Examining Early Childhood Educators' Creative Behaviors with Regards to Different Variables: Contributions of Teaching Self Regulation and Self-efficacy of Game Teaching

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Abstract

There is a growing interest in promoting young children's creative thinking and creative learning outcomes. Creativity in education has become increasingly significant and popular among policymakers. Teachers should be able to recognize and empower students' creative behaviors in their regular classroom interactions and learning environments to encourage creativity in a classroom. The role of creative behaviors in the relationship between teaching self-regulation and self-efficacy of teaching game activities is examined in this study. In this sense, to explain creative teacher behaviors, social skills, teaching self-regulation, and game self-efficacy is tested as structural equitation modeling. Designed as correlational survey research, the sample of the study comprises 151 early childhood educators (73.% women) working in the city of Kirsehir, Turkey. Participants reported on creative classroom behaviors, self-efficacy about the game activities, and teaching approach. Data of the study is collected with three data collection tools: the Creativity Fostering Teacher Behavior Index teachers' creative classroom behaviors CFTIndex; [9], [10] self-efficacy about the game activities survey form [6],Teaching Self Regulation Scale (TSRS; [2]). The correlations between latent variables were determined according to Pearson Correlation Coefficients. Participants reported on creative classroom behaviors, self-efficacy about the game activities, and teaching approach. It is concluded that teacher creative behaviors in early childhood education for promoting young children's creativity are a significant factor in the teacher professional development of attitudes and beliefs towards promoting creative thinking skills. All results and implications for practice were discussed.

Keywords: *Early childhood education, teacher, creativity, creative behaviors*.

1. Introduction

Early school years have been characterized as a "critical period" for children's development during which children need to enable their whole potential and creative minds in order to increase academic demands alongside new social relationships in the school setting. Creativity in early childhood education has an critical role on children's early academic and social success in school which has implications for their later success. It is hard to discuss the importance of early academic success for long-term academic achievement [3], [13]. One way students learn to be creative is by imitating the behavior of their teachers. This is especially true of younger children. When teachers behave creatively, the students are likely to emulate them and behave likewise. Such social modeling or observational learning, originated by Albert Bandura's theory, is the young students' natural way of learning, and it occurs in the natural social environment where models are readily available [11], [13].

Teachers cannot develop the creative abilities of their pupils if their creative skills are suppressed [12]. Kettler and his colleagues (2018) built a framework about the implications of creative teaching for teachers divided into five steps following: (1)Teaching Creative Thinking Strategies (divergent thinking, brainstorming, using analogies, redefining a problem, or Synectics, metacognitive strategies) (2) Opportunities for Choice and Discovery (3) Intrinsic Motivation 4) Environment Conducive to Creativity (Encouraging inquiry, curiosity, exploration, and self-directed learning, risk-taking and makes students aware that they will not be penalized for failing) (5) Imagination and Fantasy (Developing creative learning experiences where students enable imagination and fantasy to real-world situations and problems) [7].

1.1. The Current Study

Although several studies have examined teachers perceive creativity and creative children in educational processes (e.g., [1]; [13], there has been no research about investigating teachers' creative behaviors and understaning factor and dynamics in terms of different variables. In the current study, the behavior is 'a practical action' to actualize the concept of creativity and present a concrete perspective for educational settings. Also, the creative behaviors involve implications that solving problems effectively and innovatively, communicating with students by generating ideas and challenges with looking through new ways and strategies. Creative behavior may be accepted an ability to come up with an idea or solution in the classroom for students and teachers, tangible environments and corners.Teaching self regulation is related to teachers' teaching quality and effectiveness are major components for well qualified education. Self-regulated teaching is becoming the new innovative strategy for quality teaching [8]. Game based learing could be also accepted innovative strategy to foster creative thinking in the classroom environment. To address the knowledge gap related to preschool teachers' creative behavior related to their teaching self-regulation and game teaching self-efficacy; in the current study, I aimed at how to contribute teaching self regulation and teacher self efficacy abput game teching to teachers' creative behaviors.

2. Method

I recruited 151 preschool teachers from central Turkey. Teachers' average teaching experience was 11.6 years/months at time 1(fall semester) and 12.09 years/months at time 2 (spring semester).

2.1. Measures:

Teachers reported on the Creativity Fostering Teacher Behavior Index teachers' creative classroom behaviors (CFTIndex; [9], [10]   at time 2 and   self-efficacy about the game activities survey form[6], Teaching Self Regulation Scale (TSRS; [2]) at time 1.

- **Teacher Self-Regulation Scale (TSRS):** The TSRS is 40 items 6-point Likert scale from "strongly disagree" to "strongly agree" Dimension(s): 9 dimensions (goal setting, intrinsic interest, performance goal orientation, mastery goal orientation, self-instruction, emotional control, self-evaluation, self-reaction, help-seeking to asses the quality of the Teacher self-regulation by examining a multidimensional construt. Sample items: (1)Goal setting "*While I am preparing classes, I identify goals to be achieved by students.*" (2) Intrinsic interest *"It makes me happy to see my students learn."* (3) Performance goal orientation "It is important to be a successful teacher in order to get the promotion." (4) Mastery goal orientation *"It is important to be a successful teacher in order to satisfy myself professionally."* (5) Self-instruction "*During instruction, I adapt my instructional strategies based on student's needs.*" (6) Emotional control "*When a problem occurs in class, I first try to calm down." (*7) Self-evaluation *"At the end of instruction, I try to determine whether I met my goals."* (8) Self-reaction *"Realising that I am successful motivates me to study more."* (9) Help-seeking *"I ask for help from my colleagues when I encounter problems that I cannot solve."*

- **Game Teaching Self Efiicacy Survey in Early Childhood Education:** It is a 34-item scale, 5 point scale which has four subscales: self efficacy of planning, implementing, assesing, teaching profession regarding game based acitivites. It was designed to assess the quality of the self efficacy of game-based learning teaching from their own perspectives.Cronbach Alfa α = .90

- **The Creativity Fostering Teacher Behavior Index:** The 45 statements and nine sub scales of teacher creative behaviors were presented in the form of six-point Likert-type scales. It is a data collection tool to asses the Creativity-fostering Teacher Behavior Index (CFTIndex; [9]) was crafted, based on [4] Cropley's (1995) review, by operationalizing each of the nine classroom ecological characteristics in terms of five behavioral statements. According to Cropley[4], creativity-fostering teachers are those who habitually do the following when interacting with their students: 1. Encourage students to learn independently 2. Have a cooperative, socially integrative style of teaching 3. Motivate their students to master factual knowledge, so that they have a solid base for divergent thinking 4. Delay judging students' ideas until they have been thoroughly worked out and clearly formulated 5. Encourage flexible thinking in students 6. Promote self-evaluation in students 7. Take students' suggestions and questions seriously 8. Offer students opportunities to work with a wide variety of materials and under many different conditions 9. Help students to learn to cope with frustration and failure,

so that they have the courage to try the new and unusual. Each of these nine conditions was given a single-word label and was operationalized in terms of teacher behaviors in the classroom contexts in the development of the Creativity-fostering Teacher Behavior Index (CFTIndex; [9]). The nine conditions of examples are briefly explicated below: 1. Independence: I encourage students to show me what they have learned on their own. 2. Integration: In my class, students have opportunities to share ideas and views. 3. Motivation: Learning the basic knowledge/skills well is emphasized in my class. 4. Judgement: When my students have some ideas, I get them to explore further before I take a stand. 5. Flexibility: In my class, I probe students' idea to encourage thinking. 6. Evaluation: I expect my students to check their own work instead of waiting for me to correct them. 7. Question: I follow up on my students' suggestions so that they know I take them seriously. 8. Opportunities: I encourage my students to try out what they have learned from me in different situations. 9. Frustration: My students who are frustrated can come to me for emotional support CFTIndex; [9], [10].

2.2. Analysis

First, data was run descriptive to examine whether normality was present or not. And, then I ran hierarchical regression analyses to predict teachers' creative behaviors from teaching self regulation and self efficacy of game teaching in early childhood education. And also, I created interaction terms for moderation models by using standardized scores (z-transformations).

3. Results
- Results showed that higher levels of teaching self regulation (TSRS) (β = .42, t = 2.78, p = .006) and lower levels of game based teaching self efficacy (β = -.47, t = -4.84, p < .001) predicted higher levels teachers' creative behaviors.
- However, there was no interaction between game based teaching self efficacy and teaching self regulation when predicting teachers' creative behaviors (β = .38, t = 1.62, p = .11).

4. Some Points Discussions
- Results from the current study revealed that higher levels of teaching self regulation scores and lower levels of game self efficacy predicted higher levels teachers' creative behaviors.
- This finding could be explained by the notion that creative behaviors of teachers may be perceive the teacher's needs and relationships from different perspectives. In terms of giving the importance of parental involvement in early childhood, the quality of the relationship established between parents and teachers could be reflected in children's developmental outcomes and innovative experiences and working habits ([3]; [1]).
- The results of this study about teacher-child relationships can be looked at from some points of view. Firstly, all teacher do not enter the academic and professional arena with equal chances of developing high-quality relationships with their teachers. Many of the predictors may not be not changeable, as I can certainly not alter factors such as teacher gender, level of educational background, ability and interest. However, it is within our realm of ability to explore why these early childhood characteristics impact teacher perceptions of relationship quality. Also gained to the task of increasing teachers' abilities to provide positive and creative social and emotional learning environments, improving students' learning and behavioral adjustment [4], [7].

4.1. Limitations
All measures were teacher-report which may bring bias into reports of the perceptions and cause the shared variance between constructs. A small sample size may lead us not to detect some of the effects. Data were collected from one city, so future research should collect from more diverse samples within Turkey to generalize the results. Teachers' creative behaviors could also be observed rather than relying on teacher report.

4.2. Implications for Practice

Implications for Practice can be looked at from several points of view for teachers
- **First-Communicate –** It is the key to success, and keeping teachers involved in their 's professional development is critical. It is also strategic teacher based innovative projects and

action research involvement implication to establish relationship between teachers and their students.

- **Second-Sustainable Professional Development-** All teachers on improving relationship quality with students may be an important consideration in developing high-quality teacher-training programs. **Educate and Support Teachers for an Effective Teaching Environment–** Teachers also may guide parents in supporting their children for their academic goals such as Math or language domain. They need a broad perspective how to support their children's creative learning.**Positive Perceptions and Attitudes of Creative Teaching Skills and Creative Minds –** Informing parents about what their child is doing or child's development by sending a note home visiting or an email.Teachers' lack of knowledge may cause discrepancies in children's development of creativity in early childhood. **Be involved** in different kinds of disciplines such as art, science and humanities in teacher education – This creates a positive **multidimensional relationship** between teacher and children to support and increase children's develomental and academic outcomes in the context of fostering the creativity.

- **Third-Establishing positive, secure relationship between teacher and their colleagues, managers, teacher and his/her students and their parents s**o that they feel more secure and ready to start a positive day of creative teaching. However, if school administration or education policy-makers do not support teachers in their creative skill development, these important behaviors of teachers regarding the development of creativity in children will not make it into practice.

4.3. Conclusion

Creativity is a broad, multidimensional and abstract concept for transferring its application to the education process. Thus, it is obvious that teachers and even early childhood educators need to be provided with concrete meaningful experiences to understand creativity in the education process deeply [13], [5]. To summarize the findings, s**ustainable teacher education** grips with the new ways of learning to best support and guide students through their teaching journey. In that sense, **sustainable teacher education** is an important factor scaffolding children's academic domain through creating positive school environment in the context of this current study findings such as teaching self regulation. It may be especially important to place children who enter school at-risk of poor teacher–child relationships with high qualified teaching self regulated teachers who are able and invested in forming close and supportive relationships. It is highlighted is the interactive teaching and freedom in expressing ideas within a comfortable environment as part of the creative school philosophy supports children's active participation and interaction in the classroom

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