This supports the idea that students who participate in well-designed interactive activities such as telling stories through origami – storigami, that enable them to take part in class discussions are better able to comprehend and value what they have read and listened to (Golub & Reid, 1989).

Therefore, it is significant to improve and add to the importance of previous literacy strategies such as story telling in line with the developing needs and interests of the children of this age. This study seeks to surface the perceptions of preschool teachers regarding a new strategy called storigami to compensate the lacking of old strategies prior to applying it in their contexts.

## LITERATURE REVIEW

### Origami

The Japanese art of paper folding, origami, is derived from the Japanese terms *ori* (folding) and *kami* (paper) (Katz, 2015). The Turkish Language Society defines it as "a paper folding art to make life-like or inanimate forms that often does not entail cutting or the use of adhesives" (TDK, 2015). Origami can be used to accomplish a variety of educational goals. "Learning by doing, collaborative learning, creative learning, active learning, project-based learning, and brain-based learning are all examples of activity-centered techniques. Origami has been found to aid in the development of motor, cognitive, and creative skills in children as young as pre-school and elementary school" (Tuğrul & Kavıcı, 2002, p.14-15).

Origami has proven to be a powerful teaching and learning tool, particularly in the areas of mathematics and geometry. According to research, origami can be an effective tool in educational settings (Arici & Aslan Tutak, 2015; Canadas, et al., 2010; Zarei & Branch, 2015). The existing literature describes a variety of approaches to employ origami as a learning tool. Paper folding, according to Johnson (1999), can be utilized to pique children' interest in mathematics. Wares (2011) combined origami and geometrical elements in his research. Çakmak, Işıksal, and Koc (2014) claimed that origami had a positive impact on primary school children' spatial ability. Similarly, Boakes (2008) discovered that origami helped students build spatial skills, and she stressed the value of origami in geometry classes. According to Pope (2002), origami can be used to teach geometry. According to Arslan (2012), origami could be a useful tool in pre-service teacher education. Origami, according to Chen (2006), could aid in the teaching of mathematics to hearing-impaired and deaf students. Crystal and molecule shapes depicted by origami figures, according to Ishihara (2014), are not only three-dimensional constructs but also learning materials that can be used in science classes. According to Currier (2015), origami can help with conceptual learning, vocabulary building, and problem-solving. As a result, the research backs up origami's value and effectiveness as a teaching and learning tool.

### Developmental and Educational Contributions of Origami

It is claimed that origami studies allow for the discovery of both individual differences and intercultural universal partnerships; it is claimed that origami can be used as an effective teaching tool, particularly in studies focusing on mathematics, geometric concepts, spatial thinking, and spatial abilities (Akayuure, Asiedu-Addo, & Alebna, 2016; Arc & Aslan-Tutak, 2015; Boakes, 2009; Çakmak, 2009; Dağdelen, 2012). Origami applications allow children to express their feelings and thoughts while also teaching them that paper can change shape in a variety of ways, boosting their self-confidence and problem-solving abilities.

In a study with children aged 5-6 years, Yuzawa and Bart (2002) used the origami method in mathematics training and discovered that it had a substantial impact on the development of children's skills for comparing the proportions of geometric shapes. Brady (2008) investigated the impact of origami on mathematics education in elementary schools and found that it improved emotional (such as enjoyment, interest, pleasure, excitement, pride, and satisfaction), behavioral (continuous active involvement in the class), and cognitive outcomes (the relationship between paper folding and mathematics).

Boakes (2009), in one of her studies reported that origami enhances children's visual skills, and that their interest in lessons grew, and that they demonstrated a positive attitude. Boakes (2009) claims that physical participation of children in origami activity affects bodily-kinesthetic intelligence; verbal-linguistic intelligence to explain the concepts they discover; social-interpersonal intelligence of their involvement in working with their friends; and that following auditory and visual stimuli supports visuospatial intelligence.

As a result of his work detailing the development of origami in early childhood education in Japan over the last 140 years, Nishida (2019) spoke about the benefits and uniqueness of cultural transfer and transformation in art, mathematics, engineering, space technology, cultural studies, peace education, creative design, psychology, and medical science underlined that origami will be a tool for cultural engagement, intercultural or international education, particularly in the field of education.

Different models that grab children's attention provide possibilities for youngsters to follow instructions, follow the model, build attention and concentration abilities, and diversify their achievements in activities. On the other hand, according to other research, increasing children's interest in origami is challenging for teachers, but it is underlined that children find it entertaining and easy, and that their interest and motivation grow as a result (Respitawulan & Afrianti, 2019). Folding origami, which is also utilized as a hypothetical learning approach, is approved as an alternate method (Arslan et al., 2016; Polat, 2013).

### **Storigami**

Origami storytelling is a rarely used educational technique which is explained as a narrative creation exercise. Mastin (2007) coined the term "storigami" to describe the activity of telling stories through origami, claiming that it offers numerous educational benefits, including memory enhancement, improved fine motor muscle coordination, improved left and right brain concordance, and promoting creativity.

Storigami is a basic notion that evolved from a combination of narrative and origami. The paper is folded in ways that describe or envision an action, fiction, or character throughout the reading or telling of a story, and after the story is over, a surprise three-dimensional figure is made. While enjoying the story, the reader or listener's mind aligns the events in the story with the progressive folding processes, and they learn an origami model in the process. Storytelling and origami activities can be shared with children of all ages in small or larger groups at schools, as well as among family members at home (Petrell Kallevig, 2009). Not in the very early ages,

but the children of 4-5 years can be involved in paper folding activities while telling or being told the story.

According to a study, origami aids conceptual learning, language development, and problem solving (Currier, 2015). Mastin (2007) holds that origami storytelling offers numerous advantages, including memory enhancement, fine motor development, improved left-right brain harmony, and creativity stimulation. Oğuz (2016) emphasizes the positive effects of the storigami method, which combines origami and storytelling, on language skills, social, sensory, psychomotor skills, cognitive development, teaching processes, and learning motivation of students in his study, which included the opinions of prospective classroom teachers and aimed to explain how to convey stories through origami.

### **Educational Benefits of Storigami**

The Storigami method has many educational advantages, such as supporting the development of listening and fine motor skills, developing skills related to the right (visualization) and left (language comprehension) hemispheres of the brain, emphasizing multi-sensory integrated learning and memory development, examining and practicing spatial relationships, developing creativity and social skills, and providing additional material in mathematics and language (Petrell Kallevig, 2009).

Children can see the scenes, objects, people, and other details described in the story, which allows them to practice their visualization skills in the right hemisphere of the brain. They can visualize and comprehend symbolic representations of the folds that will be done in subsequent steps. This capacity is sometimes linked to right hemisphere skills that are neglected in standard learning approaches, according to researchers.

Language acquisition skills can be practiced in the left hemisphere of the brain by language comprehension which is predominantly a left-hemisphere skill. Children will be able to understand the words used in the stories recounted with origami, which will help them expand their vocabulary.

The visual, tactile, and aural senses are united to deliver input to the right and left hemispheres, and the brain is fully engaged in the learning environment. Learning is known to be more effective when multiple areas of the brain are active at the same time, and it is highlighted that permanent learning can be accomplished in this manner. Multisensory stimulation and story-telling with folding steps help short-term memory.

Paper handling and folding provide exercise in hand-eye coordination and hand manipulation, which helps to develop fine motor skills. Right and left, front and back, top and bottom, inside and outside, side, parallel, symmetrical, and other spatial relationships can be studied and practiced. Expressions are the fundamental principles of origami that make learning spatial relationships easier.

Moreover, possibilities for developing creativity and social skills include self-confidence and self-esteem are considered key steps in the development of children's social, aesthetic, and creative

thinking skills since they are by-products of effectively learning new skills, having new experiences, and producing new ideas.

Despite all these above-mentioned advantages of storigami, it is surprising that storigami, a method that might be included in pre-school education programs, is almost never used in Turkey, given its benefits to every sector of development in general. This strategy, which can be employed during story reading/telling, is supposed to engage children's attention and, by improving their attention span, make listening and learning more pleasurable and engaging. It is critical for the comprehension and distribution of the storigami method that all professionals and families involved in the education of pre-school children, particularly individuals who enjoy reading and telling stories and are professionally involved in this field, are made aware of this issue.

## METHODOLOGY

### Research Design

The study used a qualitative descriptive approach to explore pre-school teachers' perceptions about the possibility of integrating storigami in their activities. SWOT analysis acted as the major source of data mostly because of the fact that the study aimed at exploring teachers' perceptions of the integration of this new technique prior to investigating its applicability and implementation in real life context.

### Participants

A convenience sampling technique (Patton, 2002) was used as participants were selected from a conveniently available pool of respondents. It is the most commonly used sampling technique as it's incredibly prompt, uncomplicated, and economical through which readily approachable participants can be reached. For the purpose of the study twenty preschool teachers, holding a BA in the field of preschool teaching, participated and responded to the SWOT analysis questions. Eleven of the participants were working in private schools whereas nine of them were in the state schools. Additionally, all of the respondents were female teachers whose year of experience range from 2 to 10 years.

### Data Collection and Analysis

SWOT analysis was used to gather the data in order to explore the perceptions of preschool teachers regarding the use of storigami in their classrooms to support the activities in the kindergartens. In case of the participants' lack of knowledge about this new technique, the researchers made all the participants watch three video clips on the application of storigami (i.e. <https://www.youtube.com/watch?v=HSh9BWYbPuY>). Following the videos, respondents were given a written questions to elicit their ideas about strengths, weaknesses, opportunities and threats that this specific new technique might have while integrating it into kindergarten activities. The questions which were used to investigate participating teachers' perceptions, were field tested with two experts in the field and three teachers who did not take part in data

collection. Upon the ideas and comments of the experts and teachers, the questions were revised.

SWOT (strengths, weaknesses, opportunities, and threats) analysis is a framework used to evaluate a phenomena and an institution's position to develop strategic planning. SWOT analysis assesses internal and external factors, as well as current and future potential. It is used as a guide and not necessarily as a prescription for future planning.

In the SWOT analysis guideline, the respondents were asked twenty questions (5 under each component). Authors 1 and 2 came up with the questions, and the researchers went through multiple rounds of debate to come to an agreement on the questions. Written responses were analyzed through thematic analysis and content analysis strategies.

### **Trustworthiness of the Data**

The goal of every research study is to provide the field with credible and valid results. It is critical, especially for practitioners in a profession, that they are convinced that a method is worth pursuing if it has been demonstrated to be effective. Unlike quantitative studies, where the results can be trusted with figures and statistics and the scope of the study is more likely to be increased, qualitative studies seek answers to difficulties by observing and interviewing people to gain insights into a phenomenon. As a result, one might argue that it is impossible to demonstrate that a qualitative investigation can produce reliable results in the same way that a quantitative study can. Furthermore, qualitative studies may be skewed by the researcher's prejudice, as the study's findings are subjective.

To confirm the credibility of this qualitative study, triangulation of data was conducted as suggested by Fraenkal et al. (2012). To ensure the study's transferability, the circumstances were described in great detail. Furthermore, the open-ended surveys contained a considerable amount of demographic information from the participants, allowing for a more descriptive explanation of the issue. The researcher conducted informal interviews with certain instructors and heads of institutions from various schools to learn more about the contexts in which storigami can be implemented. Additionally, in order to assure the study's dependability, participants were given an open-ended questionnaire first, then invited to elaborate on their responses in focus group interviews. According to Miles and Huberman (1994), two raters working on the same data can reduce researcher bias which is a significant issue to verify confirmability. Two raters independently assessed the data for this investigation. According to Miles and Huberman, 70% consensus on the data is acceptable (1994). Two coders conducted an analysis many times for the current study and came to an agreement on the themes.

## **FINDINGS**

Data gathered to explore the strengths, weaknesses, opportunities and threats that the application of storigami during the kindergarten activities were analyzed through thematic and content analysis. The themes and frequencies related to each theme regarding each component in the SWOT analysis were depicted in tables.

## Strengths

In the following table the participants' perceived strengths of integrating storigami into preschool activities as a new technique were presented. The quotations in relation to the themes can be seen in table 1 as well.

**Table 1.**

### *Strengths of Storigami*

<i>Theme</i>	<i>F</i>	<i>Quote</i>
Attractive	12	<i>When children get bored, and they generally get bored very easily, this technique will definitely help me attract their attention (P 11). Appearance of different shapes by folding a paper and decorating them with a story is more attractive than any regular in-class activity (P 3).</i>
Increases attention span	9	<i>Because of the age group, students are really into stories and integrating different figures and colors through origami definitely increases their attention span (P 15).</i>
Supports creativity	9	<i>Students can be involved in the storigami process which in turn helps improved creativity (P 4). Children are creative from birth; however, they have to be supported with these kinds of techniques. Otherwise, they cannot present their creativity (P 18).</i>
Different technique	7	<i>It is absolutely not similar to regular techniques we have been making use of for years (P 1). This is a very new and different technique. It deserves to be tried for sure (P10).</i>
Develops visual and audial intelligence	5	<i>Both listening to a story and watching a person supporting the story with origami develops the children' visual intelligence as well as their audial intelligence (P 2).</i>
Integration of story and origami	4	<i>Making use of two effective activities in an integrated way can be a better idea for many reasons (P 12).</i>
Fun presentation of knowledge	3	<i>It is generally a difficult task to instruct children of this age. However, by the help of this technique, presentation type can really be fun and enjoyable (P 11).</i>
Improves verbal ability	3	<i>Not only the preschool teacher but also the students can be responsible for making use of storigami. So, both listening and telling definitely improves the verbal ability of the children (P 8).</i>
Others (increases motivation, productivity, hand-eye-muscle coordination, transition from concrete to abstract thinking, cheap)		

The strengths of storigami as a new technique were perceived as being attractive, increasing attention span of the preschoolers, supporting creativity, being a different technique, integrating story and origami, being a fun way of instruction, improving verbal ability, visual and audial intelligence. Some other less frequently mentioned strengths are its role in increasing motivation, productivity, eye-hand-muscle coordination, transition from concrete to abstract thinking. All these themes were also represented by a variety of quotes from the responses of the participants.



In Table 2, perceived weaknesses of storigami as a second component of SWOT analysis were depicted.

**Table 2.**

*Weaknesses of Storigami*

<i>Theme</i>	<i>F</i>	<i>Quote</i>
Requires skill	8	<i>The teacher has to be very skillful at storigami. It is not very practical for all preschool teachers unfortunately (P 2). Teachers must be trained specifically on this technique. Otherwise, students can become bored and the technique can lose the expected effectiveness (P 10).</i>
Difficult skill for preschoolers	8	<i>The children may not be able to do it because of the complicated nature of the technique (P 3). If their hand-eye coordination and thinking skills have not been well-developed, so it can be impractical (P 6).</i>
Passive learning	7	<i>Because of the inability of the preschoolers in applying storigami, they will be mostly passive (P 14).</i>
Long and confusing for preschoolers	7	<i>The concentration span of this age group may not be adequate to follow both a long story and the paper folding (P 6).</i>
Not appropriate for very young learners	5	<i>Especially very young learners can be easily off-task because of the necessity of sitting still and quiet (P 8).</i>
Can be boring	3	<i>Since the preschoolers are used to being active and kinesthetic activities, it can be boring to sit and listen for a period of time (P 2).</i>
Can be demotivating	2	<i>When the students try but cannot do the paper folding together with storytelling, they most probably can be demotivated (P 18).</i>
Others (requires higher order thinking skills, teacher-centered, effectiveness depends on the paper quality)		

The common themes stated by the participants regarding the weaknesses of storigami were generally about the difficulty of its application by both the teachers and the preschoolers and the probability of it to cause boredom and demotivation for the children especially for the very young learners. The most commonly mentioned main reasons were the necessity of in-service training for the teachers, requiring higher order thinking skills for the children.

The third component presented the opportunities this technique might provide to both preschool teachers and children. Most recurring themes and related quotes regarding this component are illustrated in table 3.

**Table 3.***Opportunities of Storigami*

<i>Themes</i>	<i>F</i>	<i>Quotes</i>
Develops language skills	8	<i>Active listening and the trials of the children to retell the story provides a great opportunity to develop language skills (P4). Especially the lexicon of the students increases. And this affects their verbal skills in a positive way (P 8).</i>
Develops cognitive skills	7	<i>The integration of story telling and paper folding gives them a chance to improve their thinking skills and creativity a lot (P 11).</i>
Increase attention span	7	<i>Through continuous use of this technique, attention span of the children might increase (P 17).</i>
Develops teaching skills	7	<i>Teachers need some training to be able to apply this technique in their teaching. This in-service training adds to their professional development (P 2).</i>
Increases interest and motivation	5	<i>By the help of an interesting story, colorful papers and different figures, the students can be focused easily (P 13). Because of being an irregular technique, it can be more motivating compared to the techniques applied all the time (P 11).</i>
Increases communication skills	5	<i>Active listening skills and lexicon of the students most probably increase and these skills reflect in their communication (P 10).</i>
Parent-school collaboration	3	<i>If the parents can also be trained, they can continue making use of this technique at home for varying purposes and this increases the collaboration between parents and teachers (P 5).</i>
Saves material	3	<i>With only one paper, you can teach many concepts (P 9).</i>
Increases readiness level	2	<i>It provides students with creative and thinking opportunities. Therefore, they become more ready for the literacy training (P 18).</i>

As can be seen in the above table, preschool teachers theorized a variety of opportunities when this new technique is applied. Among these opportunities there are some attention-grabbing themes that were mentioned by nearly half of the participants. The opportunity to develop language skills and cognitive skills which are the most recurring themes, can be accepted as very significant since their effect on the upcoming education life and literacy development is a very well-known fact. Moreover, application of storigami is believed to provide chances for teachers and parents as well.

The final component of SWOT analysis explores the threats of application of storigami in preschool education as a new technique. The participants were also asked to explain their perceptions regarding the threats that this technique can cause. Table 4 presents the recurring themes on this component.

Despite not being many, the threats that were uttered by the participants should not be underestimated. And for these themes about the threat that the application of storigami can cause, solutions and preventative suggestions have to be considered.

**Table 4.***Threats of Storigami*

<i>Themes</i>	<i>F</i>	<i>Quotes</i>
Discipline problems	9	<i>Depending on the story, time, and the needs of students, they can get bored and start to cause problems (P 3).</i>
Paper can be torn	8	<i>The paper used can be torn during the story telling and the activity has to end (P 11).</i>
Teacher centered	5	<i>When the teacher makes use of storigami, students are very passive (P 14).</i>
Lack of interaction	5	<i>Students do not interact with each other. This is against their nature (P 13).</i>
Feeling of being low-achiever	3	<i>When students try this technique themselves, they can have difficulty. And if they cannot manage, they might feel bad (P 1).</i>
Can cause making fun of	3	<i>Students can make fun of the student who has trouble while folding the paper (P 2).</i>
Can be boring	2	<i>Listening all the time might be boring (P 8).</i>

**DISCUSSION and CONCLUSION**

This study aimed at investigating the opinions of preschool teachers regarding the applicability of storigami, a new technique, in their activities with preschoolers. The findings of SWOT analysis revealed various perceptions about the strengths, weaknesses, opportunities and threats of this technique for both students and preschool teachers.

Among the mostly recurring themes regarding strengths of storigami include; its being attractive, supporting creativity, being a different technique, and its positive effect on the development of visual and audial intelligence and improvement of verbal ability. These results support the paper folding which is known as origami as an effective instrument in education (Arici & Aslan Tutak, 2015; Canadas et al., 2010; Zarei & Branch, 2015). Specifically, as Johnson (1999) claimed in his research, paper folding is a useful technique to grab the students' attention and increase their interest in the subject. Additionally, the results of this study about the positive impact of Storigami on students' intelligence can be accepted as a parallel result with Cakmak, Iskal, and Koc (2014) in which they claimed that origami had a positive impact on primary school children' spatial intelligence. Similarly, Boakes (2008) also discovered that origami helped students build spatial skills. Another result which is about the increased interest in the lesson is also supported by another research (Boakes, 2009). Even though these parallel studies are mainly about the impact of origami, it is not difficult to guess the better or more impact of storigami which is the combination of two important instruments in teaching (i.e. story and origami) on education.

The strengths underlined by the participants were also stated by Respitawulan and Afrianti (2019). In their study, findings also reveal the benefit of making use of paper folding to build attention, increase concentration abilities, their interest and cause higher motivation.

Some other studies whose specific foci were on storigami also support the results of this study regarding the strengths of storigami. Currier (2015), Mastin (2007) and Oğuz (2016) express the positive impact of storigami on children's fine motor development, improved left-right brain harmony, and creativity stimulation, language skills, social, sensory, psychomotor skills, cognitive development, teaching processes, and learning motivation which are all parallel to the perceived strengths and opportunities mentioned by the participants in this research.

Despite all these above-mentioned strengths and opportunities both in previous research and this study, threats and weaknesses have not been researched and stated previously. However, as any kind of technique, storigami also presents some weaknesses and negativities that can be accepted as threats in preschool education. According to the perceptions of participants who took part in this study, the difficulty of paper folding, its being long and confusing, the skill necessary to manage it, students' being passive and the probability of its being boring and demotivating in turn are some common weaknesses. Moreover, the possibility of paper's being torn, and the discipline problems as a result of getting bored are listed among the probable threats.

As a final point, despite not mentioned so frequently, the participants' opinions about the impact of storigami on preschool teachers should also be mentioned. Among the recurring themes of SWOT analysis, it is clear that participants accept this technique as a new experience for their professional development. This is mostly because of the need to develop some skills to perform storigami in their classes effectively. On the other hand, they also mention the difficulty of gaining these skills and not being able to manage to make use of this technique if they cannot gain the necessary skills.

To conclude, this study which was conducted with the aim of investigating the perceptions of preschool teachers about the use of storigami in preschool education, revealed a variety of significant findings which all contribute to the field of education. It is obvious that storigami was accepted as a new technique that will increase the interest, attention, motivation and cognitive skills of preschoolers. It was also believed to be a great professional development technique for the in-service preschool teachers. On the contrary, the difficulty of this technique for both students and young learners because of the necessity of some specific skills should not be ignored as stated by the participants.

### **Implications**

The results of this study suggest some valuable implications for a variety of subfields in education. First of all, by being a new technique of which strengths and opportunities have been accepted, storigami should be integrated in preservice teacher education programs. Secondly, it should not be limited to only preschool education and mathematics as mentioned in the literature. Its perceived positive impact on the development of students' cognitive skills and verbal abilities suggest that it can be tried as a new technique in all majors.

Moreover, it should be introduced to in-service teachers through in-service teacher education programs. Introducing this new technique will be beneficial both in terms of gaining

new teaching skills and learning an effective and new technique which has great many advantages.

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