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EXPLORING CREATIVE THINKING SKILLS AND CREATIVITY IN ENGLISH
COURSES: A CASE STUDY OF TWO CONTINUUM INTERNATIONAL
BACCALAUREATE SCHOOLS IN TÜRKİYE

A DOCTORAL DISSERTATION

BY

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THE PROGRAM OF CURRICULUM AND INSTRUCTION

İHSAN DOĞRAMACI BILKENT UNIVERSITY

ANKARA

SEPTEMBER 2025

2025

To my family



Exploring Creative Thinking Skills and Creativity in English Courses: A Case Study
of Two Continuum International Baccalaureate Schools in Türkiye

A Dissertation

Submitted in Partial Fulfilment of the Requirements

for the Degree of Doctor of Philosophy

in

Curriculum and Instruction

by

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The Graduate School of Education

of

İhsan Doğramacı Bilkent University

Ankara

September 2025

İHSAN DOĞRAMACI BILKENT UNIVERSITY
GRADUATE SCHOOL OF EDUCATION

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August 2025

I certify that I have read this doctoral dissertation and have found that it is fully adequate, in scope and in quality, as a dissertation for the degree of Doctor of Philosophy in Curriculum and Instruction.

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ABSTRACT

Exploring Creative Thinking Skills and Creativity in English Courses: A Case Study of Two Continuum International Baccalaureate Schools in Türkiye

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PhD in Curriculum and Instruction

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Creative thinking skills and creativity are essential competencies for the 21st century and have become integral to modern educational frameworks. The International Baccalaureate (IB) is known to include these skills across the Primary Years Programme (PYP), Middle Years Programme (MYP), and Diploma Programme (DP). This concurrent mixed-methods case study investigates how creativity and creative thinking skills are defined, perceived, and operationalized in English classes in two continuum IB schools in Türkiye. Data were collected through semi-structured teacher interviews, teacher and student questionnaires, class observations, curricular document analysis, and student written outcome samples, all of which ensured triangulation of perspectives. The findings indicate that the IB curricula foster creative thinking skills and creativity both explicitly, through Approaches to Learning (ATL) skills, and implicitly through the broader curricular philosophy. However, there are still challenges, including teachers' misconceptions about the distinction between creativity and creative thinking skills, ambiguity created by grouping creative and critical thinking under the same ATL category, and time constraints that limit systematic integration. To address these issues, Lin's (2011) Creative Pedagogy Framework was revised to include creative thinking skills as a fourth component alongside teaching creatively, teaching for creativity, and creative learning. The final version of the Creative Pedagogy Framework for Continuum IB Schools redefines these components from an IB perspective and provides structured guidance for more consistent integration into classroom practice. While the study's scope was limited to two schools, it offers a foundation for further research in other IB contexts and contributes to the broader discourse on creativity in education.

Keywords: creativity, creative thinking skills, creative pedagogy, International Baccalaureate, the IB curricula.

ÖZET

İngilizce Derslerinde Yaratıcılığın ve Yaratıcı Düşünme Becerilerinin İncelenmesi:
Türkiye’de İki Uluslararası Bakalorya Okulunda Bir Vaka Çalışması

Seçil Chousein Oglou

Eğitim Programları ve Öğretim Doktora Programı

Danışman: Doç. Dr. Armağan Ateşkan

Eylül 2025

Yaratıcı düşünme becerileri ve yaratıcılık, 21. yüzyıl için temel yeterliliklerdir ve modern eğitim programlarının ayrılmaz bir parçası haline gelmiştir. Uluslararası Bakalorya (IB), bu becerileri İlk Yıllar Programı (PYP), Orta Yıllar Programı (MYP) ve Diploma Programı (DP) boyunca dahil etmesiyle bilinmektedir. Bu eşzamanlı karma yöntemli durum çalışması, Türkiye’deki iki IB süreç okulunda İngilizce derslerinde yaratıcılığın ve yaratıcı düşünme becerilerinin nasıl tanımlandığını, algılandığını ve uygulamaya geçirildiğini incelemektedir. Veriler, öğretmenlerle yapılan yarı yapılandırılmış görüşmeler, öğretmen ve öğrenci anketleri, ders gözlemleri, eğitim programı doküman analizleri ve öğrenci yazılı ürün örnekleri aracılığıyla toplanmış ve böylece farklı bakış açılarıyla veri çeşitlemesi sağlanmıştır. Bulgular, IB eğitim programlarının yaratıcılık ve yaratıcı düşünme becerilerini hem doğrudan, Öğrenmeyi Öğrenme (ATL) becerileri aracılığıyla, hem de dolaylı olarak genel eğitim programı felsefesiyle desteklediğini göstermektedir. Bununla birlikte, öğretmenlerin yaratıcılık ile yaratıcı düşünme becerileri arasındaki ayrımı konusundaki bazı yanlış algıları, ATL belgelerinde yaratıcı ve eleştirel düşünmenin aynı kategori altında toplanmasının yarattığı belirsizlik ve sistematik entegrasyonu sınırlayan zaman kısıtları gibi bazı sorunlar devam etmektedir. Bu sorunlara yanıt olarak, Lin’in (2011) Yaratıcı Pedagoji Çerçevesi, öğretici yaratıcılık (teaching creatively), yaratıcılık için öğretim (teaching for creativity) ve yaratıcı öğrenmenin (creative learning) yanı sıra yaratıcı düşünme becerilerini dördüncü bileşen olarak içerecek şekilde revize edilmiştir. IB Süreç Okulları için Yaratıcı Pedagoji Çerçevesi’nin son versiyonu, bu bileşenleri IB perspektifinden yeniden tanımlamakta ve sınıf uygulamalarına daha tutarlı bir biçimde entegre edilmesi için yapılandırılmış bir rehber sunmaktadır. Çalışmanın kapsamı iki okul ile sınırlı olsa da, diğer IB bağlamlarında yapılacak araştırmalar için bir temel sunmakta ve eğitimde yaratıcılık üzerine katkıda bulunmaktadır.

Anahtar Kelimeler: yaratıcılık, yaratıcı düşünme becerileri, yaratıcı pedagoji, Uluslararası Bakalorya, IB eğitim programları

ACKNOWLEDGEMENTS

Writing a dissertation is both a journey of self-discovery and an exploration of the chosen field of study. While the act of writing is an isolated endeavor, the dissertation journey itself is inherently collective. Many individuals have supported me academically, socially, and personally. I would like to thank them for their time, guidance, and encouragement.

First and foremost, I would like to extend my deepest gratitude to my supervisor Assoc. Prof. Dr. Armağan Ateşkan. Her academic expertise, professionalism, and patience enabled me to persevere through this long and demanding process. With her constant guidance, support, and prompt feedback, I managed to complete this dissertation. She has understood me remarkably well, provided supervision with great care, and has been a role model. It has been an absolute privilege to work with her.

I would like to extend my sincere thanks to Assoc. Prof. Dr. Hilal Peker and Asst. Prof. Dr. Jale Onur, members of my dissertation monitoring committee and defense, whose academic expertise, comprehensive feedback, and patient guidance offered new perspectives at every stage. Their input greatly enriched this study, and I feel extremely fortunate to have benefitted from their supervision.

I am also grateful to Prof. Dr. Alipaşa Ayas for his insightful feedback during the defense and for his steady support throughout the doctoral process, as well as to Prof. Dr. Çiler Hatipoğlu for her constructive comments during the defense. Having them as members of my defense has been an honor.

I wish to acknowledge İ.D. Bilkent University for granting me the opportunity to pursue this doctoral program with a scholarship. The university

library, a haven for researchers, also deserves recognition for providing access to a wide range of printed and online resources.

Special appreciation is extended to those who supported me during and prior to data collection. I am especially grateful to the late Asst. Prof. Dr. John O'Dwyer, whose academic and logistical support was invaluable. I also wish to thank the coordinators in both schools, who generously dedicated time to my research despite their demanding schedules. My heartfelt appreciation goes to all the teachers and students who participated in this study; for each participant, a sapling has been donated to TEMA Foundation.

I am grateful to Ebru Atakurt, H. Feyza Sütçü, Gamze Güner, Dr. Görkem Aydın, and Steve Hobson for their feedback on the scales I designed for data collection and analysis. I also would like to thank Asst. Prof. Dr. Necmi Akşit for his guidance and for his corrections on the final formatting.

I would like to thank my fellow doctoral classmates—Bengü Cıralı, Ebru Atakurt, Sinem Koparmal, and Sinem Maden—for sharing both the joyous and challenging moments of this journey.

I would like to thank my esteemed colleagues at Bilkent University English Language Preparatory Program for their enthusiastic support throughout this long process. I feel fortunate to be a member of this community. I am thankful to my line manager, Ümran Board, for her constant support and trust in me. My gratitude further extends to Dr. Elif Şen and Dr. Hilal Atlı, whose wholehearted support helped me feel at ease during the defense.

I extend my sincere appreciation to my dear friends, both in Ankara and those further away, whose support sustained me throughout this process. Their thoughtful presence—through checking in, sharing laughter, engaging in meaningful

conversations, and, most importantly, respecting my need for space—has been invaluable.

Finally, I wish to acknowledge my parents, who taught me to be independent and resilient. I would like to thank my sister, for her wit, thoughtful care and encouragement. She patiently listened to my long voice messages and responded to each always offering a fresh perspective with a great sense of humor. I also would like to thank my husband, for his unwavering support and patience through every high and low, for his uplifting companionship, and for reminding me to enjoy the process—this dissertation could not have been completed without his support. And special thanks to my beloved daughters, my wise Lokum and my sweet little NuNu—blessings in my life.

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CHAPTER 1: INTRODUCTION

Introduction

This chapter introduces the background of the study providing the necessary information for its scope. 21st century skills, creativity, creative thinking skills and also the International Baccalaureate (IB) constitute some of the key aspects introduced in this chapter as the study investigates how creativity and creative thinking skills are infused into curriculum design and implementation in English classes in two continuum IB schools in Türkiye. The chapter then presents the problem, purpose of the study, research questions, significance and its limitations. It concludes with the definitions of the key terms.

Background

The history of human civilization is characterized by recurrent cycles of wars, pandemics, and suffering, yet it has also witnessed national and individual triumphs that have temporarily alleviated these adversities. Within this historical trajectory, creativity emerges as a complex phenomenon. It has, on one hand, caused mass destruction when used for destructive purposes during wartime. On the other hand, it has been the driving force behind transformative breakthroughs in science, medicine, design, art, literature, and education. In the context of the 21st century, creativity is of great importance and it holds the potential to serve as a critical mechanism for addressing multifaceted global challenges as long as it is strategically and ethically applied.

Rather than relying on the emergence of exceptionally creative individuals, it is necessary to conceptualize creativity as a teachable construct. Despite its

conceptual complexity, creativity can be intentionally nurtured and it can equip individuals with one of the most indispensable competencies of the modern world. It also enables them to realize their potential across different domains. Similarly, creative thinking skills are indispensable cognitive skills that require explicit focus in curriculum and instruction. These skills are necessary to bridge the gap between creative potential into creative performance (Larraz-Rábanos, 2021). Therefore, education assumes a significant role in ensuring that learners, particularly within K–12 contexts, are provided with structured opportunities and pedagogical guidance to develop creative thinking skills and enhance their creative capacities. To this end, both the IB and the 21st century skills frameworks offer some curricular approaches fostering creativity and creative thinking skills.

In this regard, the IB is widely seen as a leading global educational framework committed to fostering creativity, creative thinking and higher-order thinking skills. Rather than conceptualizing creativity as an isolated competency, the IB embeds creativity and creative thinking as integral components across its written curricula. Considering these factors, the present study seeks to delineate the interchangeably used concepts of creativity and creative thinking skills through the lenses of creative pedagogy in two IB continuum schools in Türkiye and aims at examining the implications.

21st Century Skills Frameworks

Living and working conditions and also the highly competitive environment both in school and in business life in the 21st century require many specific skills which enable individuals to cope with the demands of this century. Considering the current and future demands of education, work and commerce, 21st century skills are needed to be in various curricula so that they could be taught and assessed in

education and in other domains. These skills are framed variously by different approaches (Geisinger, 2016). To exemplify, Ananiadou and Claro (2009) divided them into four categories in the OECD framework: cognitive, intrapersonal, interpersonal and technical skills and three dimensions: information, communication, ethics and social impact. However, Soland, Hamilton and Stecher (2013), for example, included the three components of the OECD framework leaving technical skills out. Considering the suggested frameworks organizing 21st century skills, one of the common points of all these suggested frameworks is creativity. However, it is included under different categories such as learning and innovation skills (the Partnership for 21st Century Learning, 2007) or cognitive competencies (Soland et al., 2013). Interestingly, even though creativity is present in these aforementioned 21st century skills frameworks, how it is defined in each framework differs considerably. Similarly, its definitions in other domains such as psychology, education or arts varies. This accounts for the challenge in creativity research.

Critical thinking, communication, and collaboration are the other 21st century skills and similar to creativity, they are the common points some 21st century skills frameworks share. However, Soland et al. (2013) categorized these three dispositions under cognitive and interpersonal competencies. Communication is defined as one of the skills which is directly related to language teaching and learning (Barrot, 2019). Although these four skills, critical thinking, communication, collaboration and creative thinking, are placed in different categories in 21st Century Skills frameworks, they are often referred as the 4Cs of 21st Century Learning (Bedir, 2019). The integration of those four skills has been achieved in many curricula across schools (Fahim & Shirkhani, 2011; Halpern, 2014; Johnson et al., 2015). Furthermore, teachers' and students' perception of communication and critical

thinking skills have been investigated through different studies carried out at university and at different grade levels (Alazzi, 2010; Choy & Cheah, 2009; Veliz & Veliz-Campos, 2019). However, the role of creativity and creative thinking skills in foreign language curricula and how they are perceived by teachers and students need to be investigated in more depth (Cremin et al., 2009; Davies et al., 2014).

Creativity

In addition to being one of the 21st century skills, creativity is one of the complex cognitive processes that requires a variety of neural areas and brain functions to be utilized during creative thinking process (Gnezda, 2011). Creativity is generally associated with the right brain and it is believed that creativity and imagination help learners use the right brain actively. However, there is no evidence from cognitive neuroscience supporting the idea that creativity is linked to a specific area in the brain (Sawyer, 2012 cited in Zhou, 2018). Rather, “creativity involves the whole brain” (Zhou, 2018, p. 22) meaning it requires the activation of various networks in different areas in the brain. Throughout the creative process, the left and the right hemispheres work together as opposed to the common belief (Kaufman et al., 2010 cited in Zhou, 2018). Thus, learning a foreign language which is based on forming connections and making use of these connections at all stages of learning (Oxford, 1990) needs to be fostered with the help of creativity and creative thinking skills.

Creative Thinking Skills and Critical Thinking Skills

In the IB curricula and in the 21st century skills frameworks critical and creative thinking skills seem to co-exist as suggested by Halpern (2006), who shared that these thinking skills are complementary rather than independent skills. However, as critical thinking skills are beyond the scope of this study, they were not included.

Nevertheless, the difference between these thinking skills needs to be clarified because problem-solving in academic and daily life in the 21st century require learners to go through the stages of both critical and creative thinking (Marin & Halpern, 2011, Özgenel & Çetin, 2017). Critical thinking consists of complex processes and skills known as using higher-order reasoning processes for targeted outcomes, questioning the source of knowledge, testing the validity of the information acquired, analyzing the reliability of the information and finding appropriate explanations for specific tasks and justifying personal arguments (Akpur, 2020; Almeida & Franco, 2011; Sternberg, 1999; Ülger, 2016). Creative thinking skills, on the other hand, consist of both deductive and inductive thinking as well as mainly consisting of divergent thinking, particularly the generation of novel ideas (Wechsler et al., 2018). In simpler terms, critical and creative thinking should be explicitly taught, for which the teacher and the curriculum should aim to cultivate learners' thinking skills along with metacognitive skills (Fairweather & Cramond, 2010).

International Baccalaureate Organization

International Baccalaureate Organization (IBO) was founded in 1968 in Switzerland offering four programs to students between the ages 3 and 19. Primary Years Program (PYP), Middle Years Program (MYP), Diploma Program (DP) and Career-Related (CP) Program are the programs offered worldwide for the age ranges 3 to 12, 11 to 16 and 16 to 19. IB schools that offer all three programs are called IB continuum schools. The programs prioritize thinking critically and independently in addition to focusing on inquiry with care and logic (IBO, 2019b). IB curriculum is developed and promoted by IB teachers and coordinators over 5000 schools

across 160 countries. As of October 2024, there were 2,426 schools offering PYP, 1,867 schools offering MYP and 3,799 schools offering DP (IBO, 2025b).

The IB's mission is to "create a better world through education" (IBO, 2019a). To this end, its aim is to nurture internationally-minded, knowledgeable, and careful young people who can take part in creating a better world (IBO, 2019a) through inquiry. The IB Learner Profile (Appendix A) is the frame of the necessary attributes of these young individuals who aim to become responsible members of their local and global communities (IBO, 2019a). In addition to the IB learner profile, each IB program underpins learning through the integration of approaches to learning skills (ATL) and its encapsulating learning community.

The IB PYP, MYP and DP

IB programs are "philosophically aligned, each centered on developing attributes of the IB Learner Profile." (IBO, 2025d, para. 4). The PYP lays the foundation of knowledge, skills and attitudes within the scope of IB expectations. Extending these skills cultivated in PYP, the MYP equips students for the rigorous expectations of the DP and the CP. While displaying the same pedagogical approach towards instruction in a consistent way, there are specific aspects of each program differing from one another resulting from the nature of the program.

The transdisciplinary curriculum framework characterizes the IB PYP. Consisting of six transdisciplinary themes: who we are, where we are in place and time, how we express ourselves, how the world works, how we organize ourselves, and sharing the planet, the program focuses on six subject areas: language, mathematics, science, social studies, arts and personal, social and physical education. This student-centered program, where teachers are expected to stimulate in depth-inquiries and investigations, regards its learners as the learning agents responsible for

their own learning and it strives for learner autonomy. As it focuses on the whole person learning experience through play, inquiry and agency, young learners, aged between 3 and 12, are taught how to take initiatives and continuously reflect on their learning within the framework. These aspects of the PYP enable the learner to become an active participant in the learning journey and also makes a difference in the learning community. Self-efficacy, another significant feature of the PYP, is fostered in order for the development of student agency. The PYP initiates conceptual learning and encourages collaboration with peers and teachers.

Concerning the pillar- the learner- young learners and the PYP exhibition are the two essential features to be noted. Firstly, it is important to note that the PYP holistically approaches its young learners' learning considering their developmental needs and prioritizing play as a form of learning. Secondly, the PYP exhibition takes place in the final year of the program offering a great opportunity for the students to display their understanding of a topic they have found personally intriguing. They share what they have explored and present this to their community.

Learning and teaching in the PYP plays a crucial role in transforming the learner's individual learning experience in a variety of ways. It helps learners to make connections "...between, across and beyond subjects and transcends borders connecting to what is real in the world." (IBO, 2025d, para. 2). Concept-driven inquiry and ATL strengthen learning along with the integration of "authentic assessment" (IBO, 2025d, para. 1).

The MYP aims at moulding learners into intellectually challenged individuals through its interdisciplinary framework. Its curriculum consists of eight subject groups: language acquisition, language and literature, individuals and societies, sciences, mathematics, arts, physical and health education, and design. It is a five-

year program but could be implemented either in a partnership between schools or in abbreviated (two, three, or four years) formats. Learners can take six courses of those eight, in years 4 and 5. Self-conceptualization and becoming a responsible member of the community are two essential aspects of MYP. Along with these, learners are provided with “sixteen key interdisciplinary concepts” preparing them for conceptual understanding (IBO, 2025e, para. 4). ATL skills also serve as common enabling skills across all MYP subject groups forming the basis for autonomous learning and promoting the transfer of knowledge and skills to new situations. Another important aspect of the MYP is the service learners provide to the community. Additionally, the importance of inclusion is highlighted in the IB documents. Learners studying in this program can connect their studies and the real world. Being an internationally minded inquirer is highly emphasized in this program too. Having creative, critical and reflective thinkers is one of the ultimate goals of the program.

The DP provides learners with various opportunities to extend their knowledge and deepen their understanding in diverse subjects. Based on six subject groups, the DP also has the DP core namely theory of knowledge (TOK), creativity, activity, service (CAS) and the extended essay. The program is highly demanding, but learners are likely to be better at time management and to better meet the required expectations than their peers who are not involved in the program. As mentioned in IBO official website (IBO, 2025c), the DP challenges its learners in many areas, so ideally going through PYP and MYP processes enables a learner to cope with demanding load of the DP.

The IB PYP, MYP, and DP in Türkiye

In Türkiye the first IB school started its education in 1994. Now there are 125 IB World schools offering the IB programs. PYP is offered in 73 private schools. In

almost all these schools the languages of instruction are English, Turkish and another language. As for MYP, there are 16 private schools offering the program in Türkiye and except for one of these, English is specified as the language of instruction on the IBO website (IBO, 2025a). IB DP is currently offered in 80 schools in various cities across the country. Many students taking the IB DP courses also prepare for the national university entrance exam since the IB DP is not recognized for university entrance by universities in Türkiye. However, depending on their bi-lingual diploma grade, they can pursue their Bachelor's degree in some top universities in the country.

Problem

Creativity is vital to cope with the constant demands of the ever-changing living and working conditions. There are numerous frameworks (Ananiadou & Claro, 2009; Geisenger, 2016; Soland et al., 2013) categorizing 21st century skills, in which creativity is one of the core skills. According to the report prepared by the Institute for Prospective Technological Studies (Turlea et al., 2010) the key words creativity and innovation appear in EU27 curricula, which reflect the prominence of creativity in education. In line with this, the essential role it serves in 21st century skills is reflected in varied curricula. Creativity has become a common component of curricula worldwide (Graves, 2015; Vincent-Lancrin et al., 2019) and although less frequently integrated (Mahyuddin et al., 2004; Murphy et al., 2024) than creativity, creative thinking skills are also becoming an indispensable part of different curricula (Murphy et al., 2024). IB curriculum, for example, constitutes the focal point of this study because it includes both creativity and creative thinking skills. Despite the inclusion of creativity and creative thinking skills in curricular documents in various contexts, teachers may still need further clarification and guidance considering the

classroom implications (Carlile & Jordan, 2013). The reason for this might be the insufficient clarification and curricular guidance available in most curriculum documents (Coffey & Leung, 2015; Rosen et al., 2020) leaving teachers' struggle in tackling thinking skills, in particular creative thinking skills. Additionally, creativity and creative thinking skills are used interchangeably in some curricular documents; therefore, they both require further elaboration and clarification for teachers. Thus, for the adoption of novel and systematic approaches to creativity education, concept clarification for creativity and creative thinking skills is essential in K-12 foreign language education.

In addition to the curricular issues mentioned above, many teachers may remain hesitant towards the infusion of creativity and creative thinking skills into their classes for the following pedagogical reasons. Firstly, the traditional mode of instruction, namely teacher-centred instruction (Cachia et al., 2010) and also lacking the required teaching expertise concerning creativity and creative thinking skills (Kaufman & Beghetto, 2010) could result in ineffective implementation. Secondly, there is a need for more research exploring the pedagogical aspects of creativity and creative thinking skills in foreign language education in greater depth (Bereczki & Karpati, 2018; Wang, 2019) from a more holistic standpoint. As such, comprehensive guidance can be provided for English teachers to help them draw on insights, to identify and implement the necessary actions to foster these skills.

These curricular and pedagogical issues may hinder the systematic integration of creativity and creative thinking skills. However, considering the vital role of creativity education in equipping learners for the demanding 21st century workforce, addressing these issues could positively contribute to the promotion of both.

Purpose

Davies et al. (2014) noted that “creative skills” is ambiguously represented in the literature and is used as an umbrella term encompassing creative thought processes, creative problem-solving skills, creative thinking, creative learning, and possibility thinking. Similarly, the research on creative thinking skills identifies numerous definitions of creativity which are used (Widodo & Rosjanuardi, 2021) for concept clarification of creative thinking skills. These, however, point to a gap regarding teachers’ understanding of creativity and creative thinking skills and thereby underscoring concept clarification to eliminate ambiguities leading to gaps in terminology. Thus, making creativity and creative thinking skills more visible, explicit and deliberate (Isaksen & Treffinger, 2004) is crucial. Another point to be considered is the time constraints. As highlighted in PISA 2021 Creative Thinking Framework (2019), time given to creative thinking skills in classroom practice might detract from other curricular objectives. Nevertheless, promoting creative thinking skills can highly benefit the creativity instruction. When considered, through ATL the IB incorporates creativity and creative thinking skills along with critical thinking skills. It also offers very comprehensive sources. However, despite the availability of these, there is a need for crystallization of creative thinking skills for the IB.

Considering the points mentioned above, this mixed-methods case study’s overarching aim was to offer comprehensive guidance to IB EFL teachers on creative pedagogy for its systematic infusion. To achieve this, creative thinking skills as a fourth component was added to Lin’s (2011) creative pedagogy framework, a decision informed by thorough analysis of the literature (Kaufman and Beghetto, 2010; Lin, 2009; Lucas, 2016; NACCCE, 1999; Swartz & McGuinness, 2014; Torrance, 1963). The other aim of the study was to offer concept clarification

through crystallization of concepts creativity and creative thinking skills in the IB curriculum design and implementation across IB programs. Lastly, examining PYP grade 4 and MYP grade 10 students' perception of creativity and creativity thinking skills aimed at approaching the issue from multiple perspectives.

Research Questions

1. What is English teachers' definition of creativity and creative thinking skills in continuum IB schools?
2. What are PYP grade 4 and MYP grade 10 students' perception of creativity and creative thinking skills in continuum IB schools?
3. How are creativity and creative thinking skills infused into English courses in continuum IB schools?
 - a. How do the English teachers infuse creativity and creative thinking skills into their classes in continuum IB schools?
 - b. How are creativity and creative thinking skills reflected in written curricula of PYP, MYP and DP programs in continuum IB schools?
 - c. How are creativity and creative thinking skills reflected in students' written outcomes in PYP grade 4 and MYP grade 10 programs in continuum IB schools?

Significance

Although there are various studies carried out on creativity, there is not much research done on creative pedagogy and creative thinking skills considering foreign language education in continuum IB schools. Creativity and creative thinking skills are an integral component of the 21st century skills and in IB PYP, MYP and DP curricula the importance of both is underscored along with critical thinking skills in

all subject areas (IBO, 2019b). The IB provides guidance in written curricular documents (i.e. ATL documents). However, the implications of creativity and creative thinking skills are often assumed, so the teachers need to manage it through their creative capacity, which leads to inconsistency and extra challenges in practice. To address this, based on the Creative Pedagogy Framework (Lin, 2011), a new version named the Creative Pedagogy Framework for Continuum IB Schools was designed. This version offers insights into creative pedagogy for administrators, teachers and stakeholders seeking ways to infuse creative pedagogy into English lessons in continuum IB programs. Consequently, this study provides teacher and student perspectives on creative pedagogy, thereby contributing to the development of a research-informed and systematic approach to creative pedagogy within continuum IB programs.

Limitations

The following limitations need to be considered while interpreting the findings of this study. To begin with, to the extent known, this study is one of the first studies focusing on creativity and creative thinking skills in English classes in IB continuum schools in Türkiye. At the time of the study there were six continuum schools in the country and all were invited to take part in the study. However, only two of those continuum schools accepted the research invitation. Therefore, the findings cannot be generalized to all continuum schools in Türkiye.

The second limitation that needs to be considered is the rater bias of the class observations. As Floman et al. (2017) pointed out the rater might experience emotional bias even when the rater is an observer with a sufficient degree of experience conducting observations with the necessary tools. For this study, the data collection had to be completed during Covid-19 and as a result of this, it took much

longer than planned. As there were many constraints regarding the schools' academic calendars and strict rules for the class observations during the pandemic and post pandemic period, the class observations had to be carried out by only one observer, only once in each class. Under normal circumstances a series of class observations by more than one observer could eliminate this limitation.

Finally, as the first study to examine the role of creativity and creative thinking skills in IB continuum schools in Türkiye, this case study provides valuable insights from the perspectives of teachers, learners, and curricula. However, despite the inclusion of multiple data sources, the number of questionnaire responses from DP students was insufficient, primarily due to their demanding schedules and Covid-19-related constraints. Consequently, their responses were excluded from the data analysis. A similar limitation arose with the DP students' written samples. Although these samples were collected, the task type was not suitable for the intended content analysis, and therefore, the written samples were also omitted.

Definition of Key Terms

21st century skills: Skills and competencies which younger people need to acquire to meet the needs of the current century as employees and citizens. Cognitive competencies (academic mastery, critical thinking, and creativity); interpersonal competencies (communication and collaboration, leadership, and global awareness); and intrapersonal competencies (growth mindset, learning how to learn, intrinsic motivation and grit) (Soland et al., 2013).

Creativity: "Creativity is a topic of wide scope that is important at both the individual and societal levels for a wide range of task domains. At an individual level, creativity is relevant, for example, when solving problems on the job and in daily life. At a societal level, creativity can lead to new scientific findings, new

movements in art, new inventions, and new social programs. The economic importance of creativity is clear because new products or services create jobs. Furthermore, individuals, organizations, and societies must adapt existing resources to changing task demands to remain competitive.” (Sternberg & Lubart, 1996, p. 678)

Creative pedagogies: “...creative pedagogies involve ‘imaginative and innovative arrangement of curricula and teaching strategies in school classrooms’ to develop children’s creativity.” (Dezuanni & Jetnikoff, 2011, p. 265)

Creative thinking skills: generating ideas & possibilities; building and combining ideas; formulating own points of view; taking multiple perspectives & seeing other points of view (Scwartz & McGuinness, 2014).

International Baccalaureate (IB): A program, which started in 1968, offering a continuum of international education and encouraging both personal and academic achievement (IBO, 2023).

Primary Years Program (PYP): An inquiry led, transdisciplinary IB program for children aged 3-12 years old (IBO, 2023).

Middle Years Program (MYP): A five-year IB program with a challenging framework for students aged 11-16 (IBO, 2023).

Diploma Program (DP): An international curriculum for students aged 16 to 19 (IBO, 2023).

Continuum IB schools: IB schools where students from 3 to 19 years old study in PYP, MYP and DP consecutively. Those schools must be authorized in order to teach IB programs (IBO, 2023).

Approaches to learning skills (ATL): a set of skills with sub-skills that guide learners in their learning journey to achieve self-regulation with the help of the

teacher's supervision. These skills consist of thinking skills, communication, research skills, self-management skills and social skills (IBO, 2025d).



CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

This chapter reviews the literature on creativity and creative thinking skills, within the context of 21st century skills. It begins by outlining the competencies identified as essential for learners in the modern world. The chapter then explores the historical trajectory of creativity research including creative thinking skills, highlighting major models, approaches, and debates that have shaped scholarly understanding of creativity as both a product and a process. Special attention is given to creative pedagogy and the conceptual distinctions between teaching creatively, teaching for creativity, and fostering creative learning have been presented. Following this, the chapter examines the role of creative thinking skills and their pedagogical implications in foreign language learning. Creativity and creative thinking skills are addressed within English courses in the IB curriculum in the last section of the chapter.

21st Century Skills

When the demands of the current century are considered, the need to equip students with the necessary skills is undeniable. Developing technology, constantly changing workforce and the competitive nature of the century are to be considered while designing and implementing various school curricula (21st Century Skills Foundation, 2019). Now that technology is available to many, it has become more accessible and affordable, which enables a great number of students to have easy access to information. However, constant access to information does not ensure knowledge. Thus, 21st century skills are essential to design a desirable curriculum to

meet the needs of the century by adapting to the changes successfully (Ongardwanich et al., 2015). Integrating 21st century skills into curricula enables policy makers, curriculum designers, administrators, teachers, students and other stakeholders to cope with the complex issues of the contemporary world (Saavedra & Opfer, 2012). Those skills students need to acquire are: (1) Creativity and Innovation, (2) Communication and Collaboration, (3) Research and Information Fluency, (4) Critical Thinking, Problem Solving, and Decision Making, (5) Digital Citizenship, and (6) Technology Operations and Concepts (Larson & Miller, 2011). Considering these 21st century skills, it is essential to focus on creative pedagogy in order to produce creative and innovative individuals who can cope with the demands of the years ahead. Furthermore, the world can significantly become a much better and inhabitable place if individuals are educated well enough to realize their creative potentials fully (Runco, 2007).

Wechsler et al. (2018) noted that UNESCO (2016) recognized creativity as an ability that can help students to innovate in their prospective careers, so it is also recognized as one of the competencies to be developed in secondary and higher education. As Craft (2000) stated there is a need to create a new vision in education and this requires to exercise our creativity to create new frameworks in education. To achieve this, the first step is to analyze relevant terminology in the literature and specify the key words in educational research context regarding creative pedagogy.

Creativity

Scholars from various domains have examined creativity to conceptualize it across different domains (Csikszentmihalyi, 1996; Guilford, 1960; Guilford, 1967; Isaksen & Treffinger, 2004; Kaufman & Beghetto, 2009; Runco & Jaeger, 2012; Sternberg & Lubart, 1996). Even though its definition varies a great deal, there are

some striking commonalities highlighted by the researchers. Curiosity, risk taking and tolerance of ambiguity (Brandt, 2023; Tin, 2016) are commonly cited as personality traits of creative individuals. Novelty, usefulness, problem solving (Amabile & Pratt, 2016; Hernandez-Torrano & Ibrayeva, 2020; Tin, 2016; Walia, 2019) and originality (Jones, 2016; Walia, 2019), on the other hand, are used to describe creative products. Guilford (1967) summarized the significance of creativity as “Creativity is the key to education in its fullest sense, and to the solution of mankind’s most serious problems” (p.13). This quote emphasizes the vital role of creativity for education in the 21st century. However, despite its indispensable role in education, there is still ambiguity regarding creativity in curriculum. Coffey and Leung (2015) stated that curricular documents lack clarification, which implies the need for an in-depth investigation (Cremin et al., 2009; Davies et al., 2014) of what creativity, and also creative thinking skills entail in educational settings, particularly in high school foreign language education (Bereczki & Karpati, 2018; Wang, 2019). However, first it is necessary to clarify the concept of creativity.

As mentioned above the term creativity is defined in many ways depending on the domain of each scientific study. It has a multifaceted nature (Besançon, Lubart & Barbot, 2013; Rhodes, 1961; Sternberg, 2005) leading to various approaches and models. The initial definitions of this term mostly belong to the field of psychology. Therefore, the researchers focusing on “creativity” in the early years of creativity research associated it with “giftedness”, “intelligence”, and “divergent thinking” (Csikszentmihalyi, 1996; Guilford, 1967; Torrance, 1970). Lucas (2016) noted that Guilford (1967) divided thinking into two categories: convergent, which is coming up with one good idea, and divergent, which means generating multiple solutions. Torrance, on the other hand, (1970) took the idea of divergent thinking and

developed four sub-categories—fluency, flexibility, originality, elaboration—based on the idea of divergent thinking and used this categorization in his creativity tests later. J. P. Guilford (1950) and E. Paul Torrance (1970) were the two pioneers in the field having a psychometric standpoint (Sternberg, 2006). Their psychometric approach was a way of studying creativity in everyday subjects; for example, with paper and pencil tasks. Such paper and pencil tests were essential for creativity measurement since it was not possible to study the notion of creativity by analyzing exceptionally creative individuals in laboratory (Sternberg & Lubart, 2005). Unusual Uses Test (Guilford, 1967) was one of those tests testing creativity based on the possible uses of everyday objects like a brick. The focus of such tests was divergent thinking rather than convergent thinking, which many scholars in the field overlooked at those times. Particularly Torrance Tests of Creative Thinking (TTCT) (Torrance, 1970) have become the most popular way of measuring creativity (Wechsler et al., 2018). These tests consisted of verbal and figural tasks based on divergent thinking and problem-solving skills (Sternberg & Lubart, 2005). In a similar vein, Amabile's Consensual Assessment Technique (CAT) (Amabile, 1982), the Four C Model of Creativity by Kaufman and Beghetto (2009), and Five-Dimensional Model of Creativity (Lucas, 2016) are other prominent models that have shaped creativity research with a primary emphasis on creativity as a product. Differing from others, Rhodes (1961) 4P model “four strands: persons, process, press and products”, is another model, which is widely used in education to clarify the complex phenomenon: creativity (Yeung & Bautista, 2024).

Another significant point to consider in creativity research is Osborn's Creative Problem Solving (CPS) model which was first presented in Osborn's book *Wake up Your Mind* (Osborn, 1952). The model consists of seven-step CPS process

in its initial version. These seven steps are as follows: (1) Orientation, (2) Preparation, (3) Analysis, (4) Hypothesis, (5) Incubation, (6) Synthesis, and (7) Verification. This model was developed by Osborn to make creative processes more deliberate and explicit as well as focusing on students' divergent and convergent thinking skills (Isaksen & Treffinger, 2004). Up to its latest version, 6.1, the model has undergone many changes owing to many researchers' contributions (Wang, 2019). Isaksen and Treffinger (2004) inform that more than 50 unpublished impact studies and published reports of their findings were produced by several faculty, graduate students and their colleagues. The findings indicate that CPS works across various contexts and situations. Additionally, relevant parts of CPS could be chosen to apply when to meet context specific needs (Isaksen & Treffinger, 2004).

Within the scope of this study, attention is given to the notion of everyday creativity, which manifests recurrently in teachers' and students' lives. To this end, the difference mentioned by Craft, Jeffrey and Leibling (2001) will be used in the study. "Big C" refers to the creativity of the genius, whereas the term "little c" is used to indicate the ability ordinary people must have to solve daily problems by employing new perspectives. In light of these definitions, fostering creativity in schools through curriculum integration hinges upon the recognition that creativity is learnable and assessable in ways that support both learners and teachers (Lucas, 2016).

Creativity and Creative Thinking Skills in Education

Creativity is generally defined as being solution-oriented and thinking outside the box to produce original and practical ideas appropriate to a given context (Fryer, 1996; NACCCE, 1999). Its multifaceted nature (Besançon et al., 2013; Rhodes, 1961; Sternberg, 2005) has led to a wide range of definitions. According to Besançon

et al. (2013) creative potential, creative accomplishment and creative talent constitute different layers of creativity. Creative potential refers to originality whereas creative accomplishment means producing work displaying the creative potential. Creative talent, on the other hand, is related to creative work that is produced consistently (Besançon et al., 2013). Similarly, Sternberg (2005) pointed out that there are creativities consisting of “processes, domains and styles” (p.370). One of the common points mentioned in all three definitions (Besançon et al., 2013; Rhodes, 1961; Sternberg, 2005) is that creativity is a sum of all these multiple layers.

Although Rhodes (1961) and Besançon et al. (2013) used different terms, both focused on the effects of personality, process, the environment, and the outcome of creativity. According to Rhodes (1961) persons, process, press and products are complementary, each contributing to the development of creativity within the realm of its specific elements (Brandt, 2023). Rhodes (1961) noted that “The creative process can be taught” (p. 308). In school settings, focusing on this creative process and analyzing its steps could be prioritized to teach the creative process instead of addressing all constructs (Green et al., 2023).

Not only creativity but also creative thinking skills are regarded as indispensable for preparing students to thrive in their education and their future careers in a rapidly changing world (Brandt, 2023). Therefore, an examination of creative thinking skills is essential (Murphy et al., 2024). Within the scope of this study, creativity is understood as a process with a multidimensional nature rather than an attribute on its own (Green et al., 2023). Creative thinking, on the other hand, refers to cognitive processes (Chiam et al., 2014). These two constructs are closely related and may sometimes overlap, but their function and scope differ considerably. When an individual goes through the multidimensional nature of creativity process,

they not only undergo the cognitive processes, but also experiences the effects of environmental and personal factors that underlie creativity (Green et al., 2023).

Creative thinking, however, consists of cognitive processes that use inner mechanisms such as divergent thinking (Chiam et al., 2014). Rosen et al. (2020) defined creative thinking as an unorthodox way of employing some skills in order to tackle an issue. Joubert (2004) listed problem-solving strategies, self-organization or divergent thinking skills as transferable creative thinking skills while referring to creativity as domain-specific to a certain extent. He noted that this transfer could be achieved only when students are guided to analyze their creative strategies and approaches through meta-cognitive thinking (Joubert, 2004). Overall, creative thinking skills are used to refer to the cognitive processes required for the attainment of creativity.

Creativity embodies creative thinking, for which an individual experiences complex processes for solving problems creatively (Puccio & Gonzales, 2004). This complex thinking relies on affective and metacognitive skills along with a good knowledge of rules concerning the subject relevant matter (Boden, 2004; Csikszentmihalyi, 1996; Medeiros et al., 2012; Puccio & Murdock, 2001). Along with metacognitive skills in creative thinking, Puccio and Murdock (2004, p. 399) referred to “tolerance for ambiguity and risk taking” as emotional qualities playing key roles. They also pointed out that creative thinking embodies some cognitive, metacognitive and affective skills. Similarly, PISA 2021 creative thinking framework (OECD, 2019) supports the idea of these enabling skills in the creativity process. These enabling skills are not necessarily applied in a linear order, so could be employed interchangeably, enhancing creativity. However, the multidimensional nature of creativity, the overlap between creativity, and creative thinking skills call

for conceptual clarification. A key question is whether creative thinking exists independently or is always subsumed under creative process. According to Brandt (2023) creativity is “outcome” oriented whereas creative thinking skills emphasize the “process” (p.3). This difference was echoed by Gube and Lajoie (2020), He (2017), and Suherman & Vidakovic (2022), but further elaboration is needed because what distinguishes creativity as a process from creative thinking has not been examined in detail.

He (2017) argues that creative thinking needs to be seen as “an organic whole” rather than mechanisms functioning in isolation. Creative thinking skills enable the individual to go through the necessary cognitive processes leading to the creative outcome (Saeed & Ramdane, 2022). Green et al. (2023) view it as creative thinking skills involving both convergent and divergent skills. Similarly, Brandt (2023, p.3) defined creative thinking skills as “generation, manipulation, experimentation of ideas followed by thoughtful analysis and critical examination, and the effective communication of those ideas to solve a problem”. Considering the fine line between creativity and creative thinking skills, it must be noted that creative thinking skills could be subsumed under creativity, as a dimension of creativity (Brandt, 2023). Creativity is regarded as a process in this study rather than “an attribute” (Green et al., 2023, p. 1). Thus, within the realm of this study creativity as a process and creative thinking might overlap. Hence, to clearly refer to creative thinking skills in this study, divergent thinking skills — fluency, flexibility, originality, elaboration and synthesis — (Torrance, 1966), taking multiple perspectives (Swartz & McGuinness, 2014), problem-solving and also metacognition (He, 2017) were included within creative thinking skills.

Despite a significant number of studies analyzing creativity, and creative behavior in creativity research, the studies in K-12 settings tend to share a common focus: assessment. Various models of creativity and psychometric tests have been employed for the assessment. In the literature, the assessment of creativity as an attribute either in teachers or students (Kim, 2011; Özgenel & Çetin, 2017; Rosen et al., 2020) is emphasized considerably. TTCT, for example, originally aimed at examining the impact of curricula and pedagogy on creativity (Kim, 2006). However, it is now employed to assess student creativity. Assessing creativity in the classroom enables researchers to examine the effectiveness of creativity training (Barbot et al., 2011), but this is likely to lead researchers to overlook creativity as a process.

Several intervention studies carried out in subjects such as Music and Physical Education (Gu et al., 2019; Neville & Makopoulou, 2021) addressed the assessment of creativity and/or creative thinking skills. Gu et al. (2019) conducted a study with 172 primary school children from two schools who were assigned three tasks after attending three training sessions. The results showed improvement in divergent thinking skills except for flexibility. Similarly, Doron (2016) had a ten-week training program with the participants consisting of 286 children, between the ages of 10 to 14. The program tasks consisted of daily media use targeting the improvement of divergent thinking skills. The participants of the training program showed improved scores on the Tel Aviv Creativity Test (TACT), based on their fluency and uniqueness scores. Regarding the intervention studies, Alves-Oliveira et al. (2021) carried out a systematic review analyzing 70 years of creativity interventions for children between the ages of 5–13 in different educational contexts. They concluded that the intervention type, duration of the intervention and also the

way creativity assessed determine the effectiveness of creative training. Ruiz-del-Pino et al. (2022) also conducted a systematic review and meta-analysis of creativity training programs in various domains in primary education and identified six studies conducted in either in Spanish or Italian classes. Their findings indicated that creativity training programs, interventions and practices benefited the relevant primary and secondary school students. In addition to intervention studies primarily examining divergent thinking skills, there are analyses comparing creative thinking skills with critical thinking, reflective thinking and learner autonomy (Akpur, 2020; Craft, 2003; Ülger, 2016; Wechsler et al., 2018).

Some studies explored perceptions of creativity among teachers and students (Fleith, 2000; Guo et al., 2021; Karwowski et al., 2020; Kettler et al., 2018). Kettler et al. (2018), echoing earlier findings (Beghetto & Kaufman, 2010; Runco, 2003), concluded that student characteristics that are generally attributed to creativity were regarded as less desirable by the participant teachers. Creative students were generally seen as divergent thinkers, and risk-takers (Torrance, 1961) and most of the time as non-conformists, which is not usually welcomed in traditional classroom settings.

The teacher's approach to student creativity and her expertise determine how she can accommodate creativity in a classroom setting. Despite growing awareness and the recognition of creativity's role in teaching, limited teacher expertise and inconsistent infusion of creativity may still hinder student creativity (Craft et al., 2007; Tran et al., 2017). Tran et al. (2017) looked into the role of eight secondary school teachers' lesson planning and execution in lessons for teaching creativity through the Assessment Criteria of a Lesson for Creativity (ACLC) and applied it in a quasi-experimental design study in two secondary schools in subjects such as

history and mathematics. According to the findings, the use of ACLC proved to have been effective as it equipped the teachers with the necessary skills of teaching for creativity.

The reviewed literature can be grouped into two categories. The first includes theoretical studies reinforcing the idea that (Amabile, 1982; Besançon et al., 2013; Brandt, 2023; Fryer, 1996; Green et al., 2023; Guilford, 1960; Isaksen & Treffinger, 2004; Kaufman & Beghetto, 2009; Kim, 2006; Rhodes, 1961; Sternberg, 2005; Torrance, 1966) creativity is multifaceted, process-driven, and context-dependent. Some of these focus on defining creativity (Rhodes, 1961; Green et al., 2023) while others emphasize its role in education (Besançon et al., 2013; Brandt, 2023). Broader conceptualization of creative cognition (Sternberg, 2005) along with cognitive structures, environmental factors and assessment methods in the development of creativity (Guilford, 1960; Lucas, 2016; Torrance, 1966) have been underscored as well.

The second group consists of empirical studies carried out in K-12 context. These highlighted the significance of creativity training and the implementation of creativity assessment in K-12 settings (Alves- Oliveira et al., 2021; Barbot et al., 2011; Doron, 2016; Gu et al., 2019; Neville & Makopoulou, 2021). There are some studies conducted to find out about different perspectives of creativity in teaching English, but they mostly focused on one specific grade level or one specific type of school (Huh & Lee, 2020; Nguyen, 2021; Sadykova & Shelestova, 2016; Stephan, 2017; Wang, 2019). The studies analyzed have offered invaluable theoretical and practical guidance and also helped to shape the direction of the research.

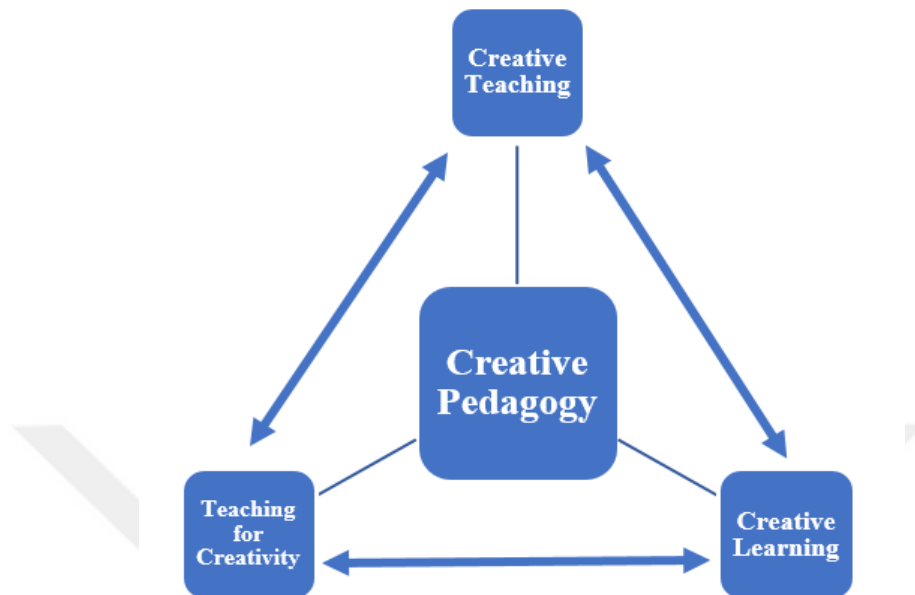
The Conceptual Framework: Creative Pedagogy

Creative pedagogy, which served as the lens for this study to examine the progression of creative thinking skills and creativity in English courses within continuum IB programs in Türkiye, is defined as the enhancement of students' creative capacities, the innovative and imaginative arrangement of curricula and teaching strategies in schools (Dezuanni & Jetnikoff, 2011). This study is grounded in Lin's (2011) non-linear and descriptive conceptual framework of creative pedagogy. It embodies three interrelated dimensions: creative teaching, teaching for creativity and students' creative learning. It holds a holistic standpoint while delineating the indispensable individual components, which complement one another. According to Lin (2011) creative teaching involves teaching creatively to further engage students and to make the instruction innovative. In contrast, teaching for creativity aims at enabling learners to acquire the necessary skills such as cultivating curiosity for their everyday creativity during the learning process. The third component, creative learning, emphasizes autonomous learning, for which students take ownership of their learning.

This framework, given in Figure 1, was designed by Lin (2009) as part of the doctoral dissertation which examined how Taiwanese teachers and grade 6 students responded to creative pedagogy in drama. Lin (2009) specified innovation, possibility thinking, playfulness and collaboration as elements of creative teaching strategies. Likewise, supportive ethos and classroom space are specified as relevant criteria of creative pedagogy. After designing a series of drama lessons in light of the curricula of the two case study schools involved in the research, Lin analyzed some approaches regarding drama with this framework of creative pedagogy (Lin, 2009).

Figure 1

Three Interrelated Elements of Creative Pedagogy

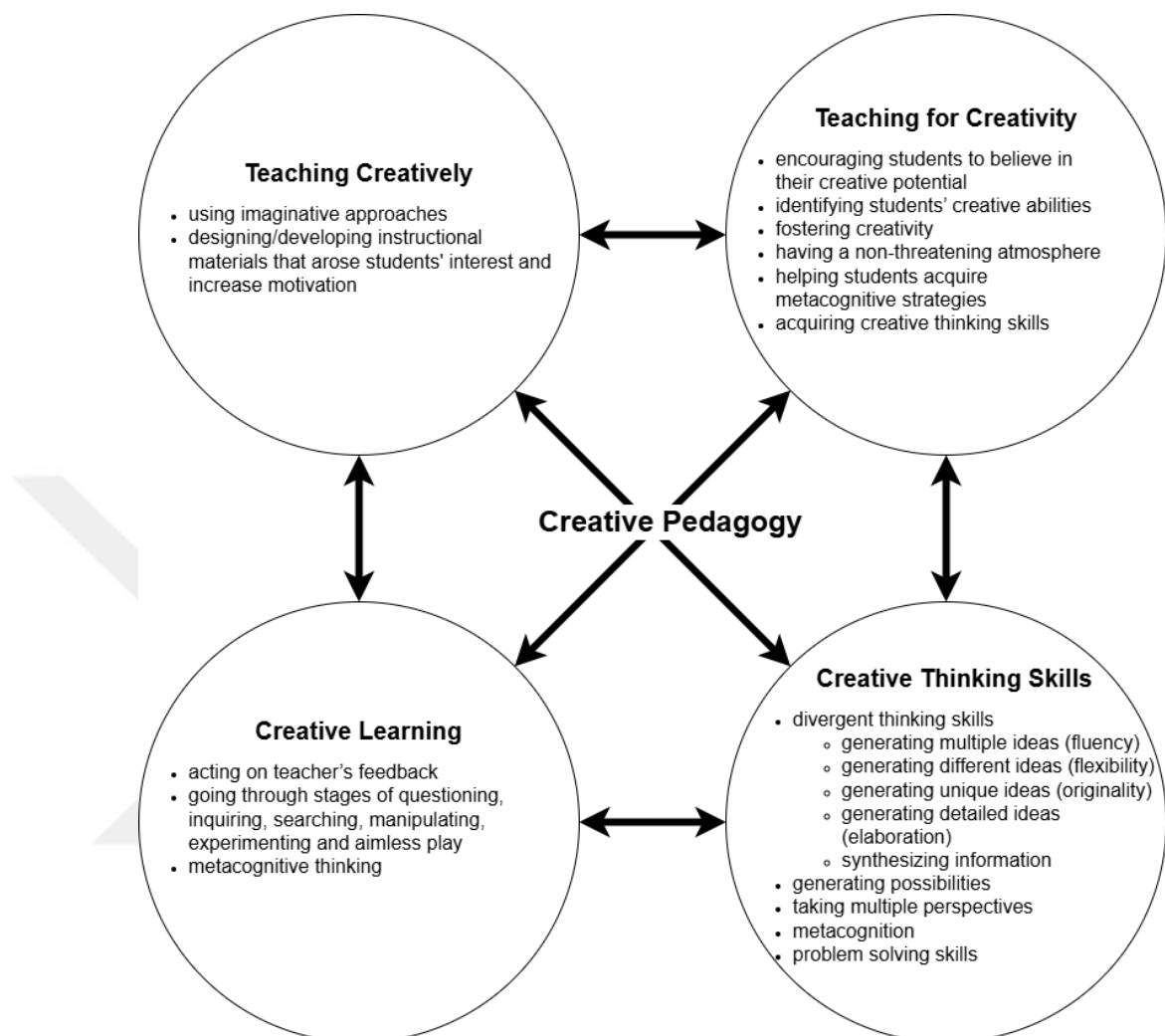


Note. From *Teacher and pupil responses to a creative pedagogy- case studies of two primary classes in Taiwan*, by Y.S. Lin, 2009, ProQuest Dissertations & Theses
<https://www.proquest.com/docview/898752874>

Most theoretical frameworks and models of creativity primarily examine the phenomenon in isolation neglecting its pedagogical implications. These frameworks and/or models typically addressed different domains rather than educational settings specifically; as a result, the teacher's role and teacher creativity has been neglected to a certain degree. However, in order to understand classroom dynamics and the teacher's role in the development of students' creativity and creative thinking skills, examining creativity within the relevant parameters of learning and teaching is essential. To this end, Lin (2009) suggested focusing on the relations among the teacher, the student, the class, context, and content. Regarding creative pedagogy, Lin (2009) stated the importance of complex models offering an integrated conceptualization. Lin's creative pedagogy conceptual framework, in this respect, is

rather innovative as it does not propose linear cause-effect chains and is not prescriptive. Lin (2009) used the term creative pedagogy to mean “a desirable practice that features creative teaching, the objectives and pedagogical strategies of teaching for creativity, and a practice that encourages children’s creative and active learning” (Lin, 2009, p. 55).

The three elements of creative pedagogy: creative teaching, teaching for creativity and creative learning are interrelated and complementary. In order for creativity to flourish, there is a need for a supportive environment (Besancon & Lubart, 2008; Burgess & Addison, 2007; Cremin, Burnard, & Craft, 2006; Lin, 2009; Wood & Ashfield, 2008), which in this research was used to refer to the interaction between the teacher as the facilitator and the student as the active learner representing creative teaching and creative learning elements of the conceptual framework. For this study, creative thinking skills were added as the fourth element to the conceptual framework with the aim of ensuring a systematic incorporation of these skills along with the three interrelated and complementary elements specified by Lin (2009). Following this, before the data collection, the initial revised version of the framework was designed based on the research questions and the literature review.

Figure 2*Initial Version of the Revised Framework*

Note. Developed by the researcher based on *Kaufman and Beghetto (2010)*, *Lin (2009)*, *Lucas (2004)*, *NACCCE (1999)*, *Swartz and McGuinness (2014)*, *Torrance (1963)*

The initial version of the revised framework shaped the data collection, and after completing the data analysis, domain-specific descriptors (given in Figure 2) were specified.

Teaching for Creativity, Teaching Creatively (Creative Teaching), and Creative Learning

Creativity is a broad field which involves both teaching and learning perspectives. Thus, drawing clear lines between teaching creatively and teaching for creativity is crucial to set expectations regarding its role in education. “Teachers using imaginative approaches to make learning more interesting, exciting and effective” is how NACCCE defined teaching creatively (NACCCE, 1999, p.105) namely creative teaching. Teaching for creativity, on the other hand, is defined as “forms of teaching that are intended to develop young people’s own creative thinking and behavior” (NACCCE, 1999, p. 95). Thus, teaching creatively does not ensure the development of creative potential of students, but contributes to effective teaching and helps teachers to take risks, become flexible, and be open to changes. Yet, one benefit of creative teaching is enabling teachers to learn about their own limits regarding creativity and reflect on it. This is significant especially when they should lead by example (Craft, 2000). Teaching creatively (delivering more engaging lessons) and teaching for creativity (teaching students to become creative) are two interrelated concepts also differentiated by some other scholars (Brinkman, 2010; Jeffrey, 2006; Jeffrey & Craft, 2004; Rubenstein et al., 2013; Soh, 2000). Fischer and Golden’s study (2018), which was conducted at a college level English literature course, on modelling teacher creativity, confirmed this by stating that creative teaching consists of a continuous cycle of problem finding, experimentation and evaluation.

In NACCCE (1999) three principles of teaching for creativity – encouraging, identifying and fostering – are identified. Teachers are expected to encourage students to exercise their creativity, which over time fosters greater confidence and

self-esteem and contributes to several attributes, namely risk-taking, independent judgment, commitment, resilience, and motivation (NACCCE, 1999). Identifying, the second principle of teaching for creativity, is identifying creative skills. When a student can identify creative skills, such as problem-solving strategies, or divergent thinking skills, that student can notice such skills and transfer her learning to other domains. As the third principle, fostering refers to fostering creativity to help students experiment and innovate (Craft et al., 2004). However, Kandemir et al. (2019) reported that teachers need further guidance to acquire the necessary skills to design learning environments fostering creativity. Furthermore, they noted that problem solving and collaboration among students should be encouraged.

Joubert (2004) suggested that creative teaching/teaching creatively is necessary for effective teaching. However, on its own, it cannot ensure student creativity. Torrance (1972) included teacher-classroom variables, indirect and direct control, and classroom climate as some ways of teaching children to think creatively. The studies he examined, though, did not reveal significant results regarding the effect of creative thinking abilities of the teacher. However, he noted that approaches involving cognitive and emotional functioning along with the ones providing interaction with teachers and other children are the most promising ones. Additionally, he put a primary emphasis on intentionality. In a similar vein, Joubert (2004) highlighted the importance of taking risks and stepping beyond the comfort zone once being exposed to uncertainties. During this process teachers should be ready to learn from their students and also experiment with their own creativity, both of which can contribute to nourishing their students' creativity. After analyzing relevant empirical studies, Davies et al. (2013) concluded that children prioritize creativity considering their teachers' and others' expectations, and they favor

relationships with mutual respect as well as flexibility, freedom and open-ended possibility. They also emphasized the importance of regularly practiced dialogue between students and teachers as well as having humor and enjoyment of language in lessons. In addition to the student and teacher dialogue, it was suggested that creativity is enhanced by collaboration among peers.

As for creative learning in the school context, Lucas (2004) listed the need to be challenged, the elimination of negative stress, feedback, and the capacity to live with uncertainty as four essential conditions. Feedback, in particular, is one of those key elements to be prioritized as proper constructive feedback plays a crucial role in nurturing students' creativity. Torrance (1963), on the other hand, focused on the differences between learning creatively and learning by authority. While learning creatively, the child goes through stages of questioning, inquiring, searching, manipulating, experimenting and aimless play. However, while learning by authority, children cannot make use of their curiosity and are told to accept the ideas from the authority without questioning. Sensing difficulties, problems and gaps in information, formulating hypotheses, testing guesses and revising them along with communicating results are essential elements of creative learning Torrance (1963) listed. He mentioned the significance of these elements for the process of creative learning, which emphasized the indispensable role of teacher guidance. Therefore, acting as a facilitator, a teacher can stimulate creative learning. Similar to the list Torrance (1963) shared, Lin (2009) noted that playfulness, collaboration, and a supportive/resourceful context are some features of creative learning fostering student autonomy.

Creative Thinking Skills and Foreign Language Education

In previous research in the field of English as a Foreign Language (EFL) it is stated that an appropriate learning environment, and personal psychological variables including motivation and creativity have a major impact on learning a new language, but little research has been done to find out how creative pedagogy affects EFL learners in the classroom (Liao et al., 2018). A study carried out in Taiwan (Wang, 2019) indicated that creative tasks facilitated students' English skills, creative thinking and class participation, which may lead to an increase in students' confidence and self-esteem in learning the language. Thus, EFL teachers have integrated critical and creative thinking skills into their classes (Wang, 2019) and the importance of these skills have been highlighted in the EFL teachers' training. However, integrating this into day-to-day teaching at the individual level is insufficient to ensure consistency across schools. Therefore, a standardized approach to creative thinking skills is needed to facilitate their systematic infusion into curricula.

The systematic literature review completed by Davies et al. (2014) revealed that despite the widespread assumption that teachers play a central role in fostering creativity, few studies have examined the specific roles teachers should assume in this process. Hence, to promote creativity and creative thinking skills, Davies et al. (2014) suggested taking actions that involve fostering positive relationships, exemplifying creative behavior, engaging in long-term curriculum planning, balancing freedom with structure, enabling flexible use of learning spaces, responding to learners' needs and styles, providing opportunities for peer collaboration and assessment, and making effective use of available resources. Similarly, Runco and Albert cited in Cropley (1995) shared the value of creating

opportunities for students to become accustomed to experimenting with complexity, ambiguity, uncertainty, and imperfection, all of which closely connected to the foreign language learning experience. On the one hand, in line with Runco and Albert's statement, the study conducted by Dai (2010) in a creative writing course in the Department of English at Sun Yat-sen University revealed that the creative writing course given helped those students to improve their writing because they worked on giving details, using dialogues effectively and experimenting with different structures particularly with complex structures. On the other hand, Fischer and Golden (2018) noted that the study they conducted on creative-project based learning (PBL) approach showed that despite a great deal of academic work on creativity, creative teaching, creative learning and teaching for creativity, there was a need for studies examining day to day issues regarding creative pedagogy in terms of course design and delivery in language classes. In summary, an explicit focus on creative thinking skills and creativity appears to be benefiting students' foreign language learning. However, as Fischer and Golden (2018) suggested further research on the implementation of creativity and creative thinking skills in language classes is needed.

The Role of English Courses in the IB Curriculum

Unlike many other curricula, the IB, which prioritizes thinking critically, creatively, and independently (IBO, 2019a), provides comprehensive guidance for teachers both for thinking skills and creativity. The IB curricula ensure "consistency and coherence through the common curriculum philosophy and shared values" considering its ideology and the expectations of the market (Stobie, 2007, p.142). Considering the scope of this study, three aspects of the IB education in relation to creativity and creative thinking skills were emphasized. The first aspect is continuum

IB schools, where PYP, MYP and DP are offered in combination (IBO, 2019b). The focus is on the progression of “international education experience from early childhood to pre-university stage” (Walker et al., 2014, p.1). The second aspect is the IB Learner Profile, a frame of ten attributes, requiring “desired student outcomes arising from common values and vision about the nature and purpose of education” (Bullock, 2011, p.2). These attributes reflect the expected outcomes of IB World Schools from each student (Bullock, 2011). Thinking critically and creatively are the two essential requirements of the IB Learner Profile that aim at assisting students in becoming solution-oriented (IBO, 2025a). Finally, ATL skills, namely “thinking skills, communication skills, research skills, self-management and social skills” (IBO, 2019a, p.6), act as guiding principles in learning and teaching. At its core IB is based on the constructivist pedagogy necessitating the aforementioned ATL skills (IBO, 2023). These ATL skills are indispensable for self-regulated learning and in order for students to have agency, IB teachers are expected to integrate these skills into their teaching (IBO, 2023). Each ATL skill plays a crucial role in enabling IB programs to foster metacognition based on a “skill framework” (Kameda & Komatsu, 2020). Additionally, ATL skills ensure that IB students are accountable for their own learning (Forrest, 2018).

Within the IB curricula, the role of creative thinking skills in English courses remains largely underexplored. The systematic review by Dickson et al. (2018) showed that most IB research on cognitive and inquiry skills focuses primarily on IB students’ perception of critical thinking skills, particularly DP students’ perception of critical thinking skills. They also examined the effects of the IB curricular expectations of students with respect to critical thinking skills. Swartz and McGuinness (2014), in a report, analyzing systematic reviews which consisted of

narrative reviews, quantitative meta-analysis, and developments as well as various approaches for the IB, referred to the integration of metacognition through Bloom's Taxonomy and explicit articulation of thinking skills aligned with ATL skills across all IB programs.

Primary Years Program (PYP)

PYP schools always emphasize the importance of language learning and ensure that all students are given the necessary opportunities to be active learners using language both in class and outside class in their social lives. In line with the IB learner profile attributes, meaningful learning opportunities are provided to help students acquire language rather than learning in discrete forms. The language courses consist of three strands: oral, visual and written language and there are two aspects of each strand. The first aspect is the receptive aspect, which consists of receiving and constructing meaning whereas the expressive aspect is based on creating and sharing meaning. Oral language involves listening and speaking while written language consists of reading and writing. Visual language, on the other hand, refers to viewing and presenting.

Intercultural awareness is always promoted as well as respect for different languages and dialects. Having exposure to more than one language is seen as a way of enhancing personal development and promoting international mindedness (IBO, 2018b). The main approach followed to teaching and learning in the program is guided inquiry and language is taught in meaningful contexts involving a wide variety of teaching strategies and styles along with a clear sense of purpose. Transdisciplinary nature of language in the program is another feature emphasized because students use language within and across the subjects both inside and outside

classroom. A concept-driven curriculum is one of the major aspects of the program which enables teachers to meet the needs of an inquiry-based system. (IBO, 2018b).

Middle Years Program (MYP)

The MYP curriculum is the continuum of PYP curriculum with respect to the knowledge, skills, and attitudes formed in the IB PYP courses. The program also helps students to get ready to face the challenges of the IB DP courses. Studying at least two languages is one of the requirements of the program. The language courses of the program are divided into two: the first group is studies in language and literature, and the other one is language acquisition. Language acquisition component is compulsory in every year of the program as it is essential to help students acquire the ability to communicate in more than one language. Teaching and learning for this course are organized in six phases. Language and Literature courses, on the other hand, consist of six skill areas: reading, listening, speaking, writing, viewing and presenting. Ideally, these courses are expected to be offered in multiple languages in MYP schools. Students taking language and literature courses work on different genres which provide insights into moral, social, economic, political, cultural and environmental domains. Considering how smoothly students can continue their studies in the DP, having at least one semester in phases 5 and 6 in MYP is advised. In language acquisition courses, where there are phase specific objectives, students can start in any phase of the continuum. An inquiry-based approach is adopted in MYP, and it is noted that in all IB programs inquiry contributes to the development of curiosity and the promotion of critical and creative thinking (IBO, 2015b).

Diploma Program (DP)

Considering the role of the constructivist approach in the IB Curriculum, the interplay between inquiry, action and reflection is always valued and besides these

three driving forces, competencies for research, critical and creative thinking, collaboration, communication, managing information and self-assessment are specified as essential approaches to learning in the curriculum (IBO, 2015a). As for Language B Courses, students taking standard level (SL) courses are expected to have some experience in the target language to be able to improve their communication skills more in familiar and unfamiliar contexts. Besides developing their communication skills in these contexts, students are expected to use higher-level thinking. On the other hand, students taking high level (HL) courses are the ones with extensive previous experience in the target language. Thus, in terms of comprehension and communication they can manage tasks in various contexts for various purposes. Literature in the target language is a requirement of HL courses so students in this group must have the necessary abilities to meet the expectations of the course (IBO, 2020). Assessment objectives of both SL and HL courses require oral and written skills. Thus, students need to respond to both skills appropriately considering the context given for each prompt. In order to guide students through production, receptive texts are to be used by teachers. Production is to be followed with interactive tasks. As for production, students are to produce various text types such as surveys, blogs or newspaper & magazine articles (IBO, 2020).

Instructors are provided with principles of course design and suggested practices and approaches. Regarding the order of the course components and textbooks there is not a prescriptive document, which creates room for teacher flexibility and creativity. Even though creativity is not explicitly mentioned in Language B Teacher Support Material, it could be inferred that the expectations of the course from teachers require creativity in terms of course design and course implementation both for SL and HL courses. The same expectations regarding

creativity apply to students as well, because they are expected to produce various text types and use the language appropriately both for classwork and internal & external assessment tasks.

“Creativity is nurtured through the process of learning language as this process involves us in divergent thinking, applying ideas, taking risks and expressing ourselves in order to relate to, and interact with, the world.” (IBO, 2015c, p. 19).

Course expectations of each IB program prove that there is a great deal of room for creative pedagogy, which requires both the teacher and the student to employ creative thinking skills. Therefore, considering the room for creativity in IB programs, it is necessary to promote creativity both for students and teachers. As Hong et al. (2009) mentioned creative thinkers are welcomed, respected and their new ideas are tolerated in a creativity-fostered classroom.

Conclusion

In summary, the literature underscores the complexity and multidimensionality of creativity. Theoretical models have clarified important aspects of creativity, but their limited attention to pedagogical implications highlights the need for frameworks such as creative pedagogy. It accounts for the interplay between teachers, students, and learning environments. Within the field of foreign language education, studies indicate that creative thinking skills contribute to learner confidence, engagement, and problem-solving capacity, yet systematic approaches to their integration are still underdeveloped. The review also reveals that, although the IB curriculum provides a good ground for fostering creativity through its learner profile attributes and ATL skills, the role of creative thinking in English courses is still insufficiently examined.

CHAPTER 3: METHOD

Introduction

This chapter outlines the research design and methodology employed to investigate the role of creativity and creative thinking skills in English courses across continuum IB schools in Türkiye. Based on the conceptual framework of creative pedagogy (Lin, 2011), which integrates teaching creatively, teaching for creativity, and creative learning, this study extended the model by incorporating creative thinking skills as a fourth element. The chapter shares the rationale for adopting a single-case study design. The details were shared regarding the data sources, data collection methods, and data analysis for both the pilot and main studies. This helped to establish a foundation for the subsequent chapter focusing on the results.

Research Design

Theoretical frameworks or models focusing on creativity primarily deal with the phenomenon of creativity itself, but seldom address the pedagogical implications of creativity. With regard to creative thinking skills, the literature predominantly addresses creative thinking as a construct rather than the specific skills involved. In addition, studies on creative thinking skills in K-12 English classes are far less prevalent than those on critical thinking. Not only is the role of creativity but also the role of creative thinking skills in English classes in IB schools have been overlooked and not much has been done in Türkiye. Hence, in this study the conceptual framework of Creative Pedagogy (Lin, 2011) was employed, providing the theoretical lens (Creswell, 2021), to frame creativity and creative thinking skills in English courses in continuum IB schools in Türkiye. While creative pedagogy

framework enabled the researcher to approach the phenomenon from multiple perspectives namely creative teaching/teaching creatively, teaching for creativity and creative learning, adding creative thinking skills to this framework made it more comprehensive for the research. Based on the literature review, the descriptors for each element of the framework were added to frame the theoretical basis and to guide the data collection and analysis processes. The revised model was revisited and was further developed based on the data drawn from this interpretive single-case study (Merriam, 1990).

Considering the research topic and the school contexts, only “numerical analysis” (Cohen et al., 2007, p.181) or having another method of research would not be applicable for the study, so it was designed as a case study with two embedded units of analysis (Yin, 2009), where the researcher had no control of the real-life events in the context (Cohen et al., 2007; Merriam, 1990; Yin 2009). In addition to that, “the focus of the study within a real-life context” constitutes one of the pillars of this study (Yin, 2009, p. 2). The researcher adhered to the five components of a case study research design proposed by Yin (2009).

Component 1 – a study’s questions: this single-case study sought answers essentially for how and what questions providing “a unique example of real people in real situations, enabling readers to understand ideas more clearly and then simply by presenting them with abstract theories or principles” (Cohen et al., 2007, p. 253). As creativity is a diverse and multidisciplinary concept, the scope of the research was narrowed through the formulation of research questions, which served as the driving force of the study and guided the specification of research methods accordingly (Tashakkori & Teddlie, 2010).

Components 2 and 3 – its propositions and unit of analysis: the role of creativity and creative thinking skills in English lessons in IB curricula was investigated within a real-life context as suggested by Yin (2009), in two private continuum IB schools in two different cities in Türkiye. This enabled the identification of cause-and-effect relationships regarding the infusion of creativity and creative thinking skills into English classes within real-life contexts.

Components 4 and 5 – the logic linking the data to the propositions and the criteria for interpreting the findings: as Nisbet and Watt (1978) stated that a case study enables the capture of distinctive characteristics that might be overlooked in large-scale data. This case study, which prioritized the “significant few” rather than focusing on the “insignificant many” (Cohen et al., 2007, p. 253), is an interpretive case study for which inductive analysis was employed. This inductive analysis led to the development of conceptual descriptors for creativity and creative thinking skills (Merriam, 1990). Furthermore, multiple data sources were utilized to elucidate the role of creativity and creative thinking skills in continuum IB schools in Türkiye (Merriam, 1990).

Transformative mixed methods were used in the study (Creswell, 2021). As Creswell (2021) put it, for transformative mixed methods a theoretical lens is used. Lin’s creative pedagogy (2011) framework was employed as the theoretical lens for the study. The study employed both qualitative and quantitative data, aligned with the data collection methods necessitated by the framework. Due to Covid-19 constraints, qualitative and quantitative data had to be collected concurrently. Quantitative data were included for two main purposes: first, to examine students’ perception of creativity and creative thinking skills; and second, to integrate these findings into the data analysis process to enhance the interpretation of qualitative

results. Accordingly, while the study is predominantly qualitative, quantitative methods were employed to support triangulation.

Originally, Lin (2011) included three elements of creative pedagogy: creative teaching, teaching for creativity and creative learning. Based on the literature review, creative thinking skills were added as the fourth element along with the descriptors for each aforementioned category to frame the theoretical basis. As this study is an interpretive single-case study with two embedded units of analysis (Merriam, 1990), the researcher carried out further adjustments following the data analysis based on the insights gained.

The case study design enabled the exploration of the phenomena from participants' perspectives (Cohen et al., 2007). To this end, semi-structured individual teacher interviews were conducted. A 42-item teacher questionnaire was administered. In addition, a 30-item student questionnaire was conducted in PYP and MYP classes in both schools, giving valuable insights into students' perspectives. To ensure triangulation, classroom observations and written outcome samples were also incorporated. Nonprobability convenience sampling was employed for these data sources. In addition, the IB English curricular documents for each program were analyzed. For students' written outcome samples and classroom observations, nonprobability convenience sampling was employed, as this method prioritizes accessibility and practicality in participant selection (Cohen et al., 2007).

Context

Two continuum IB schools in Ankara and İzmir, in Türkiye, consented to participate in the study. Both of these schools are full continuum IB schools, where the PYP, MYP and DP are offered. In January 2020, there were only six full continuum schools in Türkiye, all of which were invited to take part in the study.

However, only the two aforementioned schools accepted the research invitation.

Upon request of the schools, their names are not disclosed. However, information collected from the web pages of the schools is given in the following section.

Table 1

An Overview of Both Schools

School	City	Year of establishment	The year when each program was authorized	Tentative Number of students in each program in grades 4, 10 and 12
School A	Ankara	Primary and middle school: 1994 High school: 1993	PYP: 2012 MYP: 2018 DP: 2008	PYP: 80 MYP: 60 DP: 15
School B	İzmir	1998	PYP: 2014 MYP: 2016 DP: 2018	PYP: 33 MYP: 80 DP: 20

School A

School A, which is a co-educational foundational school in Ankara, was authorized as a PYP school in 2012, an MYP school in 2018 and a DP school in 2008. This school offers all three IB programs for K-12 grades.

The school implements PYP in grades from 1 to 4. A class teacher system is followed at the school, for which the Ministry of Education prescribes the topic-based curriculum across Türkiye. Turkish, Life Sciences, Mathematics and Social Studies are given by class teachers while English, Art, Music, Drama, Sports and Computing are the courses given by subject specialists. Weekly load for the students is 40 hours of classes, 20 of which are the class hours taught by the Turkish class teachers. The rest of the hours are allocated to the other subject areas. As the school has moved towards an immersion model of Turkish and English, the total number of hours offered in English are 20. English language classes, on the other hand, are 10

hours a week from grades 1 to 8. As an IB PYP requirement, the school covers six units of inquiry. The teachers collaborate to plan the units of inquiry, but integrating the national curriculum into the inquiry-based program is one of the challenges they experience. However, there is room for a great deal of flexibility for other subject areas such as English. The school starts teaching English as of Pre-K. Grades 5 to 8 offer subject-based lessons as well as the lessons specified by the national curriculum.

Along with the national curriculum, the MYP is carried out in Grades 6 to 10. Similar to the PYP, English is a priority in those grades. Grade 5 is known as “MYP T” which is also known as the transition year to the MYP. In terms of the implementation of the MYP there is not a difference between that transition year and the other MYP years. Inquiry-based learning and international-mindedness are two of the pillars of the education emphasized along with the Learner Profile attributes. The school offers relevant opportunities both for the training of the teachers and the curriculum development enabling the staff to overcome the challenges they encounter in the process of meeting the expectations of both the IB and the National Curriculum.

The students are predominantly Turkish students, so the international students make up approximately 7-8% of the school. Bi/multilinguism is one of the significant aspects of the school culture, which is visible in the school corridors and the classrooms as the visuals and signs are displayed both in Turkish and English. As of Grade 5 foreign language courses such as German, French, or Spanish are also offered. The school places emphasis on developing a common understanding of language teaching and learning. Concerning the shared understanding and the attitude towards language teaching and learning, the school formulated the MYP

Language Policy based on the documents: From Principles into Practices Guide and Reflection Guide. According to the statistics provided by the school, 70-75% of the students proceed with their education in the same school.

The IB DP students at this school must fulfill the requirements of the Diploma Program and prepare for the Turkish national university entrance exam. Since this is highly demanding, the number of the students enrolling for the program decreases to a certain extent after completing the MYP. Due to this, the student numbers in the DP are relatively lower compared to the PYP and MYP in the school. The school offers six subjects specified in the DP curriculum worldwide. Some of these subjects are offered both at higher level and standard level whereas some such as Environmental Systems and Societies are offered at standard level only. As for English courses, English A Language and Literature & English B Language Acquisition are offered at high levels only. Considering the student's profile, the IB DP coordinator and the English teachers make the necessary decision for the student regarding which English subject would suit the student the best. In addition to six subjects, all three parts of the core are offered. The last five years' (from 2019 to 2024) average scores of IB DP are respectively 30, 33.3, 35, 33.2, 33.7, 34.4.

The school provides detailed guidelines for the parents aiming to learn more about the DP and its compatibility with the student. Additionally, the school helps each student and the parents to come together with the school counsellors, and the DP coordinator to guide the student and the parents accordingly regarding their decision about pursuing the DP.

Overall, the school emphasizes the importance of constructing meaning and inquiry in the process of language learning at all grades in all three IB programs.

School B

School B, a co-educational foundational school, located in İzmir. It was authorized as a PYP school in 2014, an MYP school in 2016 and a DP school in 2018. This school also offers all three IB programs for K-12 grades.

The school is the only continuum IB school in that region of the country implementing all three IB programs. As mentioned on the school website explicitly, the school's core values are directly aligned with the IB core values. The students are encouraged to become active learners in their learning journey, during which interaction and collaboration are promoted.

These three core values form the basis of teacher-student relationship, to which counselling and coaching systems available at school contribute. Additionally, the National Curriculum is also followed in line with the IB curricula at each program. A comprehensive guide for each program for the parents is available online.

In the primary school, both the National Curricula and the IB PYP framework are implemented, which aim at enabling the learners to produce the expected outcomes of both. The language of the instruction is both Turkish and English. There are 24 students in each class with whom two teachers work closely. The teachers identify the students' academic and social skills and also their needs to take the necessary actions in line with the school philosophy. The physical environment available in the classrooms encourages active participation, inquiry, research and hands on learning because in each classroom there are separate sections designated for learning, sharing and practicing.

In line with the IB MYP values and expectations, there is a student-centered approach towards teaching and learning prioritizing project-based methods. While

enhancing the students' academic, social, cultural and physical skills, there is an explicit focus on guiding the students according to their individual differences. In addition to these, the students have the opportunity to take part in various extra-curricular activities. It is noted that foreign language learning is one of the primary goals of the school and to this end a communicative teaching approach has been adopted and both theme-based and project-based learning are offered. Overall, the holistic approach to education is emphasized and practiced, which aligns with the IB MYP goals.

As for the DP program the school highlights the importance of becoming a whole-person for success both in academic and social life. Speaking multiple languages, critical thinking skills and being solution oriented towards global problems are some of the priorities the school emphasizes for its DP program.

Maintaining Ethical Standards

As the student participants were under the age of 18, proposals were submitted to the Ministry of National Education (MoNE) through İhsan Doğramacı Bilkent University Graduate School of Education in October 2020 and October 2021 to obtain ethical approval for the pilot and main studies. On December 30th, 2020, MoNE granted the necessary permission for the pilot study and the next year on November 11th, 2021 permission was granted for the main study. In addition to the permission from the MoNE, parental consents for the participant students and teacher consents for the participant teachers were obtained.

To ensure participant anonymity, teachers and parents completed consent forms prior to data collection, which outlined the aims of the study and the data collection instruments. The forms emphasized that participation was voluntary. Pseudonyms were used to refer to the teacher participants.

Participants

This multiple case study, examining a real-life phenomenon (Yin, 2009), used nonprobability sampling (Cohen et al., 2007) in order to find out about two continuum IB schools PYP grade 4, MYP grade 10 and DP grade 12 teachers' and students' views on creativity and creative thinking skills. As Cohen et al. (2007) stated nonprobability quota sampling is applicable when there are fewer schools or a smaller number of teachers and students available or chosen as the sample for the case study. In addition, it is not to be generalized (Cohen et al., 2007). In terms of the implementation of nonprobability sampling, all the PYP grade 4, MYP grade 10 and DP grade 12 teachers in both schools were invited to complete the questionnaires voluntarily. In addition to the questionnaires, all the relevant teachers in both schools were also invited to voluntarily take part in the semi-structured interviews. In both schools, all of those teachers consented to participate in the study. Additionally, all PYP grade 4, MYP grade 10 and DP grade 12 students in both schools were invited to participate in the voluntary-based questionnaire completion. However, from both schools a total of only five DP grade 12 students agreed to participate. Due to DP grade 12 students' intensive schedule in both schools, the questionnaire response rate was insufficient.

Table 2

Demographic Information of the Teachers

Demographic Categories	School A #	School B #
Sex		
Male	1	0
Female	2	5
Nationality		
Turkish	2	1
British	1	3
Other	0	1
Years of experience in IB context		

Demographic Categories	School A #	School B #
1-5	2	3
6-10	0	2
11-15	1	0
16 years and more	0	0
Currently teaching in		
PYP	1	3
MYP	2	2
DP	1	1
Has been teaching in the current IB program(s)		
1-5 years	2	3
6-10 years	0	2
11-15 years	1	0
16 years and more	0	0
Teaching Qualifications		
Certificate of teaching	1	1
PGCE, CELTA	1	0
IPGCE Buckingham University, RSA TEFL, UK , UCLES IB Making the PYP Happen in the Classroom	0	1
DTEFLA, CTEFLA	0	1
CELTA	0	1
TEFL	0	1

Table 3*Demographic Information of the PYP and MYP Students*

Demographic Categories	PYP #	MYP #
Sex		
Male	20	34
Female	15	24
Age		
9-12	35	
13-15		14
16-18		44
Number of foreign languages		
1	14	1
2	16	33
3 or more	5	24
Started learning the first foreign language at the age of		
Younger than 4	16	11
4	9	13
5	7	12
6	3	9
7		4
Older than 7		9
Has been studying in this school		

Demographic Categories	PYP #	MYP #
Since Pre-K	25	
Since the beginning of primary school	6	40
First started studying at a different school. Then started studying here		
Since the beginning of Middle School		9
Since the beginning of High School	4	9
Was a PYP student before		
Yes		44
No		14
Mother's highest qualification		
PhD	3	7
Master's degree	13	31
Bachelor's degree	18	14
High School Diploma or an equivalent degree	1	4
Father's highest qualification		
PhD	3	2
Master's degree	17	27
Bachelor's degree	14	19
High School Diploma or an equivalent degree	1	7
Total	35	58

Sources of Data

Both qualitative and quantitative instruments were employed for data collection. Each instrument was either adapted or designed by the researcher. Qualitative data instruments consisted of class observation checklist (Appendix C), a set of written outcome criteria (Appendix F), semi-structured individual teacher interview questions (Appendix G), the written curriculum analysis tool for IB curricular documents (Appendix H), and the teacher questionnaire for the PYP, MYP and DP teachers (Appendix J). The PYP and MYP student questionnaires were the instruments used for quantitative data collection (Appendix K).

Table 4*Main Study Data Collection Instruments and Sources of Data*

Research Question	Data collection instruments	Sources of data
RQ1	eight semi-structured interview questions	8 teachers (4 PYP, 4 MYP teachers, two of the MYP teachers are DP teachers at the same time)
RQ2	PYP student questionnaire (30 items) MYP student questionnaire (30 items)	PYP grade 4: 35 students MYP grade 10: 58 students
RQ3 a	written curriculum analysis tool for frequency analysis	IB Curricular documents First phase analysis Common Curricular Documents: What is an IB education?, Program Standards and Practices PYP: The Learner, Learning and Teaching, The Learning Community, Language Scope and Sequence, Translanguaging, Overview, Multiliteracies, Student Language Portraits MYP: From Principles into Practice, Language Acquisition Guide, Language and Literature Guide DP: From Principles into Practice, Language A: Language and Literature Guide, Language B Guide, Language B Teacher Support Material Second phase analysis <i>PYP: The Learner (2018), Learning and Teaching (2018)</i> <i>MYP: From Principles into Practice (2015)</i> <i>DP: From Principles into Practice (2015)</i>
RQ3 b	eight semi-structured interview questions 42-item teacher questionnaire class observation checklist	8 teachers (4 PYP, 4 MYP teachers, two of the MYP teachers are DP teachers at the same time) 3 PYP, 7 MYP class observations and 1 DP class observation
RQ3 c	analytic written outcome criteria	PYP: 9 written outcome samples MYP: 11 written outcome samples

Pilot Study

Qualitative Instruments

Semi-Structured Teacher Interview Questions.

For the pilot study, there were ten open-ended interview questions (Appendix B) focusing mainly on creative thinking skills and their role in instruction. The aim was to have specific and context-based questions; therefore, the interview questions were prepared after completing the literature review. The questions served their purpose in the pilot study and helped to identify several actions for the main study data sources. Following the pilot study, the interview questions were modified with the aim of collecting more comprehensive data. The first change made was to have fewer questions. Originally, there were ten questions, but considering the time constraints due to Covid-19 restrictions, the number of the questions were limited to six. The questions about the teacher's background and the difference(s) the teacher notices between the creative students and less creative ones were some of the questions eliminated. For the main study, the teachers were asked to introduce themselves briefly and share any highlights from their career path at the beginning of the semi-structured interviews. These changes led to more purposeful interview questions and more relevant responses. Another adjustment was the inclusion of 'creativity' in all interview questions. In the pilot study, the research questions did not explicitly reference creativity, and the interviews therefore focused only on creative thinking skills. Following revisions to the research questions after the pilot study, corresponding changes were made to the main study interview questions.

Class Observation Checklist.

A class observation checklist, consisting of four sections: creative learning, creative thinking skills, teaching for creativity and how creativity is fostered, was

compiled. As there was not an observation checklist specifically focusing on creativity and creative thinking skills in continuum IB English classes, the researcher compiled a checklist based on the works of Kaufman and Beghetto (2010), Lin (2009), Lucas (2004), NACCCE (1999), McGuinness et al. (2006), Swartz and McGuinness (2014) and Torrance (1963). The checklist includes the most recurring attributes of creativity and creative thinking skills (Appendix C). There are four divisions and subdivisions to help the observer approach the task considering different aspects of the infusion of creativity and creative thinking skills. The checklist served as a guiding tool, and ensured consistency throughout the observations.

Written Outcome Criteria.

An analytic set of written outcome criteria was developed to evaluate the use of creative thinking skills in students' written work (Appendix F). There was no existing criteria within the IB context specifically addressing this area, so the instrument was constructed after a review of the literature. The criteria focuses on five categories: generating ideas, formulating original viewpoints, adopting multiple perspectives, enriching content, and explaining ideas. These categories were adapted from McGuinness et al. (2006), who proposed them in a report prepared for the IB.

Quantitative Instruments

Teacher Questionnaire

There was not an existing scale in the literature specifically addressing the IB English teachers' perceptions and practices regarding creativity and creative thinking skills, so a new instrument was developed by adapting two items from Kuo et al. (2017), nine items from Kandemir et al. (2019), five items from Olgun (2012), with the remaining 26 items designed by the researcher (Appendix D).

Kandemir et al. (2019) developed the *Creative Teaching in Mathematics Class* scale to examine the extent to which teachers' learning environments supported creativity. Their study also introduced a framework outlining the actions teachers should take to foster a creative classroom atmosphere. The scale consisted of six dimensions—teaching style, confidence, classroom climate, overcoming barriers, questioning, and innovative teaching practices—across 36 items, addressing teachers' problem-solving skills in mathematics. Similarly, Kuo et al. (2017) focused on creativity education in Taiwan through the *Creativity Education Questionnaire*, developed from interviews, document analysis, on-site visits, and surveys. This instrument consisted of five subscales—creative teachers, creative students, creative campus, interdisciplinary practice, and creative database—measured by 80 indicators and administered to 1,015 school administrators and teachers in primary and secondary schools. In a related context, Olgun (2012) designed a questionnaire as part of her master's thesis, exploring the contribution of *Destination Imagination* to Turkish students' skills. Permission for the adaptation of the relevant items from all three instruments was obtained from the respective researchers via electronic correspondence.

The teacher questionnaire was designed to explore the IB teachers' approaches to creativity and creative thinking skills. Consisting of 42 items across three sections, it included demographic information through open-ended and yes/no questions in Section I (items 1–10); examined teachers' approaches to creativity and creative thinking skills in Section II (items 11–32); and focused on the role and implementation of creative thinking skills in the IB curricula in Section III (items 33–42).

The following items were adjusted after the pilot study:

- Item 4: was a Yes/No question, but it was reformulated as an open-ended question to learn more about the teacher's previous experience.
- Item 5: PYP, MYP and DP were given as the options, but the item was changed to an open-ended item.
- Item 9: the wording of the question was revised to make it more reader-friendly.
- Section II: the option 'neutral' was changed to 'neither agree nor disagree'.
- There were two subcategories: Classroom climate (items 11-16) and Teaching style (items 17-32) in section two. In order to avoid confusion, those two subheadings were deleted.
- Item 38: upon the feedback given by the dissertation monitoring committee members, the item was changed from 'Do you teach creative thinking skills explicitly? Yes/No' to 'To what extent is it possible for you to integrate creative thinking skills into your classes?'

Student Questionnaire

To investigate the students' perception of their own creativity, creative thinking skills, their teachers' creativity, and teachers' attitudes toward creativity, a student questionnaire was developed by adapting five items from Kandemir et al. (2019). As no existing scale in the literature addressed these areas collectively, a new 30-item instrument was designed, consisting of two sections (Appendix E). Section I (items 1–8) gathered demographic information, while Section II (items 9–30) focused on creativity and creative thinking skills. Based on feedback from the dissertation monitoring committee, the wording was simplified to enhance comprehension for PYP students, and smiley symbols representing 'agree,' 'neutral,'

and ‘disagree’ were added to the Likert-type items. In addition, the following changes were made after the pilot study:

- Section II: ‘neutral’ was changed to ‘neither agree nor disagree’ in the MYP and DP questionnaires.
- Section II: ‘creativity’ was added to the section heading.
- PYP questionnaire: instead of using ‘neither agree nor disagree’, ‘neutral’ was kept as an option to ease comprehension in section II.
- Item 9: ‘in my English classes’ was added to the statement.
- Item 10: the sentence ‘...I usually make an effort to come up with solutions.’ was rewritten as ‘...I can usually come up with various solutions.’
- Item 10 in PYP questionnaire: was changed from ‘Even when my teacher does not tell me to come up with different solutions/ suggestions to the problems we have, I usually make an effort to come up with solutions.’ to ‘Even though it is not necessary for me to find a solution or have an answer to a question in class; I still make an effort to find a solution/ an answer.’
- Item 12 in PYP questionnaire: the word ‘articulate’ was replaced with the word ‘share’ and the phrase ‘the English lessons’ was added to ease comprehension.
- Item 13: ‘My English teacher...’ was added to the statement to remind that they need to consider their English teacher.
- Item 13 in PYP questionnaire: the statement ‘My teacher asks questions that require creative answers.’ was reworded as ‘My

teacher's questions require creative answers. There is not a wrong or right answer to such questions.'

- Item 14 in PYP questionnaire: the phrase 'during classes' was added.
- Item 15 in PYP questionnaire: the statement: 'I can answer my teacher's questions in many different ways.' was added.
- Item 16 in PYP questionnaire: the wording of the question was simplified as 'My teacher expects me to solve problems (or answer questions) by working cooperatively with my classmates.'
- Item 17 in PYP questionnaire: 'My teacher expects me to be creative.' was reworded as 'My teacher expects me to be creative in English classes. For example, my teacher expects me to use my creativity in writing and speaking.'
- Item 18 in PYP questionnaire: 'My teachers' feedback helps me to be creative.' was changed to 'My teacher's feedback on my writing and speaking tasks helps me to be creative in the following writing and speaking tasks.'
- Item 19 in PYP questionnaire: 'I can be creative in English lessons regardless of my teacher's teaching style/ creativity.' was worded as 'I can be creative in English lessons at all times.'
- Items 26 and 27 in PYP questionnaire: 'i.e. writing and speaking skills' was added to item 26 and 'i.e. writing a text, or a short story or sharing my opinions on different topics' was added to item 27 in parenthesis for further clarification.

Main Study

Qualitative Instruments

Semi-Structured Interviews

The terms creativity and creative thinking skills are often used interchangeably, so the interviews focused on how teachers defined these terms and the extent of their familiarity with them. Anticipating that teachers might struggle to provide clear definitions, the questions were designed to encourage elaboration on the role of creativity and creative thinking considering their own contexts. To avoid confusion, the terms teaching creatively, teaching for creativity, and creative learning were deliberately excluded, as differentiating among them could have been challenging without sufficient background knowledge. Six open-ended, nonthreatening questions (Yin, 2009) were prepared to elicit diverse perspectives on creativity and creative thinking skills (Appendix G). The questions were kept broad to avoid constraining responses (Roberts, 2020): the first three focused on definitions and perceived roles, while the remaining three examined implementation within the IB curricula and formative assessment. This design provided insight into teachers' practices while avoiding predetermined outcomes (Roberts, 2020). The interviews were also conducted in line with McGrath et al.'s (2018) twelve recommended practices for qualitative research interviews.

Class Observation Checklist

The checklist (Appendix C) proved effective in the pilot study, with no problems encountered; therefore, it remained unchanged and was employed in the main study.

Written Curriculum Analysis Tool

Although numerous studies have analyzed the International Baccalaureate (IB) curricula (Doherty, 2009; Double et al., 2023; Gardner-McTaggart, 2014; Halıcıoğlu, 2008; Hallinger, Lee & Walker, 2011; McGrane et al., 2022; Shukur, 2025; Walker & Lee, 2019; Zeng, 2024), none have directly examined creativity and creative thinking skills within English course curricula across continuum IB schools. While some research considered either creativity or creative thinking skills in the context of the IB (Back, 2024; Martin et al., 2016; Richardson & Krstić, 2021), no studies have addressed both at the same time. To investigate how creativity and creative thinking skills are embedded in English courses across the IB continuum, this study analyzed a set of written curriculum documents representing each IB program (Appendix I). For this purpose, a set of criteria was developed, based on frequently used keywords in the literature. These keywords were subsequently categorized into three groups: person approach, product approach, and creative thinking skills (Appendix H).

Written Outcome Criteria

As the analytic criteria proved effective in the pilot study, it was also applied in the main study (Appendix F). Inter-rater reliability was high, as the grades assigned by the first and second markers were strongly correlated.

Quantitative Instruments

Teacher Questionnaire

The final version of the teacher questionnaire was employed to examine teachers' approaches to creativity and creative thinking skills. The instrument consisted of 42 items across three sections: Section I (items 1–10) gathered demographic information through open-ended and yes/no questions; Section II (items 11–32) consisted of Likert-type items designed to identify teachers' approaches to

creativity and creative thinking skills; and Section III (items 33–42) focused on the role and implementation of creative thinking skills within the IB curricula (Appendix J).

Student Questionnaire

To examine students' perception of their own creativity and creative thinking skills, as well as their teachers' creativity and attitudes toward creativity, the final version of the student questionnaire was employed following revisions made after the pilot study. The instrument had 30 items organized into two sections, with Section II consisting entirely of Likert-type items (Appendix K).

Data Collection

Data Collection for the Pilot Study

A pilot study was conducted to test the data collection instruments for validity and reliability. The pilot provided valuable insights and informed further improvement of both qualitative and quantitative tools. For the qualitative strand, individual semi-structured interviews were held with one PYP, one MYP, and one DP teacher. The observations of a PYP and an MYP lesson also took place, which contributed to a great extent to the development of the class observation instrument. For the quantitative strand, written outcome samples were collected from MYP and DP students. PYP samples were eliminated for data analysis as the task type did not fit in. Teacher and student questionnaires were administered in one class at each program level, with one teacher from each program completing the questionnaire. Conducted during the Covid-19 pandemic (March–April 2021), all pilot data collection took place online: teacher interviews and classroom observations were carried out via Zoom, while the teacher and student questionnaires were administered using Qualtrics.

Table 5*Pilot Study Data Collection Plan*

March & April 2021			
teacher questionnaire administration on Qualtrics	student questionnaire administration on Qualtrics	class observations on Zoom	written outcome student samples
3 participants (one PYP, one MYP and one DP teacher)	PYP, MYP, DP students completed the questionnaire.	3 classes (one PYP, one MYP and one DP class)	representative samples from MYP and DP students in the form of film reviews (MYP) and essays (DP).

Data Collection for the Main Study

For the main study, eight semi-structured interviews were conducted via Zoom with each English teacher from the two participating schools, and all eight teachers also completed the teacher questionnaire through Qualtrics. The student questionnaire was administered to 35 PYP and 58 MYP students, also via Qualtrics. Although there were two DP classes in total (one in each school), only five students from School A completed the questionnaire due to their intensive schedules; therefore, their responses were excluded from the quantitative analysis. Convenience sampling was employed for classroom observations and written outcome student samples. Class observations were face-to-face lessons in both schools. Additionally, relevant sections of the PYP, MYP, and DP English curricula were included in the data collection. Conducted during the Covid-19 pandemic, school-specific restrictions and procedures determined the process, so it resulted in a non-linear data collection timeline. An overview of the data collection process is provided in Table 6.

Table 6*Data Collection Plan*

School A	School B
December 2021 Class Observations (in MYP classes and DP class)	May 2022 Class observations (in PYP and MYP classes)
June 2022 Class observations (PYP class)	
January 2022 individual semi-structured zoom interviews with MYP/DP teachers	December 2021 individual semi-structured zoom interviews with PYP teachers
May 2022 individual semi-structured zoom interviews with PYP teacher	May 2022 individual semi-structured interviews with MYP/DP teachers
January 2022 Collection of written production samples	May 2022 Collection of written production samples

Data Analysis**Pilot study Qualitative data analysis**

Three teacher interviews and two class observations were analyzed holistically. There were shared themes across the data sets. The findings indicated that the teachers made effort to integrate creativity and creative thinking skills into their classes; however, further evidence was required to determine the extent and consistency of this integration within course design and delivery. Teachers often used the terms ‘creativity’ and ‘creative thinking skills’ interchangeably, which at times led to overgeneralization. A recurrent concern they highlighted during the interviews was time constraints, particularly in the MYP and DP, which limited opportunities for embedding creative thinking skills. At the same time, collaborative planning, especially in PYP and MYP, supported teaching both for creativity and creatively, while ATL skills contributed to more informed instructional decisions. Another key finding was the teachers’ role as facilitators: they guided students with

encouragement, created space for learner autonomy, and fostered risk-taking and collaboration.

Pilot study Quantitative data analysis

In order to measure the internal consistency of the questionnaires, Cronbach's alpha was calculated. The results are as follows: Likert type items in section II on creativity is $\alpha = .901$ for items 11-32. As for section III, for items 35-36 and 38-40-41 $\alpha = .536$. For student questionnaires the Cronbach's alpha coefficients are given in Table 7.

Table 7

Cronbach's alpha Coefficients for Students' Questionnaire in the Pilot Study

Questionnaire	Items on creativity	α
PYP Questionnaire	9-22	.818
MYP Questionnaire	9-22	.849
DP Questionnaire	9-22	.756

Due to the limited number of participants, statistical tests could not be performed; however, percentages of responses for each questionnaire item were calculated and selected highlights were reported (Appendix L). For the written outcome analysis, an experienced EAP testing specialist and the researcher independently evaluated student samples using the analytic criteria (Appendix F). Inter-rater reliability was assessed through Pearson's correlation coefficient: four MYP and four DP papers were marked separately, and results showed perfect agreement ($p = 1$). The analysis indicated that the task type was a determining factor in demonstrating creative thinking skills in students' written work. While MYP and DP tasks provided opportunities for integrating such skills, the PYP pilot samples—

largely consisting of summaries or descriptive writing—did not require the students to make use of creative thinking skills.

The Main Study Qualitative Data Analysis

Similar to the data collection process, the data analysis was non-linear. As Rossman and Rallis (2011) described, interpretation followed an interpretive–hermeneutic circle, beginning with the analysis of individual parts before moving to the whole. The process was recursive, requiring repeated reading and reanalysis of the qualitative data sets. In line with Rossman and Rallis (2011), the stages included familiarization with the data, reflection, coding and recoding, and finally drawing on the insights gained to report the findings.

Semi-Structured Interviews, Teacher Questionnaires and Class Observations

Inductive thematic analysis of the semi-structured interviews was conducted following Braun and Clarke’s (2006) six-phase framework. Transcripts were analyzed using MAXQDA (VERBI Software, 2023), cross-checked against the recordings for accuracy, and coded according to emerging themes. Observation data were categorized using the class observation checklist and also the patterns were identified across both observations and other qualitative data sources. To address the third research question, overlapping themes between the teacher questionnaire responses and interview data were also examined.

All classroom observations were conducted by the researcher due to Covid-19 restrictions and related logistical constraints, which also limited the number of possible observers. To maintain reliability, consecutive observations were largely avoided, and no classes taught by the teachers previously known to the researcher were observed (Joe et al., 2015). As suggested by Joe et al. (2015) the observation checklist was designed to manage the cognitive load and time constraints of the

observations better. In order to ensure inter-rater reliability, there were four dimensions with several subdivisions and it ensured simple scoring procedures. Additionally, observations were carried out only on task-completion days, allowing the researcher to focus on instructional practices better.

The IB Curriculum Analysis

To identify the patterns related to creativity and creative thinking skills, core curricular documents from each IB program were selected, prioritizing those most relevant to the scope of the study. Using deductive categorization (Rossman & Rallis, 2011), key terms were classified under three predetermined themes: person approach, product approach, and creative thinking skills. This approach enabled a structured examination of how these concepts are embedded within the curricula. A frequency analysis conducted in Microsoft Excel provided a data-driven overview of term distribution. It also facilitated cross-program comparisons. In the second phase, an in-depth qualitative analysis of selected documents was undertaken to explore how creativity and creative thinking skills are conceptualized and to align these findings with the Creative Pedagogy Framework for Continuum IB Schools:

- **PYP:** *The Learner (2018), Learning and Teaching (2018)*
- **MYP:** *From Principles into Practice (2015)*
- **DP:** *From Principles into Practice (2015)*

Written production tasks

An experienced English instructor and the researcher independently evaluated representative PYP and MYP written production tasks using the analytic criteria. Inter-rater reliability was calculated through Pearson's correlation coefficient, confirming consistency in grading. For the PYP samples, the raters' scores showed a

very strong correlation ($p = .96$). The MYP results also indicated a strong positive correlation ($p = .77$).

The Main Study Quantitative Data Analysis

Student Questionnaires

SPSS 23 was used to analyze the PYP and MYP student questionnaires. As an initial step, normality was assessed using skewness and kurtosis values, as well as the Kolmogorov-Smirnov and Shapiro-Wilk tests. Subsequently, a Mann-Whitney U test was conducted to compare PYP and MYP students' perceptions of their own creativity and creative thinking skills, together with their perceptions of their teachers' creativity and attitudes toward creativity. This analysis provided insight into patterns within each group and highlighted differences between the two.

Validity, Reliability and Generalizability

Bloomberg and Volpe (2016) highlighted differences in the terminology used to describe validity, reliability, and generalizability. For example, Lincoln and Guba (1994) employed the terms credibility, dependability, and transferability, while Yin (2009) also used confirmability in discussing research design quality. In this study, however, the traditional terminology is kept. Given the importance of the researcher's perspective and the expression of participants' voices in qualitative research (Merriam, 1990), the data were carefully handled from multiple perspectives rather than being reduced to factual reporting. As Merriam noted, "One of the assumptions underlying qualitative research is that reality is holistic, multidimensional, and ever-changing..." (1990, p. 167). Conducting mixed-methods research provided a means to test this assumption.

Internal validity was ensured by applying four strategies outlined by Merriam (1990). The first was triangulation, which was achieved through the use of multiple

data sources and methods, which, as Yin (2017) emphasized, strengthens methodological rigor (Quintão et al., 2020). Data sources included IB English curricula, teacher and student questionnaires, classroom observations, and student written outcome samples. Researcher triangulation was also employed, as qualitative data were co-evaluated with Dr. Ateşkan. That provided multiple perspectives and led to theory triangulation (Quintão et al., 2020). Second, data were collected over an extended period in both schools rather than in a single round. Third, peer examination was sought. Fourth, researcher bias was addressed through transparency in assumptions, sampling decisions, and contextual details.

Expert review supported the validity of the instruments further: two experienced EAP instructors, one a native speaker and testing specialist with over 25 years of teaching experience, and the other a non-native instructor with more than 12 years of university-level experience, reviewed the questionnaires and observation checklist. Their feedback informed final revisions. External validity was supported by the potential replicability of the study in other IB schools in Türkiye, and in other countries while construct validity was established through the use of diverse data sources and carefully defined measures of creativity and creative thinking skills based on an extensive literature review (Yin, 2009).

Reliability in qualitative research is understood as dependability or consistency (Merriam, 1990). To ensure dependable results, the study's assumptions, rationale for participant and instrument selection, and theoretical framework were explicitly articulated. Reliability of the quantitative instruments was tested using Cronbach's alpha coefficients in SPSS 23. For the teacher questionnaire, items on creativity (11–32) demonstrated very reliable internal consistency ($\alpha = .848$), while items on creative thinking skills (35–41) were marginally reliable ($\alpha = .655$) (Cohen

et al., 2007). For students' questionnaire the Cronbach's alpha coefficients are given in Table 8.

Table 8

Cronbach's alpha Coefficients for Students' Questionnaire

Questionnaire	Items	α
PYP	on creativity 9-22	.548
	on creative thinking skills 23-30	.839
MYP	on creativity 9-22	.696
	on creative thinking skills 23-30	.862

Cohen et al. (2007) outlined the following thresholds for interpreting Cronbach's alpha: $> .90$ indicates very high reliability, $.80-.90$ very reliable, $.70-.79$ reliable, $.60-.69$ marginally/minimally reliable, and $< .60$ unacceptably low reliability. However, as Gliem and Gliem (2003) noted, alpha values are influenced by both the number of items in a scale and the mean inter-item correlations. Accordingly, the relatively low number of items in certain categories may have contributed to the values below $.60$.

Conclusion

In summary, the methodological choices made in this study were guided by the need to understand the multidimensional and context-specific nature of creativity and creative thinking skills within IB English courses. The integration of multiple qualitative and quantitative instruments—including individual semi-structured teacher interviews, teacher and student questionnaires, classroom observations, curricular document analysis, and student written outcome samples—enabled a holistic examination of the research questions. They also ensured methodological triangulation and strengthened the validity of the findings. Employing interpretive case study within a transformative mixed-methods framework contributed to a clear

understanding of how creativity and creative thinking skills are embedded and operationalized in IB English education in Türkiye.



CHAPTER 4: RESULTS

Introduction

This study investigated creativity and creative thinking skills in the continuum IB context in Türkiye through multiple perspectives: the curriculum of each IB program, instruction and the student body for the provision of a comprehensive guide approaching creativity education pedagogically. The chapter presents the results in two parts for each research question. First, the overall results of the data analysis are given. Then, for each research question, a further analysis, which is linked to the initial version of the revised framework (Figure 2), is provided.

Results of Research Questions

RQ1: What is English teachers' definition of creativity and creative thinking skills in continuum IB schools?

For the first research question, following Braun and Clark's (2006) inductive thematic analysis phases and then the 15-point checklist of criteria, the relevant codes, categories and themes were identified. Pseudonyms are used for teachers, and the explanations are given in Table 9 to ease reading.

Table 9

Pseudonyms for Teachers Used Throughout the Analysis

Pseudonym	Teacher at program and school	
T1	PYP	SCHOOL B
T2	PYP	SCHOOL B
T3	PYP	SCHOOL B
T8	PYP	SCHOOL A
T4	MYP	SCHOOL A
T5	MYP & DP	SCHOOL A
T6	MYP	SCHOOL B
T7	MYP & DP	SCHOOL B

The categories and codes given in Table 10 were specified after the inductive thematic analysis.

Table 10

Categories and Codes for RQ1

Theme	Category	Code
Teacher's definition of creativity	Student creativity	<i>making connections, imagination</i>
	Teaching creatively	<i>adding variety to lessons, arousing interest, flexibility</i>
Teacher's definition of creative thinking skills	Thinking creatively	<i>thinking outside the box ATL skills learner profile generating ideas</i>

The teachers defined creativity by referring to student creativity and teaching creatively. According to the teachers, making connections and imagination account for student creativity. They did not share a definition of teacher creativity, but mentioned teaching creatively by focusing on adding variety to lessons, arousing interest and flexibility. Creativity has more than one definition and each definition changes depending on the relevant domain (Simonton, 2018). Thus, it was not simple for the teachers to define it by pointing out each component of creativity.

Nevertheless, the teachers' personal definitions indicate the multilayered nature of creativity. However, the definitions, which mostly consisted of examples from the teachers' day to day teaching, revealed insufficient in-depth pedagogical knowledge regarding the concept of creativity. Although they did not define student creativity explicitly, the analysis of their answers indicate that they can differentiate between student and teacher creativity, but their understanding of teacher creativity was expressed as teaching creatively.

Concerning student creativity, the teachers in fact referred to student characteristics, which could be categorized under student creativity. Making connections and the use of imagination are two of the student characteristics that were reiterated by the teachers several times throughout the interviews. Out of eight, three teachers (two PYP and one MYP) referred to making connections and two teachers (one PYP and one MYP) referred to imagination. T2 said *“I think like having them make connections...they are allowed to make their own.”* Similarly, T5 referred to making connections by sharing *“...to apply perhaps their own personal knowledge to the context.”* Even though the teachers uttered the term ‘making connections’, some of the teachers meant students making connections with the help of teacher guidance. T8 noted *“...where the kids can use their imagination, and how they can combine it with what they have learned.”* This quote highlights the importance of imagination and also exemplifies making connections without the teachers’ guidance. The following quote, on the other hand, refers to the role of the teacher’s guidance in making connections during creativity process. T2 said *“How can I say, in the class, we never say, No, you're wrong... every answer that they give is met with a kind of, well, good idea could be, might be, I like your way of thinking. So we encourage them all the time to think outside of the box to make personal connections.”* The quote reveals the teacher’s level of awareness in terms of the guidance provided for the students to make the necessary connections. In addition to that T1 emphasized the importance of empowering the students saying that *“...The key a lot though, is very much empowering students, it's not the teacher saying everything, it's not the teacher giving everything, it's the students asking the questions, and then the students make the connections. And the students take the learning where they want it to go....”* As this quote indicates the teacher’s way of

designing lessons stimulates student creativity. To further exemplify the teacher's role in leading the students, what T4 shared is significant *"... instead of just writing on the board and like saying so we have the subject first and then the predicate and we can try to teach in a creative way for students to learn better. Because in the brain I believe that like when we teach something, when we learn something in a different way, the brain creates different connections and it helps them remember what they have learned or what we have taught them better."* As this quote clearly puts it, guidance in forming connections affects the extent of student creativity. T8 explained creativity in her own words as *"...we focus on differentiation a lot, so differentiation is everything for us. And when we give a task, we make sure we have options because creativity is not just one way..."*

By approaching creativity from both teacher and student perspectives, the teachers expressed a desire for students to recognize that teachers' creativity in the classroom positively influences students' own creativity. T6 said *"I think it's up to the teachers, they need to use their own creativity and then expect the same from the students. And if the students see this modeled and that they feel free enough to be creative and different, the result is essential and I don't think the IB program can succeed without that."* In addition to the teacher setting an example for creativity, T6 also referred to having an environment that is conducive to creativity. She noted *"...I think that's safe environment and the environment of collaboration and being kind to each other. If we establish that right at the beginning of the year and then the creativity will follow..."* The quotes show that the teachers' encouraging attitude leads to student creativity. All PYP teachers emphasized the importance of encouraging creative student questions and answers. T3 said *"...we usually encourage students to come up with their own ideas... We usually give open-ended*

questions, we always ask open-ended questions so we would like to understand what they have to say about the topic.” Similarly, T8 commented “...when we give a task, we make sure we have different options, because creativity is not just one way.”

Four teachers (two PYP and two MYP teachers) defined teacher creativity as adding variety to lessons and arousing interest in class. Their points correspond to teaching creatively in the literature. T6 explained adding variety as “...*doing things that like out of the book or finding things although we have a curriculum or a syllabus to find stuff to match up to that....*” Similarly, T5 explained how creative lessons can engage the students “*But I think the creativity can take place by the materials that you present and the activities that you have your students complete. That's where I think that creativity can happen from a teacher perspective. So certainly, it doesn't matter the proficiency of the learner in that regard. Because you can always make the lesson very, very creative. And I think perhaps the more creative, the more interesting the lesson. Not always, but certainly a majority of times, if you find creative ways to present your information that you want to complete your aim of your lesson, if you can find creative ways, ways of doing that students will certainly adopt your teaching style. They'll be more motivated to learn.*” T7 also mentioned “*I would define creativity as actually the adjective: novel, I guess, and maybe finding some new ways of doing things. It might be something typical you do every day in the language classroom, but finding new ways of doing it...*” This quote expresses the role of integrating change into everyday practice to engage students further. It is evident that the teachers see teaching creatively as breaking the routine in their everyday classes.

Another significant point the teachers referred to was the importance of flexibility. Two MYP teachers focused on the necessity of teacher flexibility and

shared that it is essential to maneuver well while working with creative students. If the teacher is flexible enough, she can act well in the face adversity namely dealing with unexpected student questions and answers. Concerning the importance of teacher flexibility one of the PYP teachers, T1 noted “...we let we move on from that. We don't say, oh, no, the plan says this, we have to do this, we can do with the students....” The quote indicated that the teacher has room for changes in her lesson plan rather than acting rigidly. T5 referred to flexibility saying “...it's probably up to the teacher to allow creativity to happen to take place. If you structure your lesson, to such rigidity, it's not going to allow the students to be perhaps creative as they would like to be....” T8 indeed referred to flexibility without using the key words flexibility, but mentioned the importance of avoiding rigidity when it comes to student mistakes. She stated “...it's nice not to focus on the mistakes first I think, because that kills creativity there, because then the kid is not thinking about the creative part. That kid starts to use, like, uh, shorter sentences or even words. Um, that's why I try to like, ignore, um, the mistakes while they're talking, but later during the lesson, I'm taking notes later without making them feel that it was their mistake.” According to the teachers, flexibility can be fostered through their approach to lesson planning, instructional delivery, and error correction in the classroom.

Defining creative thinking skills by providing a straightforward definition was more complicated for the teachers. Instead, they referred to creativity and critical thinking skills, which suggested that they may not have a comprehensive understanding of what creative thinking skills encompass. Two teachers (one PYP and one MYP) defined it as thinking outside the box. T4 said “...creative thinking skills is teaching them how to think outside the box and finding other ways to interpret something or to think an issue from a different aspect that no one would

ever expect.” Three teachers (two MYP and one PYP teacher) mentioned ATL skills and Learner Profile, both of which are necessary to understand the role of creative thinking skills in IB curricula. However, despite mentioning both ATL skills and Learner Profile, which are essential aspects of IB curricula, the teachers did not elaborate enough on the integration of these. T5 said *“From an IB perspective ...when you think about creativity, within the ATL framework, obviously, critical thinking there plays the biggest role... So that might be a reading task. It might be a video, it might be a simple concept, from a discussion point of view, and students critically think about, as I've just mentioned, their own personal opinions, their own personal ideas, or thinking outside the box of what is possible or what's not possible within the realms of reality perhaps.”* This quote illustrates the teacher’s level of awareness of ATL skills, and it also reveals misconceptions about the terms creativity, critical thinking, and creative thinking skills, as well as their roles within ATL. Likewise, T8 said *“...when we do our lessons, we always talk about that...the learner profile would go a lot into this”*. Although the teachers referred to ATL skills and the learner profile, what the teachers understand from the interplay between ATL skills, Learner Profile and creative thinking skills is vague. The most relevant definition was by T3 because that teacher referred to creative thinking by pointing out *“... it actually allows them to think deeper into finding more about the topic... That's creative thinking...they will come up with some ideas and we will lead them to by asking some more questions. They will then analyze whether the ideas they suggested could be right or wrong.”* In fact, the teacher described generating ideas, which is regarded as one of the creative thinking skills. However, she did not know the term. T2 also made a similar reference to generating ideas again without explicitly using the term *“So we were always trying to get them to think of not just*

one answer...” Another attempt to define creative thinking skills was by T7 who referred to novelty. The teacher said “... *if you come up with innovative ways and which is so practical and easy nowadays with technology, so innovative ideas, innovative ways of doing this and thanks to technology, yes. Coming up with something new, even if the task stays the same. Yeah, that would be creative thinking in my language classroom.*” This definition of creative thinking results from misconception of creativity and creative thinking. T7 also defined creative thinking as “*Creative thinking. Creative thinking is a very key, key, key concept in the language classroom because language is creative.*” Similar to the previous one, this explanation does not show what the teacher understands from creative thinking either. Likewise, T8 gave a long explanation to share her understanding of creative thinking skills without providing a clear-cut definition. She rather referred to the importance of providing room for the students to perform by using different means to show their understanding, which cannot be directly linked to creative thinking skills. The distinction between creativity and creative thinking skills is not clear in the explanations provided. She noted “*It’s like different things, so, for example, if you want to say, create an invention using the energy resources, some students go ahead, they do a drama, some students want play- dough. They want to do in that way. The other student wants to draw it. The other students want to like cut and glue things, so they create something and that’s totally fine with us because, uh, what I’m looking for is, um, they’re using like their thinking skills. They are talking, discussing it with their friends and they’re trying to put something together and then they have to like, describe it in English.*” Despite referring to thinking skills, the teacher did not mention how they use their thinking skills. It rather shows that the teacher provides room for student choice and as a result of this what kind of class activities the

students can perform. Furthermore, T8 referred to creative thinking skills mentioning generic terms and giving references to IB Learner Profile attributes “...*creative thinking skills, I would say, mm it's like you becoming an Inquirer, you should be open minded. Um, you should be knowledgeable. You should research. You should learn, you should share your ideas, and then like, you should be like able to communicate with others so that you can put it together. You should be like, um, a reflective thinker. You should see. ...And then, um, like they come to the point where they like, oh, is this good? Let's reflect upon it. So I would say like the learner profiles would go a lot into this.*” Although this quote shows the teacher’s awareness of Learner Profile, it does not provide any clear definition of creative thinking skills. Interestingly T1 and T6 did not provide a definition of creative thinking skills.

Linking RQ1 Results to the Initial Version of the Revised Framework

Teaching Creatively

The teachers’ conceptualizations of creativity revealed a clear emphasis on their own pedagogical practices. While they did not produce formal definitions of “teacher creativity,” their descriptions reflected established features of teaching creatively, namely introducing variety into lessons, arousing student interest, and exercising flexibility in instructional delivery. These practices were understood as ways to break routine, integrate new approaches into familiar content, and respond to student needs.

Several teachers highlighted the importance of flexibility as an essential condition for teaching creatively. This was regarded as the ability to adapt lesson plans in response to student input and also as a way to embrace students’ willingness to take creative risks. Error correction strategies, such as deferring feedback to avoid disrupting idea generation, were presented as mechanisms for a supportive classroom

climate. Teachers also identified offering multiple options for task completion as integral to teaching creatively.

Teaching for Creativity

The teachers' comments indicated an awareness that their own creative practices in the classroom could influence students' creativity. Modelling creative behaviors was perceived as a catalyst for student creativity. Some teachers stated that teachers' willingness for engaging students creatively and providing a classroom environment conducive to experimentation and collaboration reinforce the IB programs' approach to creativity.

Pedagogical choices, such as using open-ended questions, designing tasks that encourage diverse forms of expression, and empowering students to ask their own questions, were considered as essential strategies for stimulating student creativity. Creating a safe, collaborative, and respectful environment was seen as foundational.

Creative Learning

When the teachers' perspective is considered, it is likely that creative learning could have been experienced when the students made independent or teacher-guided connections. Making connections was frequently described as students linking personal experiences with academic content or linking new learning points to prior learning. Teachers acknowledged their role in facilitating these connections by guiding discussion, encouraging divergent thinking, and empowering the students.

Some of the teachers' examples illustrated how lesson design stimulated creative learning. They mentioned providing various opportunities for students to demonstrate understanding (e.g., drama, modelling with playdough, visual art, or written explanations). These practices led to combining learning with the students'

personal interests and strengths, representing the multifaceted and learner-dependent aspects of creativity.

Creative Thinking Skills

Defining creative thinking skills was challenging for the teachers. A small number of teachers referred to elements of the ATL framework and Learner Profile attributes. This showed the partial awareness of the institutional approach to creative thinking. However, the explanations often lacked precision, had gaps regarding the pedagogical knowledge of how creative thinking skills are explicitly developed and assessed. Lack of terminological clarity between creativity, critical thinking, and creative thinking was evident. Thus, professional development targeting these distinctions could help to intentionally foster and assess creative thinking within the IB continuum.

Interrelationship of the Four Dimensions

The teacher interview data showed that Teaching Creatively, Teaching for Creativity, Creative Learning, and Creative Thinking Skills are overlapping dimensions of classroom pedagogy. Each construct shapes and reinforces the others. Teaching creatively was the element of creative pedagogy through which the teachers most comfortably discussed their own role in fostering creativity. Teaching for creativity functioned as a medium of fostering students' creative development, but less commonly than teaching creatively. As for creative learning, teacher guidance was particularly significant in supporting PYP learners to make connections, while MYP and DP learners were given room for acting more independently. Creative thinking skills on the other hand constitute the cognitive core of this process substantially, but the teacher comments revealed a lack of terminological clarity about how these skills differ from general creativity or critical

thinking. To this end, the intentional cultivation of creative thinking skills might be relying on implicit instructional planning. Overall, the data suggest a cyclical relationship. However, the strength of the interrelationship highly depends on teacher awareness.

RQ2: What are PYP grade 4 and MYP grade 10 students' perception of creativity and creative thinking skills in continuum IB schools?

The student questionnaire was administered in all three programs. In total 35 PYP grade 4 students and 58 MYP grade 10 students responded to the questionnaires from both schools. The students' answers were grouped in three sections: students' perception of their own creativity, students' perception of their teacher's creativity and attitude, and the final section students' perception of creative thinking skills. A Mann-Whitney U test was carried out for a comparative analysis of PYP and MYP students' responses as the answers were not normally distributed. Table 11 displays the results of the Mann-Whitney U test results.

There were six items asking for students' perception of their own creativity. Items 9, 10, 12, and the combined measure indicated that PYP students rated their creativity higher than MYP students (*all* $p < .001$). For Item 22, MYP students scored significantly higher ($p < .001$), indicating they perceived themselves as less restricted in creativity compared to PYP students. On the other hand, items 11 and 19 showed no significant differences in perceptions.

The students' perception of their teacher's creativity and attitude were the next section. Items 13, 16, 17, 18, and 21 indicated PYP students rated their teachers' creativity and attitude higher than MYP students (p values range from .026 to $< .001$). Item 13 was the only instance where MYP students scored higher ($p = .026$),

reflecting better perceptions of their teachers' creativity in one area. Items 14, 15, and 20 did not show notable differences.

Students' perception of creative thinking skills constituted the third section, where the items 23, 27, and 28 indicated that PYP students perceived their creative thinking skills more positively (p values from .038 to $< .001$). The combined score also showed that PYP students perceiving themselves significantly better in creative thinking skills ($p = .031$). Items 24, 25, 26, 29, and 30 showed no significant differences between PYP and MYP students.

Overall, the analysis demonstrated that PYP students generally rated themselves higher in creativity, perception of their teachers' creativity and attitude, and their own perception of creative thinking skills compared to MYP students. The drop in creativity-related perceptions among MYP students could be reflecting challenges in transitioning from the PYP to MYP framework, possibly due to changes in curriculum structure or developmental factors.

Table 11

Mann-Whitney U Test Results of Students' Perception of Creativity and Creative Thinking Skills

Grouping	Item	<i>z</i> value	<i>p</i> value	Mean Ranks		Means		Significant
Students' perception of their own creativity	09	-4.69	<.001	PYP	62.03	PYP	4.83	Yes
				MYP	37.93	MYP	4.09	PYP>MYP
	10	-4.93	<.001	PYP	62.99	PYP	4.83	Yes
				MYP	37.35	MYP	4.07	PYP>MYP
	11	-0.99	.322	PYP	49.83	PYP	3.97	
				MYP	44.46	MYP	3.88	
	12	-4.25	<.001	PYP	60.33	PYP	4.83	Yes
				MYP	38.96	MYP	4.14	PYP>MYP
	19	-1.57	.116	PYP	51.15	PYP	4.29	
				MYP	42.93	MYP	4.14	
22	-3.81	<.001	PYP	35.16	PYP	1.17	Yes	
			MYP	53.46	MYP	2.02	MYP>PYP	
Cmb.	-2.652	.008	PYP	56.46	PYP	3.99	Yes	
			MYP	41.29	MYP	3.72	PYP>MYP	
Students' perception of their teacher's creativity & attitude	13	-2.22	.026	PYP	39.43	PYP	3.63	Yes
				MYP	51.57	MYP	4.21	MYP>PYP
	14	- 0.45	.651	PYP	48.40	PYP	4.20	
				MYP	46.16	MYP	4.36	
	15	- 0.57	.569	PYP	48.83	PYP	4.31	
				MYP	45.90	MYP	4.38	

Grouping	Item	<i>z</i> value	<i>p</i> value	<i>Mean Ranks</i>		<i>Means</i>		<i>Significant</i>
<i>Students' perception of creative thinking skills</i>	16	-2.10	.036	PYP	53.11	PYP	4.66	Yes
				MYP	43.31	MYP	4.48	PYP>MYP
	17	-3.78	< .001	PYP	57.36	PYP	4.94	Yes
				MYP	40.75	MYP	4.59	PYP>MYP
	18	-2.93	.003	PYP	56.06	PYP	4.66	Yes
				MYP	41.53	MYP	4.38	PYP>MYP
	20	-1.92	.055	PYP	53.44	PYP	4.14	
				MYP	43.11	MYP	3.84	
	21	-2.76	.006	PYP	54.04	PYP	4.83	Yes
				MYP	41.87	MYP	4.46	PYP>MYP
	Cmb.	-1.073	.283	PYP	50.84	PYP	4.42	
				MYP	44.68	MYP	4.33	
	23	-3.21	.001	PYP	55.80	PYP	4.66	Yes
				MYP	39.88	MYP	4.29	PYP>MYP
	24	-1.08	.279	PYP	49.19	PYP	4.49	
				MYP	44.01	MYP	4.45	
	25	-0.53	.593	PYP	47.57	PYP	4.37	
				MYP	45.02	MYP	4.50	
	26	-1.70	.089	PYP	51.20	PYP	4.49	
				MYP	42.75	MYP	4.36	
	27	-3.49	< .001	PYP	56.19	PYP	4.71	Yes
				MYP	39.01	MYP	4.32	PYP>MYP
	28	-2.07	.038	PYP	53.19	PYP	4.37	Yes
				MYP	42.39	MYP	4.09	PYP>MYP
	29	-1.96	.050	PYP	52.79	PYP	4.37	
				MYP	42.64	MYP	4.12	
	30	-1.78	.075	PYP	51.89	PYP	4.54	
				MYP	43.19	MYP	4.40	
	Cmb.	-2.158	.031	PYP	54.04	PYP	4.50	Yes
				MYP	41.87	MYP	4.32	PYP>MYP

Linking RQ2 Results to the Initial Version of the Revised Framework

Teaching Creatively

The results indicated that PYP students generally rated their teachers' creativity and classroom approach more positively than MYP students. Significant differences ($p < .05$ to $p < .001$) were found in items measuring the teacher's ability to design engaging, varied lessons (items 16, 17, 18, 21), suggesting that PYP students perceived greater novelty and variety in instructional delivery. These perceptions aligned with the earlier qualitative findings that PYP teachers often adapted lesson formats and employed diverse strategies to sustain interest. The exception was item 13, where MYP students scored significantly higher, potentially indicating that at least in one aspect of lesson delivery, MYP teachers are perceived

as more innovative. No significant differences emerged for several items (14, 15, 20), showing some overlap in perceived teaching creativity across programs.

Teaching for Creativity

Student perceptions suggested that PYP teachers are more successful in creating learning environments that actively foster creativity. Higher PYP scores on most teacher creativity and attitude items may reflect better implementation of creative practices. Additionally, they may reflect more opportunities for exploration, and a classroom climate conducive to risk-taking. These perceptions are consistent with the IB PYP emphasis on inquiry-based, transdisciplinary learning. The more mixed results in MYP may point to structural changes such as a stronger focus on subject-specific content and assessment, which could limit opportunities for explicitly teaching for creativity.

Creative Learning

Students' self-assessment of their own creativity shows that PYP learners consistently rated themselves higher than MYP learners on most items (items 9, 10, 12, and the combined score; all $p < .001$), suggesting greater confidence in their ability to generate ideas and make imaginative connections. The one reversal, item 22, indicated that MYP students felt less restricted in creativity than their PYP peers ($p < .001$), which may suggest that older students perceive more autonomy in certain aspects of their work. They rated their overall creativity lower, though. This pattern may reflect developmental changes in self-evaluation or a shift from PYP to MYP.

Creative Thinking Skills

In perceptions of creative thinking skills, PYP students again rated themselves more positively on several key items (23, 27, 28) and in the combined score. These items were related to confidence in using imagination, exploring

multiple perspectives, and engaging in novel problem-solving abilities that PYP students seemed to experience more frequently. No significant differences emerged for the items related to specific applications of creative thinking (items 24, 25, 26, 29, 30). This suggested that in certain skill areas, both groups perceived similar levels of capability. The decline in MYP perceptions may reflect the absence of explicit emphasis on creative thinking processes or a shift toward focusing on content, with fewer open-ended tasks designed to elicit creative thinking.

Interrelationship of the Four Dimensions

The quantitative results suggested a coherent pattern: PYP students' higher perceptions of their own creativity, their teachers' creativity, and their creative thinking skills reinforced one another. Teachers' use of creative instructional strategies (teaching creatively) appeared to contribute to a classroom culture actively fostering creativity (teaching for creativity), which in turn supported more confident, autonomous engagement in creative learning. These experiences could have strengthened students' perception of their creative thinking skills.

In contrast, MYP students tended to rate all three domains lower. This might have resulted from the differences in reinforcing the creative pedagogy constructs during the transition from PYP to MYP. Some of the reasons for this change could be the curricular structure, increased subject specialization, or some developmental factors experienced in MYP.

RQ3: How are creativity and creative thinking skills infused into English courses in continuum IB schools?

a) How Do the English Teachers Infuse Creativity and Creative Thinking Skills into Their Classes in Continuum IB Schools?

Drawing on the analysis of teacher interviews, questionnaires, and classroom observation data, Braun and Clarke's (2006) inductive thematic analysis framework and 15-point checklist were applied. The categories and codes are presented in Table 12.

Table 12

Categories and Codes for RQ3

Theme	Category	Code
Course Design	IB Programs Curricula	collaborative planning, ATL skills, IB continuum programs
Course Delivery	Teacher's role	teacher characteristics, teacher questions, classroom atmosphere
Assessment	Formative	feedback, task types, criteria, grading

Semi-Structured Teacher Interviews.

Course Design. The teachers' answers centered on collaborative planning, ATL skills and IB continuum programs. Firstly, while elaborating on collaborative planning, all of the PYP and two of the MYP teachers emphasized the significance of team planning using the subject 'we'. They all shared that collaboration leads to teacher creativity, particularly for the teachers who identify themselves as uncreative. T6 pointed out "...the coordinators are very collaborative and very supportive..., collaborating with other teachers is much better because it grounds you..." T7 pointed out how the curriculum enables them to practice creativity "...all the framework actually, creativity has a very important role in the IB curriculum... It serves its purpose when you create lesson plans or want to do something interesting, actually it leads you, directs you in a way, and you can come up with different ideas, different perspectives..." T2, though, noted that they do plan collaboratively, but not systematically, "...when we're planning our lessons, it just happens naturally...in the middle of doing something and I think, we can just try this... it is just natural flow

really.” Interestingly, none of the teachers commented on the actions they take to make student creativity and creative thinking skills a consistent part of course design. However, it is evident that IB curricula have raised the teachers’ awareness about the integration of creativity and creative thinking skills into their course planning.

Without the guidance of the curricula embracing creative thinking along with other thinking skills and creativity, the teachers would not be able to cover creative thinking skills and/or creativity to this extent. T1 elaborated on the role of the curricula by explaining how the IB provides enough room for creativity and creative thinking skills in its system. While doing this, the teacher exemplified through sharing some examples from her son’s IB experience. She noted “*...he's been taught to think for himself go out of the box, and his own idea, have his own opinion, not what the teacher says. You know, you're a, he's allowed to say, well, I, I see it like this, I don't see it like this, then creative aspects, gives them confidence, it gives them an ability to have their own idea independent learning, and creativity feeds all that. I think that creative part of our teaching of our curriculum enables the student to be confident and independent learner, they can work as a team, they can work with the friends, and they can have different ideas. And that's all coming from creative thinking, you know, what do you think constantly? What do you think? What do you think, you know, what's your question? What do you wonder about this? What do you want to learn what? And they're all you know, then they make their own connections, not just sitting like, you know, passive person saying: Tell me what to think. Tell me what the answer is. You know, they find the answer. They say what they think the answer is.*” T1 also mentioned the room IB curricula offer for creative thinking and said “*...way we teach they, they are able to you know, we are able to incorporate it.*”

Secondly, all of the MYP teachers referred to ATL skills regarding creativity and

creative thinking skills. T5 noted “*Yes, we’ve got the ATL skills, we’ve got the learner profile, we’ve got various concepts and contexts, given a wide variety from IB, and so the curriculum certainly allows for creativity.*” T7 said “*ATL skills, they will be improved throughout the year, throughout the tasks of course... It happens in time, within and without, inside and outside the classroom.*” The references to ATL skills primarily focused on creativity, but lacked the necessary elaboration because how the teachers use ATL skills for creativity and creative thinking skills in practice is vague. The final point is the role of continuum IB programs. Two MYP teachers implied that the continuum provides the necessary means for each program. T5 compared MYP and DP “*...MYP, a framework, in which we can apply our own content...The diploma program, the content is then provided by IB...the content for grades 11 and 12, also allows for creativity...there will always be multiple solutions, multiple perspectives...it's up to the teacher to coerce that.*” The teachers’ comments about the role of the continuum were not in-depth, but they acknowledged the role of the continuum in their accounts. Overall, the responses, which mainly consisted of examples from the teachers’ day to day class experiences, revealed that creativity and creative thinking skills form an integral part of IB curricula. With the guidance the curricula provide, the teachers have had awareness of thinking skills and creativity. Apparently, course objectives must be covered in a timely manner, but still it is obvious from the teachers’ comments that IB curricula have room for creativity and creative thinking skills. Nevertheless, there is not a systematic infusion of creativity or creative thinking skills.

Course Delivery. Course delivery examines the teacher’s role through teacher characteristics, questions, and classroom atmosphere along with the IB learner profile. Avoiding rigidity, which the teachers expressed as being open-minded, is the

essential teacher characteristic described. Furthermore, being open-minded is another trait emphasized by the teachers. T3 said “...*here we constantly encourage them to express and we are open-minded...*” T5 stated “...*the teacher acting as a guide, rather than spoon feed...presenting various materials, being adaptive for different learners, understanding their needs...*” However, none of the teachers referred to creative thinking skills with respect to the teacher’s role. This indicates the gap in their content and pedagogical knowledge and also the lack of a systematic approach to these skills.

Besides teacher attributes, teacher questions, mentioned by two PYP and four MYP teachers, account for the enhancement of creativity and creative thinking skills. Yet none of the teachers elaborated on creative thinking skills while mentioning teacher questions. T2 shared “...*sometimes we are not even aware that we’re doing it...we do aim to develop the skills by question...very rarely would we ask a yes/no question...*” Concerning teacher questions T4 said “...*it's mostly in the form of a personalized question. Creativity is hard. Sometimes you need to teach something at a basic level because of the level of the students. If I can find a creative way to teach it and enhance creative thinking skills, I can. But critical thinking is more important. It's easier for me.*” The teacher’s rationale here shows she is more familiar with critical thinking skills and most probably knows much better how to incorporate them. T5 mentioned “...*that comes through inquiry...to elicit information from students. I’m constantly asking questions, asking deeper questions that require more thought process...*” The teachers’ explanations indicate that they notice the significance of teacher questions, but their conceptualization of teacher questions requires further elaboration. T1 focused on the teacher’s readiness for students’ questions. “...*we were being trained and shown how to think more like a PYP*

teacher. ...foreign language teachers -we find it more natural... We do group projects, and they find things out and they ask questions, whereas traditional education system in Turkey, I noticed is 'Don't ask questions'. The teacher knows everything...” It is obvious that the teachers regard both teacher and student questions as very important, but they cannot explicitly justify their reason for their choice of questions. The third common point is about classroom atmosphere. Providing an inclusive and welcoming classroom atmosphere, enabling creativity and creative thinking skills, is indispensable to course delivery. Two PYP and two MYP teachers mentioned the significance of the classroom atmosphere. T6 said “*...you need a very safe learning environment before students will test out creativity. I think we create that at the very beginning of the year...If we establish that at the beginning, then creativity will follow.*” Similarly, T8 noted “*...you have a creative classroom, and the kids know that...they feel so comfortable, and they're not scared of making mistakes...*” One of the points T1 shared “*The more you do, the more you get used to it. And you can't go back. I mean, can't go back to worksheets... you can have a worksheet as a classwork paper, but the worksheet itself can be interactive, have creative, you know, creativity related questions where they have to think for themselves, they have to say why they made that decision why they have that choice? What they think this is? That's, that's the worksheets, you know, it's not multiple choice.*” This quote shows that the teacher is very much aware of how creativity related questions contribute to the learning and the class atmosphere.

Formative Assessment. Regarding formative assessment the teachers mentioned task design, assessment criteria and feedback concerning creativity and creative thinking skills. The teachers’ explanations show that six of the teachers (except for two PYP teachers) incorporate creativity and creative thinking skills into

formative assessment for two reasons. The first reason given for this was that it is necessitated by the IB, the second reason was that it is a way of spicing up the lessons. T7 said “...*our formative tasks specifically, they're always creative because you have to. Otherwise, it would get so boring for young people...it's always better to give them some creative tasks where they can apply their creative thinking skills or improve such skills...*” T6 similarly said “*The IB, they demand creativity anyway. Students have to be necessarily creative.*” A variety of task types are employed from daily homework to presentations and essay writing, where the teachers aim to get the students to use their creativity and creative thinking skills. The type of assessment criteria and feedback vary. All of the teachers stated that they grade some of the formative assessment tasks. T7 put it as “*They are graded, but for the sake of doing it, for example, each task is worth five points. If you do the task properly, you are given five points, but you don't lose more because of the poor quality of writing. That's what makes it formative, actually.*” It seems that the teachers grade some of the formative assessment tasks due to course weightings they specified. T8 noted “*...some of these tasks, they affect their report cards, but some of them are to keep them going.*” They did not expand on their task or criteria descriptors, though. For four of the teachers, integrating creativity and creative thinking skills is a challenge because as T4 mentioned “*...we need to use the generic MYP criteria...it's limited to incorporate different specific criteria or skills like creativity.*” Similarly, T3 said “*It is a challenge to integrate creativity and creative thinking skills because I think there is limitation. There is limitation because we need the grammar points, we need to evaluate them because we also have to follow the Cambridge Primary Years program...*” T1 explained how they practice formative assessment in their classes “*We will give rubric. For example, if we're doing like we, if you're doing a project,*

and we can set a rubric, sometimes the rubric can come from us because we're doing an assessment. And it's a part of our PYP curriculum, stuff, or it's them reflecting, so they write their own rubric, what do they expect from themselves? You know, and then we, maybe we do a class discussion, what do you think the rubric should be for this project? What do you think you're learning? What do you think you should be checking yourself for? And they're very good. They know, honestly, they know. It's amazing. They know better than the teacher, teacher, you know, what they should be doing, so we can do things like rubric, it's, the more creativity you bring into the classroom, the more creativity there is." Regarding the feedback given to such tasks, T8 referred to being flexible and lenient by wording it as *"I think they love instant feedback, for their creativity, because they feel that being proud of themselves is really important at this stage...even if you don't like it, you should give positive feedback."* It could be concluded that the teachers attempt to infuse both creativity and creative thinking skills, but it is not systematic and compared to creativity, creative thinking skills are rather overlooked. This random act of infusion of both creativity and creative thinking skills into formative assessment hints that formative assessment of creativity and creative thinking skills require further expertise. Besides this, another highlight from the teachers' comments is the feedback given. Only T8 referred to the type of the feedback without giving details. Even though all teachers mentioned that they grade some of the formative assessment tasks, their explanations lack details regarding their approach to formative assessment task feedback. With respect to feedback, T1 referred to time constraints and noted *"As a teacher, we always have time issues, we always complain, we don't have enough time, that's classic teacher, we don't have enough time to do all this in two weeks, we never have enough time. But, you know, we always we always have these assessments going on*

in the six-week unit, we will have a pre assessment, then we'll have a couple of formative assessments, and then we have a summative assessment at the end of the unit. And, you know, for example, the summative assessment will certainly have creativity involved, it's up to them, there will be, there will certainly be an element of leaving it to the student, and they take it, you know, they take what they've learned, with creativity thrown in, and they show us and we let them have that some kind of choice student ownership..." As this quote reveals, the teachers' approach differs and also some of the teachers integrate creativity and creative thinking into summative assessment. This leads to a major difference considering the type of the assessment involved.

PYP, MYP, and DP Teacher Questionnaire. The questionnaire responses to questions concerning creativity and creative thinking skills and how they are practiced in class were matched with the categories and codes emerging from the interview data. Course design, and course delivery are the emerging themes based on the questionnaire responses. Although the results of the teacher questionnaires and the interview responses show some apparent similarities, a close examination reveals that the teachers do not practice creativity and creative thinking skills to the extent stated in the teacher questionnaires. The response distributions of the participants for items 11-32, 35-36, and 38-41 are given in Table 13.

Table 13*Response Distribution of All the Teacher Participants*

Question	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11. I usually start my class by sharing an event, joke, story, or scenario to make my instruction effective.	0	0	0	5	3
12. My students can use any form (such as verbal, visual, dance, drama etc.) to demonstrate their knowledge.	0	0	0	4	4
13. Even if I do not tell my students to come up with different solutions/ suggestions to the cases we have, they usually make an effort to come up with solutions.	0	0	2	3	3
14. I always reward my students if they propose original, extraordinary solutions and ideas in the classroom.	0	0	1	3	4
15. My students always feel comfortable and welcomed even when they make mistakes.	0	0	0	1	7
16. My students can always articulate their ideas without fear of embarrassment.	0	0	0	2	6
17. I ask questions that require creative answers.	0	0	0	3	5
18. I encourage my students to ask questions.	0	0	0	1	7
19. I ask my students questions with more than one answer (such as open-ended questions).	0	0	0	1	7
20. I enable my students to use their creativity to develop deep understandings within their learning.	0	0	0	4	4
21. I direct my students to outside classroom activities (such as searching on the internet, resorting to reference books or knowledgeable adults around them).	0	0	0	4	4
22. I expect my students to use their knowledge and skills creatively to make reasoned conclusions or answers.	0	0	0	5	3
23. I have my students experiment creatively.	0	0	2	5	1
24. I encourage my students to think creatively.	0	0	0	1	7
25. I encourage my students to take creative risks and be innovative.	0	0	0	4	4

Question	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
26. I frequently arrange problem solving instruction in the form of game activity in the classroom.	0	0	3	3	2
27. I frequently design activities that enable students to think in a variety of ways.	0	0	0	4	4
28. I enable my students to solve problems through collaboration with each other.	0	0	1	3	4
29. My students know that I expect them to be creative.	0	0	0	6	2
30. I encourage my students to consider existing ideas from new perspectives.	0	0	0	4	4
31. I believe creativity helps my students cope with the complexity of language learning.	0	0	0	5	3
32. I believe creativity helps my students develop strategies to deal with the unexpected in language learning.	0	0	1	5	2

Question	Not at all 1	2	3	4	To a great extent 5
35. To what extent are you familiar with creative thinking skills in IB Curriculum?	0	0	0	6	2
36. To what extent do you refer to creative thinking skills for your course design?	0	0	0	7	1
38. To what extent is it possible for you to integrate creative thinking skills into your classes?	0	0	0	5	2
39. To what extent do you believe creative thinking skills contribute to students' language learning?	0	0	1	1	6
40. To what extent do you think students are aware of the role of creative thinking skills in curriculum?	0	0	4	2	2
41. To what extent do you think students are able to use creative thinking skills in English classes?	0	0	0	5	3

For the items 15, 16, 17, 18, 19 and 24 seven teachers chose “strongly agree” as their answer. Each of these items focuses on the teacher’s approach to creativity and creative thinking skills in the classroom context. These items helped the researcher to see whether the teacher embraces and reinforces student creativity through his/her attitude. In addition to this, they all said “yes” to the questions asking about the use of creative teaching methods and integrating creativity into their teaching methods. These indicate the gap between the questionnaire responses and interviews in terms of the teachers’ in-depth knowledge of creativity and creative thinking skills along with their teaching practices. The questionnaire responses imply that the teachers have a good knowledge of creative thinking skills and their role in IB curricula and also know how to integrate these and creativity into their courses. However, their responses in the interviews neither reflect this implication nor provide enough justification of the implementation.

Regarding course design, there is a mismatch between the questionnaire and interview responses. The teachers’ responses to Likert type items 35 and 36 indicate that they are aware of creative thinking skills in IB curricula and they refer to those skills for course design to a great extent. For item 35, six teachers out of eight chose 4 and two teachers chose 5 (to a great extent). As for item 36, seven teachers chose 4 and 1 teacher chose 5. However, the responses in the interviews do not reflect the questionnaire responses. Similarly, seven teachers chose 4 and one teacher chose 5 to respond to the question ‘to what extent they refer to creative thinking skills for the course design’. In response to the question ‘to what extent is it possible for you to integrate creative thinking skills into your classes’ five of the teachers chose 4 and three of them chose 5. When asked about the actions they take for the integration of creative thinking skills into their classes, all of the teachers referred to creativity

rather than creative thinking skills, which reveals the misconception I identified in the analysis of the interviews. However, when analyzed in detail, the interview responses still do not reflect the extent of awareness displayed in the questionnaires. For example, T1 shared “... *creative part of our teaching, our curriculum enables the student to be a confident and independent learner... that's all coming from creative thinking: what do you think constantly? What do you think? ...they make their own connections...*” T8 noted “...*they are like responsible for their own learning ...by following the IB curricula, our students have become really strong...not just with the language, it's the way of thinking, their creativity and then the way they analyze things. They question things...*” The teachers know that thanks to PYP curriculum the students are well-equipped, and they acknowledge the vital role IB curricula play in course design, but their interview answers do not reflect the extent of awareness of creative thinking skills displayed in the questionnaires.

As for course delivery, questionnaire and interview responses correspond regarding teacher attitude, teacher questions and classroom atmosphere. Both the interviews and the questionnaire responses showed that the teachers are both open-minded and welcoming towards the students’ creative answers and work for a collaborative, encouraging and non-threatening classroom atmosphere. T6 noted “... *sometimes creativity is mistaken for chaos, which isn't actually...When they're creative, you should allow that and be more flexible with the plan...*” For example, seven teachers “strongly agreed” and one teacher “agreed” with the statement: “My students always feel comfortable and welcomed even when they make mistakes.” Similarly, seven of them “strongly agreed” and one of them “agreed” with the statement “I encourage my students to think creatively.”

The teachers stated that they are familiar with creative thinking skills and integrate creativity into their classes to a great extent, but they replied in more general terms in the interviews. They also mentioned a variety of actions they take for the integration of creativity into their teaching. However, they did not specify whether they aim to promote student creativity by employing such activities or they just aim to spice up their lessons through including different types of activities. The discrepancy between the questionnaire responses and the interviews accounts for the gap in pedagogical and content knowledge.

Class Observations. The misalignment between what the teachers articulated in the interviews and what they stated in the questionnaires was reflected in the class observations as well. Regarding course delivery, the data collected throughout the observations showed that there were some instances of creativity and creative thinking skills. Since the observations took place only once, it was not possible to identify observable behaviors representing each dimension. For example, the teachers' nourishing being enterprising, independence of judgment, being persistent and resilient were not observed. However, this might have resulted from the nature of the observations as it was not possible for the researcher to have a series of class observations. On the other hand, the researcher observed that in all eleven classes each teacher had a positive and welcoming atmosphere in their classes which seemed to help the teachers to nourish motivation in their classes. Furthermore, the teachers stimulated creativity and provided their students with constructive feedback. The feedback appeared to be guiding for the students to become more aware of creativity and what is expected regarding creativity. They all acted as facilitators incorporating creativity into their classes at varying degrees. Concerning creative thinking skills in MYP and DP classes, the teachers in all seven MYP classes and one DP class

enabled the students to take multiple perspectives through various activities such as making comments about the specific topic of the day considering different aspects. In the DP class, the teacher guided the students at some stages to formulate their own points of view and to have enrichment and explanation of ideas more, which led to more student engagement. However, the interview data analysis showed that the teachers might not have the necessary knowledge to identify the instances of creative thinking skills in their lessons, which hinted that the infusion of creative thinking skills into lessons might not always take place systematically. In all PYP classes, the researcher observed that the teachers tried to foster creativity by stimulating curiosity and creating opportunities for experimenting with creativity. To exemplify, one PYP teacher had the students write a haiku- a short Japanese poem. This created both curiosity and opportunities for experimentation. In this class it was possible to observe that the teacher's approach led to risk taking as well. When compared, creativity was more observable and common than creative thinking skills in class observations. Nevertheless, the class observations proved effective to see that the interview data was in line with the class observations data because both indicated that there was not a systematic infusion of creativity or creative thinking skills. The item level frequencies of class observations are given in Table 14.

Table 14

Item Level Frequencies of Class Observations

Items	PYP Class 1	PYP Class 2	PYP Class 3	SUM of PYP	%	MYP Class 1	MYP Class 2	MYP Class 3	MYP Class 4	MYP Class 5	MYP Class 6	MYP Class 7	SUM of MYP	%	DP Class 1	SUM of DP	%	Total Freque	Total %
generate ideas & possibilities	1	0	1	2	66.7%	1	1	0	0	0	1	1	4	57.1%	1	1	100.0%	7	63.6%
formulating own points of view	0	0	1	1	33.3%	1	1	1	1	1	1	1	7	100.0%	1	1	100.0%	9	81.8%
enrichment and explanation of ideas	0	0	1	1	33.3%	1	0	0	0	0	1	1	3	42.9%	1	1	100.0%	5	45.5%
taking multiple perspectives	0	0	1	1	33.3%	1	1	1	1	1	1	1	7	100.0%	1	1	100.0%	9	81.8%
nourishing motivation	1	1	1	3	100.0%	1	1	1	1	1	1	1	7	100.0%	1	1	100.0%	11	100.0%
nourishing independence of judgment	0	0	0	0	0.0%	0	0	0	0	0	0	0	0	0.0%	0	0	0.0%	0	0.0%
nourishing willingness to take risks	1	0	1	2	66.7%	0	0	0	0	0	0	0	0	0.0%	1	1	100.0%	3	27.3%
nourishing being enterprising	0	0	0	0	0.0%	0	0	0	0	0	0	0	0	0.0%	0	0	0.0%	0	0.0%
nourishing being persistent and resilient	0	0	0	0	0.0%	0	0	0	1	0	0	0	1	14.3%	0	0	0.0%	1	9.1%
stimulating curiosity	1	1	1	3	100.0%	1	1	1	1	1	1	1	7	100.0%	1	1	100.0%	11	100.0%
enhancing awareness of creativity	1	1	1	3	100.0%	1	1	1	1	1	1	1	7	100.0%	1	1	100.0%	11	100.0%
recognizing and becoming more knowledgeable about the creative process	1	0	1	2	66.7%	0	0	0	0	0	0	0	0	0.0%	0	0	0.0%	2	18.2%
creating opportunities for experimenting with creativity	1	1	1	3	100.0%	0	0	0	1	0	0	0	1	14.3%	0	0	0.0%	4	36.4%
creating a sense of responsibility for learning	1	0	0	1	33.3%	1	1	1	0	0	1	1	5	71.4%	1	1	100.0%	7	63.6%
act on teacher's feedback	1	1	1	3	100.0%	0	0	0	0	0	0	0	0	0.0%	1	1	100.0%	4	36.4%
go through stages of questioning, inquiring, searching, manipulating, experimenting and aimless play	0	0	0	0	0.0%	1	1	0	0	0	0	0	2	28.6%	1	1	100.0%	3	27.3%
go through stages of metacognitive thinking	0	0	0	0	0.0%	1	1	0	0	0	1	1	4	57.1%	1	1	100.0%	5	45.5%
Frequency	9	5	11	25		10	9	6	7	5	9	9	55		12	12			
%	52.9%	29.4%	64.7%	49.0%		58.8%	52.9%	35.3%	41.2%	29.4%	52.9%	52.9%	46.2%		70.6%	70.6%			

Linking RQ3-a Results to the Initial Version of Revised Framework

Teaching Creatively. The interviews suggested that IB teachers, particularly in the PYP, perceive collaborative planning as a way of enabling their own creativity. Teachers frequently referred to shared planning meetings, the exchange of ideas, and the IB's flexible curricular framework as mechanisms that encourage the design of varied, engaging, and innovative learning experiences. For some, such collaboration compensates for their personal limitations in creative capacity. They shared that collaboration leads to grounding their practice in a supportive professional network. The IB's framework is known to direct teachers toward creative lesson designs through its inquiry-driven structure. Consequently, it functions as both inspiration and guide. Nevertheless, there was no evidence of a structured, program-wide approach to embedding creativity into course design. The integration of creativity appeared to be dependent on individual teachers' flexibility within the curriculum.

The questionnaire responses indicated that teachers frequently employed creative strategies in their course delivery, such as starting lessons with stories, jokes, or scenarios. Observation data corroborated that many lessons involved stimulating and curiosity-driven activities. For example, haiku writing provided a welcoming, risk-tolerant classroom atmosphere. The teachers' willingness to adapt lesson plans to accommodate creative student responses demonstrated a high level of flexibility and support towards learning. However, interview data revealed that these creative methods observed were often aimed at making lessons more engaging. This suggested that despite having instances of teaching creatively, it may not always point to a deep theoretical understanding of its role in fostering students' creativity or creative thinking skills.

Teaching for Creativity. Although teachers acknowledged the IB's emphasis on fostering creativity through the curriculum and the ATL skills framework, their explanations of how these were operationalized in practice were often vague. ATL skills were mentioned as curricular documents for developing creativity and creative thinking, but concrete strategies that could be employed for translating these into daily teaching were lacking. The continuum nature of IB programs was seen as supportive of creativity. It could be inferred from the teachers' accounts that the framework is conceptually aligned with teaching for creativity, but the implementation depends on individual teacher interpretation rather than systematic school level planning.

Both self-reported and observed practices suggested that the teachers actively promoted creativity by encouraging multiple perspectives, rewarding original solutions, and creating opportunities for experimentation. The classrooms were described and observed as collaborative, supportive, and non-threatening environments. They had the essential conditions for creative risk-taking. Teachers recognized that the IB curricula inherently promoted independent, analytical, and questioning dispositions, yet their interview responses indicated that they often conflated creativity with creative thinking skills. This points to a potential gap between classroom teaching and conceptual understanding. While teachers expressed strong agreement in the questionnaires about integrating creativity into their teaching, the lack of systematic approaches observed in the classroom suggested that some creative outcomes may be incidental.

Creative Learning. Teacher accounts of classroom atmosphere and questions stimulating creativity indicated an appreciation of the conditions required for creative learning. Openness, safety, and an inclusive environment were

repeatedly mentioned as they were seen as necessary for students to take creative risks. Teachers noted that both teacher-led and student-led questioning can stimulate creative engagement, but these were generally described in general terms. Several participants highlighted that the IB encourages students to construct their own understanding and to question some perspectives. These correspond closely to creative learning. However, in practice, critical thinking was often prioritized over creative thinking. The reason for this might be the teachers' familiarity with critical thinking pedagogy and also the perceived difficulty of teaching creative thinking systematically.

Observation data indicated that the tasks were often curiosity-driven and exploratory. These tasks also created opportunities for the students to generate ideas, articulate viewpoints, and collaborate on problem-solving activities. Nevertheless, several indicators of creative learning such as independence of judgment, enterprise, persistence, and resilience were rarely observed. This presence of creative learning elements implied that there were enriched and stimulating activities, but creativity as a learning process may not have been integrated all the time. The teachers' feedback appeared to guide the students to a great extent. However, it was not always given in a structured fashion.

Creative Thinking Skills. Creativity was frequently discussed, but explicit focus on creative thinking skills was limited. The teachers acknowledged that tasks, particularly in formative assessments, could provide opportunities for applying creative thinking skills. However, these opportunities were generally incidental. Some formative and summative tasks had elements of choice, student ownership, and self-assessment rubrics. These could stimulate creative thinking. Nonetheless, the absence of systematic criteria and/or explicit skill progression indicated a need for

these. Time constraints, external program requirements (e.g., Cambridge integration in some contexts), and generic assessment criteria were shared as setbacks.

Questionnaire responses showed that the teachers believed they are familiar with creative thinking skills and integrated them into course design, particularly within the IB framework. However, the interview and observation data revealed a misconception: many teachers referred to creativity when referring to creative thinking skills. This indicated a lack of precision in their understanding. Certain aspects of creative thinking, such as taking multiple perspectives, formulating personal viewpoints, and engaging in metacognitive thinking were observed. However, their inclusion was generally unsystematic. Furthermore, some teachers perceived the students' awareness and ability to apply creative thinking skills as limited. This suggested that these skills were not always explicit within instruction.

Interrelationship of the Four Dimensions. The interview data revealed an alignment between teaching creatively, teaching for creativity, creative learning, and creative thinking skills, but their operational integration of these four constructs was not evident enough. The IB framework promotes creative pedagogy through its inquiry-based approach, ATL, and learner profile attributes. Collaborative planning supported teaching creatively by enabling teachers to share and develop ideas, which in turn helped for teaching for creativity. A supportive classroom climate and questioning strategies created conditions for creative learning. However, without explicit and systematic embedding of creative thinking skills, it would not be possible to promote student creativity systematically. Teaching creatively and creative learning seemed to closely connect. However, the link between teaching for creativity and creative thinking skills was much weaker.

The results revealed that there was interconnectedness among the four constructs of creative pedagogy. However, this interconnectedness was not reflected in the interviews and/or class observations as to the extent it was implied in the questionnaires. This pointed to a gap regarding the implementation of creative pedagogy in the teachers' conceptualization.

b) How are Creativity and Creative Thinking Skills Reflected in Written Curricula of PYP, MYP and DP Programs in Continuum IB Schools?

IB Curriculum Analysis. The frequency analysis revealed distinct patterns in the use of terms related to creativity and creative thinking skills across three programs. These findings provided an initial quantitative overview. The key curricular documents through qualitative analysis were further explored to understand how these concepts are embedded and operationalized within the IB framework.

According to the PYP curriculum analysis, key words in person approach category are used 352 times. Curiosity, collaboration, and imagination are the most frequent words in the PYP curriculum. They are followed by the key words autonomy, thinking outside the box and openness to experience and ideas. Key words in the product approach category are used 115 times. Problem solving is the least frequently used one whereas the other three: novelty, usefulness and originality are used more than 30 times. As for creative thinking skills, formulation of questions and seeing other points of view along with enrichment and explanation of ideas are the two most frequently used key words.

MYP curriculum key words analysis yielded similar results. Person approach key words are used 163 times. Product approach key words, on the other hand, are used 50 times. Key words related to creative thinking skills are used 186 times. The

most frequent key words in Person approach category are curiosity (44), imagination (38), and thinking outside the box (26). In product approach category problem solving (2) is the least frequent key word while usefulness is the most frequent one (30). Creative thinking skills (186) category has formulation of questions (174) and seeing other points of view & enrichment and explanation of ideas (11) as the two most frequently used ones.

DP curriculum Person approach key words ($f = 122$) are less frequently used compared to PYP and MYP ones. Most frequently used key words in Person approach category are firstly collaboration (47), secondly imagination (28) and lastly curiosity (27). Thinking outside the box (17) was ranked as the fourth. As for product approach, usefulness (18) is the most frequent one which is followed by novelty (16) and originality (16). Regarding creative thinking skills, formulation of questions (46) and seeing other points of view (1) is the most frequent one.

Across the curricular documents of the continuum the frequency analysis reveals that curiosity, collaboration, imagination and thinking outside the box representing the person approach are the most frequently present key words in all three programs. For product approach novelty, usefulness and originality are the most frequent key words. As for creative thinking skills the most frequently used words are seeing other points of view & enrichment and explanation of ideas and also formulation of questions. These similarities show that there is a pattern regarding the references made to both approaches and creative thinking skills in each IB program curricular documents. Surprisingly some key words, which are risk taking, tolerance of ambiguity, adapting language to different situations and thinking creatively, are used in none of the curricular documents. Self-confidence is existent neither in MYP nor in DP documents, but it is used once in PYP Learning &

Teaching guidelines. Except for problem solving, which is not found in the DP curricular documents, all the other key words under product approach are used in the curricular documents. Creative thinking skills key words are used less frequently compared to creativity key words. Brainstorming is used in only one of the MYP curricular documents whereas it was not observed in the PYP and DP documents.

Considering the frequency of the key words in the common documents of the IB programs, curiosity, collaboration and imagination are the most frequently used words from the person approach category. Autonomy, thinking outside the box, openness to experience and ideas are the ones that are also used in those curricular documents, but they are much less frequent than the former ones. Interestingly self-confidence, tenacity & lack of inhibition in expressing of opinions, thinking creatively, and adapting language to different situations are not found in those common curricular documents. Usefulness from the product approach category is the only key word that is not used in the relevant documents. Seeing other points of view, enrichment and explanation of ideas and also formulation of questions are the only key words representing creative thinking skills category.

Table 15*Frequency Analysis of Key Terms of PYP Curricular Documents*

Key Term		The Learner	Learning & Teaching	The learning community	Language scope and sequence	Translanguaging	Overview	Multiliteracies	Student language portraits	Total	Total
Person approach focus on characteristics of creative individuals	curiosity	17	30	21	7	21	1			97	352
	risk taking									0	
	tolerance of ambiguity									0	
	autonomy	5	3	4	1	4				17	
	collaboration	14	29	57	2	57	2	1		162	
	thinking outside the box	4	8	3		3				18	
	openness to experience and ideas	1	5	4		4				14	
	adapting language to different situations									0	
	thinking creatively									0	
	tenacity and lack of inhibition in expressing of opinion	3	3	1		1				8	
	self confidence		1							1	
	imagination	5	11	8	2	8		1		35	
Product approach focus on characteristics of creative products	novelty	1	3	15		15				34	115
	usefulness	5	8	11	3	11	1			39	
	problem solving		2	1		1	1			5	
	originality	2	3	16		16				37	
Creative thinking skills	generating ideas									0	589
	taking multiple perspectives									0	
	seeing other points of view & enrichment and explanation of ideas	2	2	1	2	1				8	
	formulating own points of view									0	
	brainstorming									0	
	formulation of questions	36	361	76	30	1	76	1		581	
	building and combining ideas									0	

Table 16*Frequency Analysis of Key Terms of MYP Curricular Documents*

	Key Term	From Principles into Practice	Language acquisition guide	Language and literature guide	Total	Total
Person approach focus on characteristics of creative individuals	curiosity	9	19	16	44	163
	risk taking				0	
	tolerance of ambiguity				0	
	autonomy	6	9	3	18	
	collaboration	23			23	
	thinking outside the box	11	7	8	26	
	openness to experience and ideas	11		1	12	
	adapting language to different situations				0	
	thinking creatively				0	
	tenacity and lack of inhibition in expressing of opinion	2			2	
	self confidence				0	
	imagination	18	7	13	38	
Product approach focus on characteristics of creative products	novelty	7	1	1	9	50
	usefulness	25	2	3	30	
	problem solving	2			2	
	originality	7	1	1	9	
Creative thinking skills	generating ideas				0	186
	taking multiple perspectives				0	
	seeing other points of view & enrichment and explanation of ideas	2	8	1	11	
	formulating own points of view				0	
	brainstorming			1	1	
	formulation of questions	115	32	27	174	
	building and combining ideas				0	

Table 17*Frequency Analysis of Key Terms of DP Curricular Documents*

		From principles into practice	Language A : language and literature guide	Language B Guide	Language B teacher support material	Total	Total
Key Term							
Person approach focus on characteristics of creative individuals	curiosity	9	3	13	2	27	
	risk taking					0	
	tolerance of ambiguity					0	
	autonomy	1		1		2	
	collaboration	30	4	4	2	40	
	thinking outside the box	13	1	3		17	122
	openness to experience and ideas	5			1	6	
	adapting language to different situations					0	
	thinking creatively					0	
	tenacity and lack of inhibition in expressing of opinion	2				2	
	self confidence					0	
	imagination	20	4	4		28	
Product approach focus on characteristics of creative products	novelty	1		3	2	6	
	usefulness	17	1			18	30
	problem solving					0	
	originality	1		3	2	6	
Creative thinking skills	generating ideas					0	
	taking multiple perspectives					0	
	seeing other points of view & enrichment and explanation of ideas			1		1	47
	formulating own points of view					0	
	brainstorming					0	
	formulation of questions	34	1	10	1	46	
	building and combining ideas					0	

Table 18*Frequency Analysis of Key Terms of Other Curricular Documents*

	Key Term	What is an IB education? Programme standards and practices	Total	Total
Person approach focus on characteristics of creative individuals	curiosity	4	4	
	risk taking		0	
	tolerance of ambiguity		0	
	autonomy	1	1	
	collaboration	6	6	
	thinking outside the box	2	1	3
	openness to experience and ideas	1	1	20
	adapting language to different situations		0	
	thinking creatively		0	
	tenacity and lack of inhibition in expressing of opinion		0	
	self confidence		0	
	imagination	3	2	5
Product approach focus on characteristics of creative products	novelty	2	2	
	usefulness		0	5
	problem solving	1	1	
	originality	2	2	
Creative thinking skills	generating ideas		0	
	taking multiple perspectives		0	
	seeing other points of view & enrichment and explanation of ideas	1	1	
	formulating own points of view		0	20
	brainstorming		0	
	formulation of questions	5	14	19
	building and combining ideas		0	

For the second phase of the analysis a further examination of the curricular documents (Appendix I) was carried out. Through this deeper examination, the role of creativity and creative thinking skills in the curricular documents was clarified,

thereby linking the curriculum analysis to the Creative Pedagogy Framework for Continuum IB Schools.

PYP. Rather than limiting learning to the conventional subjects studied in primary years education, transdisciplinarity enables PYP students to interact with the world by asking and answering relevant questions that accelerate their learning. It contributes to their understanding and meaning making of the world. The role of the subjects (i.e. the learner) in this framework is to benefit the learning process instead of restricting it to subject-specific expectations, thereby building their knowledge by interacting with all the relevant parties in the learning community. Nicolescu (2006) clarified the difference between transdisciplinary, multidisciplinary and interdisciplinary putting an emphasis on the subject who is regarded as the knowledge creator.

The Learner. Learner agency is emphasized throughout the document and defined as students steering their learning based on their needs. It is closely linked to the empowerment of students, which is essential for them to make the appropriate choices, form questions as well as making meaning. These features support the way creativity defined in the literature. In addition to agency, the IB Learner profile consists of attributes almost each contributing to the creative development of students. Each of these attributes foster originality, fluency, flexibility and innovation, in other words risk-taking, open-mindedness, inquiring and reflecting.

In approaches to learning section there are explicit references to creative thinking skills. Generating novel ideas, making unexpected connections, considering new perspectives and asking what if questions are the direct references shared. Besides these, there is guidance provided specifying how teachers can support their students to enhance their learning. Such practical guidance could also ensure the

promotion of creative thinking skills. Play is another essential aspect of learning that is underscored, which indeed offers an opportunity for students to learn about the world and themselves.

Creativity and creative thinking skills are not covered in isolation in The Learner booklet. They are presented together with other thinking skills and integrated with agency, inquiry, playfulness, and reflection.

The document provides a great deal of guidance for the cultivation of creativity and creative thinking skills in young learners. Both act as core educational values taught through agency, inquiry, learner profile attributes, and approaches to learning. It is emphasized that creativity is a lifelong competence requiring play, exploration, and reflection. It is also highlighted that exploration of new ideas and risk taking, which are promoted in the program, cultivates creative thinking.

Learning and Teaching. Creativity and creative thinking skills are emphasized throughout the document. The transdisciplinary approach enables students to learn about various themes as explorers instead of just studying those. Learning is not regarded as passive. Instead, it is mentioned throughout the document that problems, questions, and themes constitute learning that requires imagination, exploration and innovation. Creative thinking is emphasized through problem-solution, making connections across disciplines, having multiple perspectives, and inquiry. In addition, student agency and voice are prioritized. Students are considered as co-constructors of knowledge. Divergent thinking, risk-taking and playful experimentation are also promoted as factors helping students construct their learning. ATL framework explicitly presents creative thinking skills as generating ideas, holding alternative perspectives, evaluating ideas, and engaging in reflective thinking. Another important point mentioned in the booklet is the significance of

creativity in communication. The transdisciplinary framework requires meaning making and the expression of new ideas through the integration of creativity, for which a great deal of guidance is provided in the curricular document. Besides all these, collaborative planning among teachers is an integral part of the curriculum. It enables teachers to prepare in a creative way to plan flexibly in order to meet students' needs and also respond to students' thinking skills within the boundaries of PYP education. PYP exhibition and student-led actions also offer many opportunities for students to display their creativity authentically. The document defines teachers and students as active participants in the learning process positioning them as creators, innovators and problem-solvers.

MYP.

From Principles into Practice. Similar to PYP curricular documents, the IB learner profile plays a significant role in fostering and developing creativity and creative thinking skills in MYP. The learner profile attributes inquirers, thinkers, communicators, and risk-takers are directly related to creative thinking. Creativity is seen as the key to the promotion of acting harmoniously in the school community through respecting themselves and the other parties at school and outside school. ATL framework provides a comprehensive guidance regarding creative thinking skills along with other thinking skills. Generating ideas, making connections, and adapting ideas in new contexts are some of the highly promoted skills. ATL framework helps students to act as critical and creative thinkers as well as taking responsibility for their own learning. Conceptual learning is an integral component of MYP which enables students to be involved in higher-order thinking, handling abstract and complex ideas, creating interdisciplinary links and transferring learning across contexts. Learning is not restricted to the input provided in class. Creating

personal relevance, applying knowledge in contexts that they are not familiar with, and having creative, critical and conceptual thinking are prioritized to a great extent. Another benefit MYP curricula provide is the six Global contexts, which enable students to adopt a creative outlook and approach problems creatively. MYP projects are the platforms for the students where they can reflect their personal expression and innovation. Along with pursuing their personal interests, they can produce a creative outcome through applying ATL skills. The community project is a great opportunity to serve the community by working collaboratively to find creative solutions to real life problems. Interdisciplinary units also helps students to act flexibly and innovatively by engaging with authentic and open-ended tasks. Regarding assessment there is guidance on the integration of assessment although creativity is not all the time directly assessed. Authentic tasks, performance-based tasks and reflection through self-assessment and feedback also support the assessment of creativity. Creativity is not a suggested component of the MYP curricula, it is integrated into its philosophy, structure, pedagogy, and assessment. Inquiry, conceptual engagement, contextualized learning, personal voice and authentic action contribute to its cultivation. In addition to creativity, creative thinking skills are indispensable and seen as a habit of mind, which enable students to construct meaning, generate solutions and express themselves clearly.

DP.

From Principles into Practice. Creativity is an integral part of the DP curricula. It is integrated into the curriculum explicitly in various parts namely teaching approaches, assessment practices, and learner development. Similar to MYP, some of the Learner Profile attributes directly foster creativity and creative

thinking. These attributes enable students to become creative in the long run as well as contributing to students' overall transformation throughout the program.

Approaches to teaching and learning involve creativity and creative thinking skills, which are reflected in the form of generating novel ideas and evaluating alternatives, applying knowledge in new contexts and working with others collaboratively. The constructivist model consists of inquiry, action and reflection, of which the stages directly require the use of creativity and creative thinking skills. For inquiry, students focus on real-world questions and use their creativity to shape their research and responses. For action, students are supposed to take creative and purposeful actions. At the reflection stage they evaluate creative thinking, the processes they have gone through and also their learning. In addition to these, with the guidance of conceptual and interdisciplinary learning students make connections across disciplines through deep understanding, synthesizing and generating solutions. The authentic performance assessment promotes creativity and enables it to become an organic part of assessment. Students are encouraged to exhibit their depth and originality of their understanding in their performance in the form of presentations, portfolios, research projects. Creativity and creative thinking skills are part of each relevant subject depending on the nature and the aims of each specific subject. In language and literature creativity and creative thinking skills are promoted in narrative writing, interpretation, and stylistic experimentation. The IB Diploma program embeds creativity deeply into the learning model. It is not an extracurricular component. It is rather a core component that helps students pursue their development in the best way through reinforcing inquiry, personal expression, a lens for the interpretation of global issues as well as acting as a skill to be nurtured and assessed. It also supports meaningful action. Additionally, creativity, activity, service

(CAS), extended essay (EE), and theory of knowledge (TOK), each of which requires the student to employ creativity in various forms to meet each of these components' expectations. All these ensure that the IB mission and the DP curricula are aligned. Table 19 demonstrates a comparative analysis of how creativity and creative thinking skills are reflected across the three IB programs: PYP, MYP, and DP.

Table 19

How Creativity and Creative Thinking Skills are Reflected Across the Three IB Programs

Dimension	PYP (Primary Years Program)	MYP (Middle Years Program)	DP (Diploma Program)
Key Structures Supporting Creativity	Play-based learning, big themes across subjects, giving students choice, using different ways to express ideas	Interdisciplinary work, global contexts, ATL skills with creative thinking as a part	CAS, EE, TOK, creative thinking in ATL, big concepts and cross-subject learning
Creative Thinking Skills in ATL	Coming up with new ideas through play and exploration, showing learning in many ways (drawing, acting, movement)	Connecting different ideas, thinking of other possibilities, making creative projects such as the personal project	Creating and judging new ideas, making personal research questions (EE), combining and analyzing ideas (TOK)
Creativity in Curriculum Design	Curriculum grows from what students are interested in and curious about	Curriculum is based on concepts, helping students think more flexibly and abstractly	Curriculum includes set concepts but also allows creative exploration in the core
Assessment of Creativity	Teachers watch and reflect on how engaged and imaginative students are	Projects and reflections (like MYP projects), looking at process and originality	Real-world tasks like TOK essays, EE, and other internal work, with focus on depth and originality
Learner Profile Links	Encourages risk-taking, questioning, communicating, and reflecting by letting students explore	Helps students grow as thinkers and risk-takers in many subjects	Linked to being thoughtful, communicative, reflective, and balanced, with creativity tied to ethics and global thinking

Linking RQ3-b Results to the Initial Version of the Revised Framework

Teaching Creatively. The analysis of the IB curricular documents across the PYP, MYP, and DP revealed a consistent emphasis on teaching approaches that model creativity through pedagogy, curriculum design, and learning environments. The teachers' use of diverse instructional strategies, interdisciplinary connections, and flexible planning processes characterizes teaching creatively within the IB continuum. The transdisciplinary framework in the PYP facilitates teaching creatively through diverse and real-world themes. Teachers are regarded as co-constructors of knowledge, designing inquiry-driven, exploratory, and student-centered learning experiences. Play-based learning, collaborative planning, and project-based exhibitions are integral to the creative teaching process. Similarly, in the MYP, teaching creatively is enabled through interdisciplinary units, global contexts, and open-ended authentic tasks. Learning opportunities given aim at challenging students in a variety of ways, such as approaching problems from multiple perspectives. In the DP, the TOK course, the EE, and CAS are the major components of the curriculum enabling creative teaching. These conceptual and interdisciplinary elements require teachers to guide students through inquiry, synthesis, and reflective evaluation, employing innovative assessment formats such as portfolios, performance-based tasks, and research projects.

Across all three programs, the role of the teacher goes beyond content delivery. The teacher is seen as a facilitator fostering intellectual curiosity, risk-taking, and innovation in both instructional design and classroom interactions. This role of the teacher aligns with the person approach to creativity, as teachers model the dispositions of curiosity, collaboration, and imagination. These terms were among the most frequently referenced terms in the curricular documents.

Teaching for Creativity. Teaching for creativity within the IB framework involves the intentional cultivation of learners' originality, problem-solving, and flexible thinking through structured opportunities. Teaching creatively focuses on how teachers approach instruction, but teaching for creativity centers on the intentional design of learning experiences fostering creativity.

In the PYP, learner agency is the focal point and explicit guidance on supporting students to generate novel ideas, make unexpected connections, and explore alternative perspectives accompanies it. Creativity is embedded within the ATL framework. In the MYP, creativity is cultivated through conceptual learning and global contexts, which enables students to transfer knowledge across different settings. The ATL framework emphasizes generating ideas, making connections, and adapting thinking. These are actively taught and practised through projects and community-based initiatives. In the DP, teaching for creativity is most evident in the integration of creativity within disciplinary and interdisciplinary contexts, which require students to apply knowledge in novel ways. The constructivist cycle of inquiry, action, and reflection directly supports the development of creative competencies. Furthermore, creativity is assessed through both subject-specific and core components.

The frequency analysis underscores that novelty, usefulness, and originality, which represent the product approach to creativity, are recurrently referenced across all programs. This indicates a continuous focus on producing outcomes. Such outcomes are expected to be not only new but also purposeful and contextually relevant. On the other hand, the absence or low frequency of certain creativity-related keywords, such as risk-taking and tolerance of ambiguity suggests potential gaps in how creativity is conceptualized and operationalized for teaching purposes.

Creative Learning. Creative learning in the IB continuum is characterized by learners' active engagement in constructing meaning, integrating knowledge, and applying understanding in novel contexts. Inquiry-based methodologies support creative learning by learning environments that value exploration, reflection, and authentic application.

In the PYP, creative learning is reflected through transdisciplinary inquiry. Students go through many diverse stages, such as exploring ideas beyond disciplinary boundaries and as a result of this they interact with multiple parties in their learning community. In the MYP, creative learning is enhanced through conceptual engagement and the Global Contexts, providing relevance and encouraging students to address real-world problems with innovative solutions. Interdisciplinary units and personal projects are key platforms for this process. In the DP, creative learning is embedded within the core components known as TOK, CAS, and EE.

Creative Thinking Skills. Creative thinking skills within the IB curricular framework are systematically integrated into the ATL skills across all three programs. However, their emphasis and operationalization vary. The frequency analysis identified formulation of questions, seeing other points of view, enrichment and explanation of ideas as the most consistently used creative thinking skill descriptors across the continuum. These skills align with divergent thinking, perspective-taking, and idea elaboration, the core elements in the development of creative cognition.

In the PYP, creative thinking is fostered through playful exploration, posing “what if” questions, and making imaginative connections. In the MYP, students are guided to generate ideas, adapt them to new contexts, and integrate multiple

perspectives. In the DP, creative thinking is developed through synthesizing knowledge, evaluating alternatives, and applying conceptual understanding. Despite the presence of these skills, several creative thinking descriptors such as brainstorming, taking multiple perspectives, building and combining ideas were either absent or given only a few references.

The curriculum documents suggest that creative thinking is regarded as a discrete skill and also as a habit of mind. It is cultivated not only through specific teaching strategies but also through the structuring of learning experiences that require curiosity, openness, and flexibility. The emphasis on formulation of questions, in particular, reflects the IB's commitment to inquiry-based learning which has a key role in the learning process.

c) How are Creative Thinking Skills Reflected in Students' Written Outcomes in PYP grade 4 and MYP Grade 10 in Continuum IB Schools?

Nine PYP and 11 MYP samples were chosen and marked against the criteria by the researcher. Following this, another marker, an experienced instructor with prior IB experience, marked the same papers.

Both PYP and MYP tasks required the students to personalize, which enabled them to enrich and explain their ideas better. In addition to personalization, the tasks also aimed at eliciting the students' own points of view. This contributed positively to the majority of the students' performance. In some PYP papers, it is evident that the students were able to generate ideas. However, generation of ideas was demonstrated as listing ideas in most of the papers. Another point to be raised concerning PYP papers is taking multiple perspectives. The students interviewed with the family members and wrote about their experience, but they did not show strong evidence of taking multiple perspectives. However, considering the PYP

expectations, taking multiple perspectives as successfully as generating ideas could be more challenging for grade 4 students compared to MYP grade 10 students. The students' language in both groups was accurate in their samples. Thus, their expansion regarding those specific points did not result from inaccuracy or incompetence in expressing themselves.

Linking RQ3-c Results to the Initial Version of the Revised Framework

Teaching Creatively. Both the PYP Grade 4 and MYP Grade 10 tasks set for students were designed with an emphasis on personalization, enabling learners to connect their academic work with their own experiences. Such an approach reflected teaching creatively, as it differed from standardized prompts to provide students with opportunities for authentic self-expression. The teachers facilitated idea development and more elaborate explanations in students' written outcomes by allowing them to engage with personally meaningful content. This intentional task design mirrored the IB philosophy of fostering creativity.

Teaching for Creativity. The written tasks in both programs demonstrated an intentional attempt to cultivate creativity by eliciting students' own viewpoints and encouraging them to expand upon their ideas. The incorporation of personalization into task requirements reflected a deliberate strategy to promote originality and depth aligned with the person approach to creativity. Furthermore, the tasks implicitly encouraged the application of product approach qualities such as enrichment and explanation of ideas. Idea generation was evident particularly in PYP responses, but it was often reflected as simple listing rather than the development of complex ideas. This suggested that teaching for creativity was embedded in task design, but the scaffolding for more advanced creative thinking processes may be required for the PYP.

Creative Learning. The students' task engagement illustrated an effort to connect learning with real-life contexts. This engagement manifests creative learning in knowledge construction within meaningful personal and social experiences. In the PYP, despite the presence of authentic responses, the evidence of adopting multiple perspectives was limited. This might have resulted from developmental differences because perspective-taking at a complex level can be more cognitively demanding for Grade 4 learners than for MYP Grade 10 students.

Creative Thinking Skills. The analysis revealed that creative thinking skills particularly the enrichment and explanation of ideas, were successfully demonstrated in both PYP and MYP student work. The task requirement encouraged the articulation of individual viewpoints, which supported the skill of formulating one's own perspective. In PYP samples, idea generation was observed but it mainly consisted of listing ideas rather than synthesis. The skill of taking multiple perspectives was more evident in MYP Grade 10 samples. In the PYP, perspective-taking could have been cultivated through the interactive task more. Overall, both groups showed competence in expressing themselves, but the depth and complexity of their creative thinking skills varied according to developmental stage and the degree of scaffolding.

Conclusion

This mixed methods study foregrounded the role of creative pedagogy in the IB context approaching the phenomenon from multiple perspectives, which required both qualitative and quantitative data sources and analysis. As a result of an elaborate data analysis that required both deductive and inductive thematic data analysis, and recurring stages of coding as well as statistical analysis of PYP and MYP student questionnaires, the results of the study yielded significant patterns regarding four

constructs of creative pedagogy namely teaching creatively, teaching for creativity, creative learning and creative thinking skills.

The results of the study revealed that each construct supports and depends upon the others in a cyclical, mutually reinforcing process. Based on the results of the study it could be noted that:

- Teaching creatively inspires engagement and models innovative approaches.
- Teaching for creativity provides structured opportunities to practise creativity.
- Creative learning environments are places where students take ownership of their learning and experiment while learning.
- Creative thinking skills function as the cognitive toolkit through which creativity is enacted.

To conclude, teacher awareness, curricular alignment, and authentic assessment are enabling factors for students to demonstrate more complex and integrated expressions of creativity. However, if conceptual clarity about creative thinking skills is lacking, or where teaching creatively is not explicitly linked to teaching for creativity, the potential impact on student creative learning is reduced.

CHAPTER 5: DISCUSSION

Introduction

This chapter presents and interprets the findings of the study on the role of creativity and creative thinking skills in IB English courses across two continuum schools in Türkiye. Drawing on multiple data sources, the study explored how creativity and creative thinking skills are defined, perceived, and enacted in practice. As one of the first studies in this field, this study offers important insights and also a revised Creative Pedagogy framework designed based on Lin's (2011). The framework offers research-based clear guidance for continuum IB schools. Implications for future research are also presented in this chapter

Overview of the Study

The 21st century expectations and the fierce competition around the world require students to be competent learners with a wide range of diverse skills as well as having a good command of several foreign languages. Thinking skills contribute to the development of these diverse skills and they also constitute the most important life skills that any student in the current century must acquire. Critical thinking skills are more commonly visible in the curricular documents. Therefore, there is a need to make creativity and creative thinking skills visible as well. In addition to this, these two concepts need to be demystified. These actions are essential to teach such skills in K-12 context effectively. The IB curricula have a comprehensive guidance on thinking skills, especially through ATL skills, and introduce these skills starting from PYP. This mixed-methods case study aimed at examining and clarifying the role of creative thinking skills and creativity in the IB curricula in two continuum IB schools

in Ankara and İzmir in Türkiye. Considering the growing awareness of the need for creativity and creative thinking skills in K-12 context in the country, this study set out to contribute to this domain.

There were three research questions, each of which investigated the issue from multiple perspectives. The first research question addressed the teachers' personal definition of creativity and creative thinking skills in two continuum IB schools. The second question focused on PYP grade 4 and MYP grade 10 students' perception of creativity and creative thinking skills in the same school context. The third question examined how the infusion of creativity and creative thinking skills was reflected in English courses in those two continuum schools. There were three sub-questions of the final research question. These sub-questions sought to explore the issue through the IB curricula, the English teachers' actions and the written student samples.

For a thorough data analysis, a laborious data collection was carried out, for which both qualitative and quantitative data were collected in light of the first version of the revised Creative Pedagogy Framework. Semi-structured teacher interviews, teacher questionnaires, curricular IB documents, and students' written production samples constituted the qualitative data sources. For the quantitative data collection PYP grade 4 and MYP grade 10 student questionnaires were used. The revised version of Creative Pedagogy Framework used as the lens for the data analysis. Inductive thematic analysis was carried out for the analysis of semi-structured teacher interviews and teacher questionnaires. As for the IB curricular documents a frequency analysis was initially carried out and then the analysis was narrowed down by focusing on some representative curricular documents from each

program. For student written outcomes a content analysis was completed. A Mann-Whitney U test was done for the analysis of student questionnaires.

This study explored the role of creativity and creative thinking skills in continuum IB schools in English lessons from multiple perspectives. The findings of the study were intended to provide insights for the stakeholders of the IB education. However, the findings could contribute to non- IB contexts and their stakeholders too. In addition, this study proposed a revised version of Creative Pedagogy Framework for Continuum IB Schools based on Lin's conceptual framework (Lin, 2011).

The findings are presented in the following order: those related to the IB curriculum; the teachers' misconceptions regarding the definitions; and the teachers' infusion of creativity and creative thinking skills into their classes, including the use of formative assessment and written student samples. Subsequently, findings from the student questionnaires are reported. The discussion of these findings is structured around three interrelated aspects—curriculum, teachers, and students—emphasizing the connections among them.

Discussion of Major Findings

Creativity and the Creative Thinking Skills in the IB Curriculum

The IB's overarching mission to develop inquiring, knowledgeable, and caring individuals who are equipped to contribute meaningfully to a complex world makes creativity and creative thinking skills indispensable across the IB programs. Aligned with the theoretical basis of the curricula (Bullock, 2011; Keser et al., 2022), creativity and creative thinking skills could be traced back to its philosophy and pedagogy. One of the significant findings of this study showed that they are reflected both implicitly and explicitly in the written IB curricula. As data analysis revealed,

many key words referring to creativity as personal attributes, creativity as a product and creative thinking skills are found in various curricular documents. The implicit references represent multiple layers of creativity and the complexity of creative thinking skills (Henriksen, 2018). Furthermore, there is explicit coverage of both creativity and creative thinking skills in ATL along with the other thinking skills. This explicit articulation within the ATL framework offers structure and flexibility in order to develop the relevant skills in meaningful contexts. Both types of references show that neither creativity nor creative thinking skills are presented in isolation (IBO, 2018a), they are indeed integrated in a systematic way. The aforementioned references are indicators of creative pedagogy in the IB curricula, yet the term creative pedagogy is not used in the documents. These references enable both teachers and students to acquire the relevant key words of creative pedagogy contributing to their exposure.

Another finding related to the IB curricula is the subtle progression of creativity and creative thinking skills across the programs. Both are fostered progressively through age-appropriate structures and expectations. The evolution of concrete forms into abstract forms through PYP and DP was identified. In PYP, creativity is fostered through transdisciplinary learning. Transdisciplinary approach facilitates meaning-making which is not limited to subject boundaries. It goes beyond subjects. Open-ended play, inquiry, and interactive communication, all of which allow young learners to experiment, explore, and express themselves in multiple ways. This boosts their natural curiosity and imaginative capacity. Thus, students are expected to explore ideas, ask questions, and express themselves in various ways and also considered as knowledge creators. Seeing students as knowledge creators, which is supported by Nicolescu (2006), is one of the major

factors differentiating transdisciplinary, interdisciplinary, and multidisciplinary approaches. Both in MYP and DP conceptual learning is of vital importance and abstract thinking is highly promoted (IBO, 2015a; IBO, 2015b). In MYP, creativity becomes increasingly cognitive and contextual. The use of global contexts, interdisciplinary units, and conceptual frameworks encourage students to make abstract connections, form diverse perspectives, and develop original responses. The interdisciplinary units contribute to the further development of creativity and creative thinking. In DP, it has a vital role as students are expected to reflect creativity in their work. More complex creative outcomes are also encouraged in the DP. Risk taking and innovation takes over more and students are more inclined to think independently and do research as well as engaging in ethical reasoning. This progression can benefit a continuum student in many ways as it enables the student to gradually build on the creative potential and the creative thinking skills with the help of the teachers' feedback. The overall progression demonstrates that the IB curricula cultivate creativity as process and product and at the same time simultaneously support the acquisition of creative thinking skills as lifelong competencies (Chida, 2023).

The curricular guidance provided for the teachers is another important finding. In order to meet the curricular standards, the teacher is given a very active role in the IB and it is underscored in the curricular documents. Teachers are regarded as active agents of teaching and learning, which enhances both teachers' and their students' creative capacity. Firstly, the curricula empower the IB teachers considerably. They are considered as designers co-constructing knowledge with their students. PYP teachers are supposed to create environments that support imaginative play, inquiry, and student agency to stimulate creative thinking. Observing, listening,

and responding to students' questions and interests enable them to shape the curriculum accordingly in their class. In the MYP and DP, the teacher is regarded as more of a facilitator and mentor, who guides students through increasingly complex processes of inquiry. The ATL framework tools aim at equipping teachers with the necessary knowledge regarding thinking skills. This is supposed to stimulate teachers' active role in the provision of creative thinking strategies. Secondly, collaborative unit planning is instrumental for teachers in integrating creativity and creative thinking into course design, delivery and assessment. This creates a great opportunity for exchanging ideas and gaining new perspectives.

The literature supports the findings in this study, particularly within constructivist and socio-cultural learning paradigms. Some researchers (Craft, 2005; Corazza & Lubart, 2023; Fasko, 2001; Robinson, 2011; Sawyer, 2012) emphasize that creativity is not restricted to the arts but it is a learnable, and domain-specific skill that is cultivated in environments promoting autonomy, inquiry, and collaboration. The IB aligns with these principles as it prioritizes agency, inquiry and authentic assessment tasks. Furthermore, the role of the teacher as a creative practitioner in the IB curricula is supported by the literature (Elisondo, 2025; O'Boyle, 2022; Saracho, 2012). Infusing creativity as a core pedagogical value has the potential to transform educational practice and student identity. Thus, the IB contributes to the sustainability and meaningful development of creativity and creative thinking skills across its programs.

In summary, the analysis of the IB curricular documents revealed that IB's commitment to fostering creativity and creative thinking skills across all three programs not only validates its mission to develop reflective, innovative, and

globally minded learners but also offers valuable insights into how educational systems can support creativity in a sustainable and meaningful way.

The Teachers' Definitions and Misconceptions

The IB requires its learners to think creatively and underscores the importance of creativity along with creative thinking skills, which is reflected in different forms in the IB documents. This offers a great guidance and at the same time comprehensive reference sources for its teachers. However, being able to define a term is not an easy task for a teacher even when the teacher is familiar with the concept. The personal definition of an educational term characterizes how to approach it and also specifies the boundaries to be considered for teaching. For that reason, the practitioners' definitions reflect their conceptualization.

When asked about the definition of creativity and creative thinking skills, each teacher shared their definitions. These definitions have several commonalities, revealing a general understanding of the terms creativity and creative thinking skills among the teachers. However, a major finding regarding their definitions is that the teachers appeared to struggle to define, identify and differentiate the individual layers of the terms despite having the IB curricular sources within their access. A close examination of their responses indicated that the teachers drew more on procedural knowledge than on declarative knowledge regarding the definition of the relevant terms.

These definitions, mostly in the form of exemplification, revealed partial awareness of the terms, but lacked conciseness. Giving concise definitions could have been challenging for the teachers because creativity has a multi-dimensional nature (Hernandez-Torrano & Ibrayeva, 2019), which makes it elusive (Wagner, 1978). While varying from one another, the definitions given revealed that the

teachers primarily benefited from making associations to define the terms. In addition to sharing several associations, the teachers tried to express their understanding of the terms through detailed exemplification of class activities and teacher activity. The associations and the exemplification inadvertently corroborate the constructs in Lin's (2011) creative pedagogy. The teachers' accounts indicated that they see making connections and using imagination (Fryer, 1996; Lindqvist, 2003; Richards & Cotterall, 2016; Walia, 2019) as an active demonstration of student creativity. In addition to student creativity, there were primarily references pointing to teaching creatively. Without using the term teaching creatively, the teachers indeed shared the importance of spicing up the lessons by adding variety to break the routine (Andiliou & Murphy, 2010; Jones & Richards, 2016). They hinted that flexibility as a teacher attribute can account for student creativity. Adopting a flexible approach to feedback (Akyıldız & Çelik, 2020; Beghetto, 2007; Bolden et al., 2020; Furman, 2011; Kaufman & Beghetto, 2013; Richardson & Mishra, 2018), to planning, and to lesson execution in order to nurture creativity (Al-Nouh et al., 2014; Birkmaier, 1971; Fryer, 1996; Soh, 2017) is another common point the teachers emphasized. Similarly, asking stimulating teacher's questions was also shared as one of the actions nurturing creativity (Esfandiari & Hussein, 2023; Lucas, 2016; Salmon & Barrera, 2021).

As for creative thinking skills, there were two emerging patterns of findings. Firstly, some responses indicated that the teachers could not clearly differentiate between creativity, creative and critical thinking skills. They indeed used them interchangeably. This points out to misconceptions. Secondly, the teachers mainly defined creative thinking skills as thinking outside the box. In the literature, however, generating ideas, and creative problem solving (Fryer, 1996; Saeed &

Ramdane, 2022) are primarily emphasized for creative thinking skills. Saeed and Ramdane's (2022) findings, for which they screened many articles, showed that creative thinking skills refer to a number of varied skills rather than only one set of universal skills. Researchers' definitions of creative thinking skills in the literature still vary to a great extent and some definitions highlight other aspects of creativity (Plucker et al., 2004; Rosen et al., 2020). Therefore, the clearly laid-out ATL skills were thought to have guided the teachers for reference. The teachers referred to ATL skills, but even when asked explicitly, their explanations regarding creative thinking skills lacked elaboration.

Another significant finding of the study is the gap between the IB curricular documents and the teachers' definitions. When the key words and other references to creativity and creative thinking skills in the IB curricula are considered, it appears that the teachers used only a few. This indicates that further support could be provided for the IB teachers to have a better sense of creativity and creative thinking skills.

The Teachers' Infusion of Creativity and Creative Thinking Skills into Their Classes

Every curriculum has an ideological basis that forms the "patterns of thinking" (Stobie, 2007, p.141) and the effect of these patterns are evident in various aspects of curriculum implementation (Stobie, 2007). Based on constructivism (Cambridge, 2011), the IB curricula reflect these patterns of thinking in the form of constructivist influence in course design, delivery and even in interaction patterns. The IB curricula is a research-based curricula, where there is "a detailed and developmentally appropriate curriculum framework or curriculum that is broad, balanced, conceptual and connected" for each IB program (*What is an IB Education*,

2019, p.5). IB Learner Profile is an integral part of the IB education consisting of ten attributes that each student in each program is expected to display. The curricular goals and Learner Profile attributes make creativity and creative thinking skills indispensable for each IB program to achieve the program goals. Additionally, as Walker, Bryant and Lee (2014) mentioned “The Continuum gives us a common language and the common language is one of the things that helps us connect between the different sections of the school” (p.4). The findings of this study reinforce the idea that working in a continuum IB school and having access to the necessary curricular documents is a great opportunity to foster both creativity and creative thinking skills.

Each IB program was designed at different times to meet the needs of the constantly changing business world, which led to challenges in terms of progression from one program to the other (Walker & Lee, 2018). Therefore, the continuum has a crucial role in ensuring consistency and continuity among the programs. With respect to this role, some commonalities were identified. From the teachers’ accounts it was evident that the teachers have shared values and aligned practices of the IB. Furthermore, there are some commonalities concerning the teachers’ and the curriculum’s role within the scope of creativity and creative thinking skills in the continuum.

The interviews, class observations and the questionnaire analysis indicate that there is consistency among programs with respect to the teachers’ encouraging attitude towards creativity, which predominantly results from the flexibility given in PYP and MYP curricula (IBO, 2019b). Each IB program curriculum still helps teachers incorporate creativity into their teaching, because as Larraz- Rábanos (2021) stated “...creativity should be addressed curricularly in the objectives, as formative

content, as a strategy, in learning activities and in assessment” (p.30). The study carried out by Hong et al. (2011) regarding the effects of teachers’ epistemological beliefs, motivation and goal orientation supports what Larraz- Rábanos (2021) emphasized regarding the role of the curriculum because according to the study (Hong et al., 2011) the most significant predictor of instructional practices that foster creativity is teachers’ own learning goals compared to other attributes such as motivation for creative work. This hints the need for shared curricular values and goals.

Firstly, regardless of their programs, each participant acknowledged that the IB curricula nurture creativity and creative thinking skills. This was observable in all of the teachers’ approach towards creativity, their students, class atmosphere, and their feedback on students’ creative performances. Many curricular documents namely ATL skills and specific program booklets enable the teachers to infuse creativity and creative thinking skills into course design and delivery. As in line with the former research conducted to examine the role of thinking skills (primarily critical thinking skills) in IB curricula (Double et al., 2023; Hallinger et al., 2011), this study concludes that the IB nurtures both creativity and creative thinking skills by incorporating them into IB Learner Profile and ATL skills (IBO, 2019a). As these skills are inherently embedded in the IB curricula, it is much more manageable for the teachers to stimulate thinking through teacher questions. The structure of the IB curricula along with the teacher guidance it offers, foster student creativity rather than allowing it to be overlooked (Hallinger et al., 2011; Wright & Lee, 2014). The IB teachers are empowered to cultivate creativity (Richardson & Krstic, 2021; Ritter & Mostert, 2017; Swartz & McGuinness, 2014), so they channel this empowerment into equipping their students with creative competencies. When equipped with such

competencies, an IB student can become a confident and independent learner who can form the necessary connections for effective learning.

Secondly, one of the requirements for all IB teachers is to collaborate with their colleagues to plan their courses (Aksoy & Bozdoğan, 2024). The participants referred to the benefits of collaborative planning in the interviews and noted that it contributes to their creative planning articulating it as one of the major factors in fostering teaching creatively and teaching for creativity to meet the curricular expectations.

Thirdly, time constraints in covering the IB curricular objectives (Lee et al., 2022) and inconsistency in the integration of creativity and creative thinking skills in formative assessment due to time constraints are the two recurring issues identified in each IB program across the continuum.

Despite the teachers' attempts to infuse creativity and creative thinking skills, a crucial finding based on the interview results hints that this incorporation of creativity is not systematically done. The teachers' understanding of creativity differs and this hinders the intentional infusion of creativity and creative thinking skills. While it has a noticeable role in the curricula, it is still up to the teacher to specify the daily doses and acts of creativity. Similarly, creative thinking skills are overlooked to a larger degree in practice even though there is considerable guidance provided through ATL skills. As creative and critical thinking skills are given under thinking skills category in the IB curricular documents, the teachers could overlook creative thinking skills. In brief, ATL skills aim at helping teachers to take their students through relevant thought processes (IBO, 2019a), but there is still a need for further guidance regarding the practice of creative thinking skills.

The amount of flexibility provided with respect to course design is one of the major differences among the continuum programs. The teachers explained this as the diminishing amount of flexibility from PYP to DP curricula. However, this change from PYP to DP does not disadvantage students' development of creativity and creative thinking skills. As the IB ensures a smooth transition of the curricular progression of each program across the continuum, it provides sufficient scaffolding for creativity in PYP and MYP studies with an adequate amount of guidance prior to DP. This nurtures students' creativity throughout their studies in the continuum. However, if this curricular guidance and flexibility provided throughout PYP and MYP is overlooked, this might lead to issues in DP. Thus, teacher expertise is highly necessary.

Formative Assessment

Bennett (2011) defined formative assessment as an indispensable part of instruction enabling the teacher to identify what to change in the process of instruction as well as clearly spotting a learner's strengths and weaknesses at each stage of the learning process. In order for the teacher to effectively identify the student's strengths and weaknesses, Kean (2014) emphasized that student involvement is essential because the student is expected to act as an active agent throughout the assessment and feedback stages. Thus, formative assessment is a great opportunity to create room for the inclusion of creativity and creative thinking skills (Bolden et al., 2020).

One of the key findings of the study is that the IB curricula enable the teachers to integrate creativity and creative thinking skills into their formative assessment. The role of the curricula in that sense was emphasized by the majority of the teachers. However, the teachers' accounts indicated that it was not a systematic

integration. The reasons given for this were mainly the time constraints and the loaded course work across the programs. Additionally, the points shared by the teachers hinted a need for further expertise concerning the design and the implementation of creativity related to formative assessment tasks (Lucas, 2016).

Another striking finding is how the teachers approached formative assessment regarding the role of creativity and creative thinking skills in it. While it is a regular part of their instruction through diverse activities including self-reflection and peer reflection, some of the teachers mentioned that they also grade some of the formative assessment tasks. The reason they shared for this was their aim to get their students to complete the work in a better way. It was hinted that assigning some task points to some formative assessment tasks enable students to take the task more seriously and also to complete some of the assessed course work. Another finding relevant to assessment is the integration of creativity and creative thinking skills into summative assessment tasks. One of the PYP teachers noted that some of the summative tasks are projects, so such tasks are more feasible to infuse creativity and creative thinking skills. This information pointed to a challenge in terms of formative task design regarding the inclusion of creativity and creative thinking skills.

Written Outcome Student Samples

One interesting finding concerning formative assessment is that the teachers' interview responses for formative assessment task design and assessment corroborated what was reflected in written student samples. The content analysis of sample tasks revealed that the teachers managed to infuse creative thinking skills into their formative assessment task design effectively despite experiencing time constraints. This hinted that the teachers could make creative thinking skills a part of their course.

Another finding is about how significantly the writing task type determines the extent to which creative thinking skills are reflected in the student work. The written sample analysis showed that designing developmentally appropriate, open-ended writing tasks is crucial to support the progressive development of creativity from primary through secondary education in IB schools. Interestingly, the teachers did not refer to this in their explanations. However, they mentioned how the IB requirements guide them into the integration of creative thinking skills.

From the PYP and MYP Students' Perspective: Student Questionnaires

The data analysis showed that the PYP students perceived themselves as more creative compared to the MYP students. This finding resonates with the findings of the curricula analysis regarding the curricular differences between the PYP and the MYP. As mentioned in the IB curricula analysis section above, the major reason for this could be the tangible opportunities provided for creativity in PYP classes. To illustrate, exploring the world through play and discovery is in the center of the program enabling learners to learn by doing (IBO, 2018a), which encourages tangible acts that can make creativity more applicable to PYP students in class settings. Another reason could be the active role given to a PYP student in the construction of knowledge. As learners, they are regarded as active subjects in “knowledge creation” (IBO, 2018a, p.7), which is one of the major differences of transdisciplinary curriculum from MYP interdisciplinary curriculum. Furthermore, transdisciplinary themes might account for the difference in PYP and MYP responses. These six transdisciplinary themes in PYP help learners connect with the learning community through working collaboratively in order to comprehend who they are, people around them and the world in general. As stated in Learning and Teaching (IBO, 2018a) “transdisciplinary inquiries are creative...focus on themes...”

(p. 12). Student inquiries are similar to situations students might encounter in their daily lives, so they are expected to be action-oriented, which makes creativity and creative thinking skills more tangible in a PYP class. Co-construction “of unit of inquiry with students” (IBO, 2018a, p. 19) is also another factor that accounts for the questionnaire results. Furthermore, it is explicitly stated that “Teachers acknowledge that there could be multiple realities/answers/solutions and encourage students to identify, inquire into and share them.” (IBO, 2018a, p. 20).

Another finding concerning student questionnaire results is that the PYP students’ perception of creative thinking skills was much stronger than the MYP students’. Considering the developmental differences and the expected awareness of ATL skills in MYP, this result was rather contradictory. It was not parallel with what some MYP teachers mentioned in the interviews because according to the interview analysis, MYP students were thought to be more familiar with creative thinking skills than PYP students.

Overall, the results of the first two categories resonate with the interview and the class observation data and also are aligned with PYP curriculum design, where a wide range of forms of learning are fostered.

Implications for Practice

Bringing it all together: Final Version of the Framework

Based on the insights of the study and drawing upon Lin’s creative pedagogy framework (2011), the Creative Pedagogy Framework for Continuum IB Schools was developed, Figure 3. The IB PYP, MYP and DP curriculum was also considered while finalizing the latest version of the framework. This framework proposes an inclusive approach to the infusion of creativity and creative thinking skills into IB English classes and could be used as a guiding document.

In the center of the framework there are four components, namely creative learning, teaching creatively, teaching for creativity, and creative thinking skills. The IB curricula constitutes the outer layer referring to specific attributes of the curricula. These attributes – the IB curriculum design, collaborative planning, learner profile, and ATL skills – foster creativity and creative thinking skills. The descriptors for each component of the framework were specified to display the interplay among the components of the framework unambiguously. To illustrate, asking questions that help students form a personal understanding of the topic presented and taking creative risks (Beghetto, 2021) have been included under the sub-category: inquiry. These descriptors also aim at enhancing the application of the framework, given that IB teachers are already acquainted with the terminology used in each descriptor.

Practical Recommendations for the IB

Based on the findings of this study, the following practical recommendations are offered for IB schools in order to strengthen the integration and support of creativity and creative thinking skills across the continuum through introducing creative pedagogy.

Suggested Creative Pedagogy Framework for IB Teachers' Professional Development

The framework offers two key resolutions regarding the role of creativity and creative thinking skills in continuum IB schools, where it could be conveniently employed. Firstly, it aims at demystifying the concepts creativity and creative thinking skills and also explicitly focusing on the difference between teaching creatively, teaching for creativity and creative learning. Without having a shared understanding of creativity and creative thinking skills, it would not be realistic to mention the infusion of both. Secondly, the framework provides clear explanations

for each component, which make more it user-friendly as a reference document. As mentioned by Larraz-Rabanos (2021) incorporating the explicit adoption of creative thinking skills into curriculum design and implementation can help students to acquire these skills and eventually achieve creativity. The IB curricula already provide support for each IB program with the help of ATL skills and Learner profile attributes, but this framework can help to make it more concrete, systematic and compact because “Developing, evaluating, and implementing new content into the educational curriculum, such as creative thinking skills, take significant time” (Ritter & Mostert, 2017, p. 244). Owing to ATL skills and other components of the IB curricula, creativity and creative thinking skills have been an indispensable part of the IB continuum, but the results of the study pointed to a need for a more comprehensive guidance. For that reason, the suggested framework, designed based on the thorough interpretation of qualitative and quantitative data analysis, is aiming at bridging the gap through saving time and providing concise guidance for the stakeholders. Ritter and Mostert (2017) suggested having effective creative training programs focusing on cognitive skills that enhance creativity. However, considering the sustainability and consistency of the teacher professional development in the IB programs to ensure the systematic practice of creativity and creative thinking skills in the continuum coherently and consistently (Stobie, 2007), it might be more advantageous and efficient to have this framework for the teachers as it could be specifically customized for their IB program. Furthermore, the findings of the study indicated that the teachers’ need to learn more about creative pedagogy along with creative thinking skills, so this suggested framework can form a great basis for a series of professional development for continuum IB teachers.

Such a professional training program can ensure “a smooth curriculum implementation and transition between IB programs” (Walker & Lee, 2018, p.470) and also can equip the teachers with the necessary pedagogical knowledge and skills.

For the IB teachers’ professional development regarding creative pedagogy and multi-dimensional (Larraz-Rábanos, 2021) nature of creativity and creative thinking skills, online training modules, where the participants can be provided with videos and follow-up webinars regarding the concepts teaching for creativity, teaching creatively, creative learning (NACCCE, 1999), and creative thinking skills could be the starting point. This could enable IB teachers to form a theoretical base, which is undeniably necessary to nurture both creativity and creative thinking skills in and outside the classroom in continuum IB schools. Hence, the proposed framework given in Figure 3, could be used to design professional development modules.

Setting specific goals for creativity and creative thinking skills for each IB program

The continuity the IB continuum offers is a contributing factor to infuse creativity and creative thinking skills into the IB curricula. In particular ATL skills provide a substantial amount of guidance both for teachers and students. However, by identifying program specific goals and measurable objectives for creativity and creative thinking skills for each IB program, it can become much more manageable for IB teachers regardless of the IB program they teach for. This can also work for non-continuum IB schools. Such schools can identify the relevant goals that are not covered in their program/programs and take actions accordingly. Overall, identification and categorization of creativity and creative thinking skills goals can fasten the development of metacognitive awareness of the creative processes.

Using authentic and process-oriented assessment

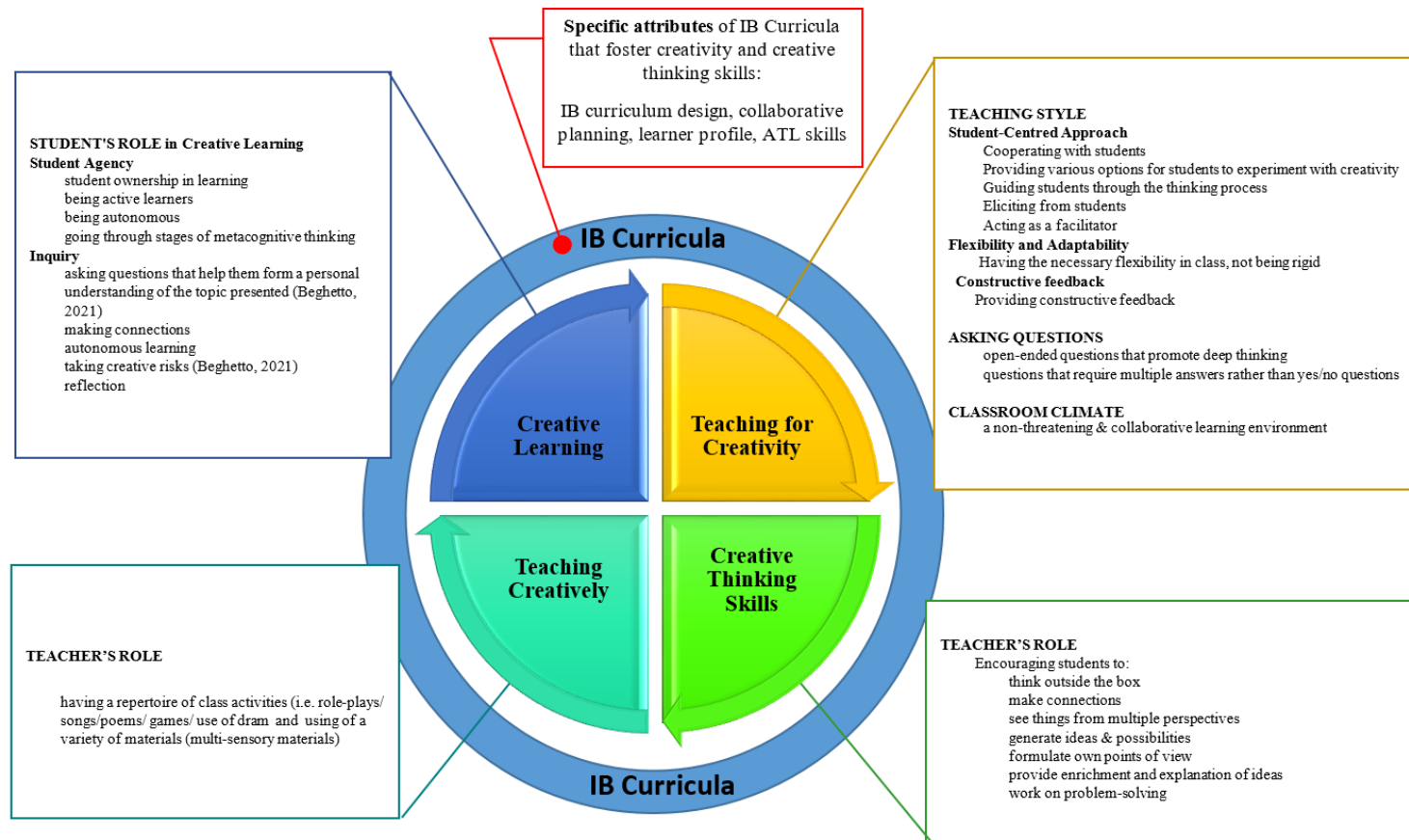
In order to support assessment strategies that prioritize the process of creativity, not the product only, the rubric and the teacher feedback could prioritize dispositions of creativity as process and creative thinking skills. Therefore, the suggested professional development program could also focus on designing such formative assessment tasks for further guidance.

Practical Recommendations for Non-IB Schools

Although this study focused on the IB, some findings of the study could benefit non-IB schools. Firstly, at the policy level, educational frameworks that aim to foster creativity and creative thinking skills could consider adopting the relevant aspects of the IB model, particularly the integration of learner agency, inquiry and ATL skills. Secondly, policymakers could recognize the active role of the teacher in fostering creativity and creative thinking skills to ensure adequate support for students in the learning process. To this end, they could consider putting the suggested professional development above into practice.

Figure 3

Final Version of the Proposed Framework



Implications for Further Research

Based on the available literature, this study appears to be the first study investigating into the role of creativity and creative thinking skills in English courses in continuum IB schools. As one of the first studies, this research has brought with it both challenges and insights. Its limitations has been shared in the first chapter. The implications for further research has been outlined in this section.

Firstly, although all the continuum IB schools at the time of the study were informed and invited to participate in this study, only two of those schools accepted the invitation. Therefore, the study had to be carried out with a relatively small population. A similar study could be carried out with a bigger population in Türkiye. Furthermore, comparative studies analyzing both Turkish context and other contexts in continuum IB schools could also be conducted.

Secondly, the participant (i.e. the teachers) demographic data concerning their level of experience, teaching qualifications and whether these contribute to their integration of creativity and creative thinking skills could be linked to the findings. Any future studies investigating how IB English teachers infuse creativity and creative thinking skills into their classes could consider this. Likewise, to determine the implications of a professional teacher development as suggested in the practical implications section, future studies could look into the professional teacher development aspect of creativity and creative thinking skills. Besides these, a comparative study examining the role of critical and creative thinking skills in IB curricular documents could be carried out in order to provide further guidance to continuum teachers.

Being the first study examining the role of creativity and creative thinking skills in continuum IB schools in Türkiye, this case study had a limited scope.

However, future studies could explore the progression of creativity and creative thinking skills across each grade within a specific IB program and across all continuum IB programs.

Fourthly, a comparative study could focus on continuum IB schools and non-continuum contexts to find out whether there is a different approach adopted in continuum schools in order to practice creativity and creative thinking skills based on the progression of the programs. Furthermore, future studies could investigate to what extent teachers in each continuum school are aware of the ATL skills of other IB programs and their approach regarding creativity and creative thinking skills. Similarly, comparative studies examining teachers' practice of creative thinking skills and critical thinking skills in continuum IB schools could be carried out.

Another implication for further research could be including DP students' perceptions to better identify the patterns of student perception of creativity and creative thinking skills across continuum programs. As mentioned in the limitations in chapter 1, due to insufficient number of DP student responses, it was not possible to find out about the DP students' perception of creativity and creative thinking skills. Additionally, for the future studies it might be worthwhile to carry out a study examining continuum program students' perceptions through a questionnaire including program specific questions, which could help researchers collect data that could demonstrate the differences in student perceptions among IB programs in a more comprehensive way. Having follow-up student interviews might also help to identify students' understanding of creativity and creative thinking skills and whether they can differentiate between the two.

Finally, future research could explore how creativity is perceived and practiced by teachers and students within IB classrooms across different cultural and

linguistic contexts. Longitudinal studies could examine how students' creative capacities develop over time through their IB journey.

Conclusion

This study tried to shed light on the role of creativity and creative thinking skills in English classes in two continuum IB schools in Türkiye. Evidently the IB curricula nurture the development of both creativity and creative thinking skills by enabling the teachers to practise to a certain degree, which in turn equip the students with the necessary skills to possess the relevant IB Learner Profile attributes.

However, as shared in the previous sections, the misconception about creativity and creative thinking skills might cause teachers to refrain from the consistent infusion of both creativity and creative thinking skills. Secondly, having both creative and critical thinking skills under the umbrella of thinking skills in ATL documents makes it ambiguous for teachers considering course design and delivery. These results suggested that the revised creative pedagogy framework, named as Creative Pedagogy Framework for Continuum IB Schools, might help IB teachers to become more familiar with the components of creativity and creative thinking skills so that they can ensure the systematic integration of both into their courses.

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Appendix A

IB Learner Profile



IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life. KNOWLEDGEABLE We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance. THINKERS We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions. COMMUNICATORS We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups. PRINCIPLED We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.	OPEN-MINDED We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience. CARING We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us. RISK-TAKERS We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change. BALANCED We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live. REFLECTIVE We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.
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The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.



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Appendix B

Semi Structured Interview Questions of Pilot Study

PILOT STUDY SEMI STRUCTURED INTERVIEW QUESTIONS

Semi-structured interview Questions for Grades 4th, 10th and 12th English teachers on their perspectives of creative thinking skills in their current IB program.

1. Could you briefly tell me about your educational background and work experience?

- Have you had any specific training on creativity?

2. How would you define creative thinking skills?

Definition to be shared with the teachers after the first two questions: *generating ideas & possibilities; building and combining ideas; formulating own points of view; taking multiple perspectives & seeing other points of view* (Scwartz & McGuinness, 2014).

3. What do you think of the role of creativity and creative thinking skills in foreign language learning?

4. Do you see any differences in language learning between creative students and the ones who are not that creative regarding their progress? If yes, could you mention what kind of differences these are?

5. When you consider your teaching style, to what extent do you think you are able to promote creative thinking skills in your classes?

6. What do you think of the role of creative thinking skills in IB curriculum?

7. While designing formative assessment tasks, to what extent do you integrate creative thinking skills and creativity?

8. While assessing your students' written and spoken formative assessment tasks to what extent do you integrate creative thinking skills and creativity into your criteria for such tasks?

9. Do you think that a teacher's creativity leads to students' creativity? If yes, could you elaborate on this by providing some specific examples?
10. Under unexpected or unusual circumstances what kind of adaptations have you needed to make regarding course design and delivery especially in terms of creative thinking skills?

Prepared by the researcher



Appendix C

Class Observation Checklist Pilot & Main

CLASS OBSERVATION CHECKLIST

Creative Thinking Skills		
<i>The teacher helps students to:</i>		
	✓	RESEARCHER'S NOTES
generate ideas & possibilities		
formulating own points of view		
enrichment and explanation of ideas		
taking multiple perspectives		
Teaching for Creativity		
<i>The teacher encourages students to believe in their creative potential by:</i>		
	✓	RESEARCHER'S NOTES
nourishing motivation		
nourishing independence of judgment		
nourishing willingness to take risks		
nourishing being enterprising		
nourishing being persistent and resilient		

<i>The teacher fosters creativity by:</i>		
	✓	RESEARCHER'S NOTES
stimulating curiosity		
enhancing awareness of creativity		
recognizing and becoming more knowledgeable about the creative process		
creating opportunities for experimenting with creativity		
creating a sense of responsibility for learning		
Creative Learning		
<i>The students:</i>		
	✓	RESEARCHER'S NOTES
act on teacher's feedback		
go through stages of questioning, inquiring, searching, manipulating, experimenting and aimless play		
go through stages of metacognitive thinking		

Compiled by the researcher based on the works of Kaufman and Beghetto (2010), Lin (2009), Lucas (2004), NACCCE (1999), McGuinness et al., (2006), Swartz and McGuinness (2014), Torrance (1963)

Appendix D

Teacher Questionnaire of Pilot Study

1. TEACHER QUESTIONNAIRE (PILOT STUDY)

Creative Thinking Skills Questionnaire

This questionnaire has been designed to learn about your perceptions of ‘Creative Thinking Skills’ in English classes in continuum IB Schools in Turkey. It is a vital part of a PhD Research Project which is being carried out by Seçil Chouseinoglou, a PhD candidate in the department of Curriculum and Instruction at Bilkent University. This questionnaire contains three parts and forty-two questions in total. It should take approximately 40 minutes. Sixteen questions of the questionnaire were adapted from three different researchers’ questionnaires and a grant of permission was obtained from each researcher. The other twenty-six questions were prepared by the researcher.

The information you provide will be used for research purposes only and it will be kept strictly confidential. No personal information will be included in any publications or presentations.

Please respond to each statement that represents your views in the best way.

Thank you for your cooperation. Should you have any questions or comments, please feel to contact me.

I. Personal Information

Tick the appropriate boxes and give a short answer if it is an open-ended question.

1. Gender: Male () Female ()
2. What is your nationality?

3. How long have you been teaching English in IB context?
 - 1-5 years ()
 - 6-10 years ()
 - 11- 15 years ()
 - 16 and more ()
4. Before you started working in your current institution, did you work in another IB school in Turkey or abroad?
Yes () No ()
5. Which program are you currently teaching at?

- PYP ()
 - MYP ()
 - DP ()
6. How long have you been teaching in this program?
- 1-5 years ()
 - 6-10 years ()
 - 11- 15 years ()
 - 16 and more ()
7. What is the highest level of education you received?
- Bachelor's Degree ()
 - Master's Degree ()
 - PhD ()
8. What teaching qualifications do you hold?
-
9. Have you ever attended workshops, seminars, certificate programs focusing on 'creativity'?
- Yes () No ()
- If you have chosen YES, could you please specify the name of the event(s) you attended?
-
10. Would you describe yourself as a creative student considering your primary/secondary/ high school education?
- Yes () No ()

II. Creativity and Creative Thinking Skills

The following questions are about 'Creativity and Creative Thinking Skills' in your English classes. If you strongly agree with the statement circle 5, if you strongly disagree circle 1.

For the questions given below choose the answer that best describes your answer.

1 2 3 4 5

strongly disagree	disagree	neutral	agree	strongly agree
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Classroom Climate					
11. I usually start my class telling an event, joke, story, and scenario to make my instruction effective.	1	2	3	4	5
12. My students can use any form (such as verbal, visual, dance, drama etc.) to demonstrate their knowledge.	1	2	3	4	5
13. Even when I do not tell my students to come up with different solutions/ suggestions to the cases we have, they usually make an effort to come up with solutions.	1	2	3	4	5
14. I always reward my students if they propose original, extraordinary solutions and ideas in the classroom.	1	2	3	4	5
15. My students always feel comfortable and welcomed even when they make mistakes.	1	2	3	4	5
16. My students can always articulate their ideas without fear of embarrassment.	1	2	3	4	5
Teaching Style					
17. I ask questions that require creative answers.	1	2	3	4	5
18. I encourage my students to ask questions.	1	2	3	4	5

19. I ask my students questions with more than one answer (such as open-ended questions).	1	2	3	4	5
20. I enable my students to use their creativity to develop deep understandings within their learning.	1	2	3	4	5
21. I direct my students to outside classroom activities (such as searching on the internet, resorting to reference books or knowledgeable adults around them).	1	2	3	4	5
22. I expect my students to use their knowledge and skills creatively to make reasoned conclusions or answers.	1	2	3	4	5
23. I have my students experiment creatively.	1	2	3	4	5
24. I encourage my students to think creatively.	1	2	3	4	5
25. I encourage my students to take creative risks and be innovative.	1	2	3	4	5
26. I frequently arrange problem solving instruction in the form of game activity in the classroom.	1	2	3	4	5
27. I frequently design activities that enable students to think in a variety of ways.	1	2	3	4	5
28. I enable my students to solve problems through collaborating with each other.	1	2	3	4	5
29. My students know that I expect them to be creative.	1	2	3	4	5
30. I encourage my students to consider existing ideas from new perspectives.	1	2	3	4	5

31. I believe creativity helps my students cope with the complexity of language learning.	1	2	3	4	5
32. I believe creativity helps my students develop strategies to deal with the unexpected in language learning.	1	2	3	4	5

III. Creativity and Creative Thinking Skills in Curriculum

The following questions are about ‘Creativity and Creative Thinking Skills’ in IB Curriculum.

33. Do you use creative teaching methods?

Yes () No ()

34. Do you think that you can integrate creativity into your own teaching methods?

Yes () No ()

35. To what extent are you familiar with creative thinking skills in IB Curriculum?

1 2 3 4 5

Not at all

To a great extent

36. To what extent do you refer to creative thinking skills for your course design?

1 2 3 4 5

Not at all

To a great extent

37. What kind of actions do you take to integrate creative thinking skills into your classes? Please specify.

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--

38. Do you teach creative thinking skills explicitly?

Yes () No ()

39. To what extent do you believe creative thinking skills contribute to students' language learning?

1 2 3 4 5

Not at all

To a great extent

40. To what extent do you think students are aware of the role of creative thinking skills in curriculum?

1 2 3 4 5

Not at all

To a great extent

41. To what extent do you think students are able to use creative thinking skills in English classes?

1 2 3 4 5

Not at all

To a great extent

42. How much time is needed to observe the contribution of creative thinking skills to students' English language development?

- Less than a year ()
- 1 year ()
- 2 years ()
- More than 2 years ()

Appendix E

Student Questionnaires of Pilot Study

STUDENT QUESTIONNAIRE (PILOT STUDY)

Dear Students,

This questionnaire was prepared to collect data on ‘creativity’ and ‘creative thinking skills’ in English courses in IB Programs.

There are two sections consisting of thirty items in total. Ten of the questionnaire items were developed by different researchers and a grant of permission was obtained from each researcher. The rest of the questions were prepared by the researcher.

Please read the instructions very carefully and answer all the questions.

Your responses will NOT be shared with your school, parents or any other institution. They are completely anonymous.

The time available for you to complete this survey is 30 minutes. Ten of the questionnaire items were adapted from others researchers’ items and the necessary grant of permission was obtained for those items (Appendix D). The other twenty questions were prepared by the researcher.

If you have any questions about the questionnaire, please email me:

Thank you very much for your cooperation.

I. Tick the appropriate boxes below to answer the questions in Personal Information Section.

Personal Information

1. Gender: Male () Female ()
2. How old are you?
 - 9-12 ()
 - 13- 15 ()
 - 16- 18 ()
3. How many foreign languages do you speak? 1() 2() 3 or more ()

4. How old were you when you first started learning a foreign language?
 - Less than 4 ()
 - 4 ()
 - 5 ()
 - 6 ()
 - 7 ()
 - Later than 7 ()
5. How long have been studying in this school?
 - Since I started studying in Primary School ()
 - Since I started studying in Middle School ()
 - Since I started studying in High School ()
6. Which program are you currently enrolled in?
 - PYP ()
 - MYP ()
 - DP ()
7. What is your mother's highest qualification?
 - PhD ()
 - Master's Degree ()
 - Bachelor's Degree ()
 - High School Diploma or equivalent degree ()
 - Less than high school diploma ()
8. What is your father's highest qualification?
 - PhD ()
 - Master's Degree ()
 - Bachelor's Degree ()
 - High School Diploma or equivalent degree ()
 - Less than high school diploma ()

II. The following questions ask about your attitude towards 'Creative Thinking Skills and Creativity in English Classes'. Remember there are no right or wrong answers. If you strongly agree with the statement circle 5, if you strongly disagree circle 1.

For the questions given below choose the answer that best describes your answer.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

Creative Thinking Skills: generating ideas & possibilities, taking multiple perspectives, seeing other points of view.

9. I can use any form (such as verbal, visual, dance, drama etc.) to demonstrate my knowledge.	1	2	3	4	5
10. Even when my teacher does not tell me to come up with different solutions/ suggestions to the problems we have, I usually make an effort to come up with solutions.	1	2	3	4	5
11. I always feel comfortable and welcomed even when I make mistakes in class.	1	2	3	4	5
12. I can always articulate my ideas without fear of embarrassment.	1	2	3	4	5
13. My teacher asks questions that require creative answers.	1	2	3	4	5
14. My teacher encourages me to ask questions.	1	2	3	4	5

15. My teacher asks me questions with more than one answer.	1	2	3	4	5
16. My teacher expects me to solve problems through collaborating with my peers.	1	2	3	4	5
17. My teacher expects me to be creative.	1	2	3	4	5
18. My teachers' feedback helps me to be creative.	1	2	3	4	5
19. I can be creative in English lessons regardless of my teacher's teaching style/ creativity.	1	2	3	4	5
20. I am creative in English lessons because my teacher encourages me to be creative.	1	2	3	4	5
21. When my teacher is creative, this inspires me to learn English better.	1	2	3	4	5
22. I need to use my creativity in arts courses only.	1	2	3	4	5

23. Creative thinking skills help me to learn English better.	1	2	3	4	5
24. Creative thinking skills help me to write better.	1	2	3	4	5
25. Creative thinking skills help me to speak better.	1	2	3	4	5
26. Creative thinking skills strengthen my English skills.	1	2	3	4	5
27. Creative thinking skills promote my abilities to create in English.	1	2	3	4	5
28. Creative thinking skills raise my motivation for studying English.	1	2	3	4	5
29. Creative thinking skills enhance my interest in learning English.	1	2	3	4	5
30. Creative thinking skills enhance my participation in class.	1	2	3	4	5

PYP STUDENTS QUESTIONNAIRE (PILOT STUDY)

Dear Students,

This questionnaire was prepared to collect data on ‘creativity’ and ‘creative thinking skills’ in English courses in IB Programs.



There are two sections consisting of thirty items in total.

Please read the instructions very carefully and answer all the questions.

Your responses will NOT be shared with your school, parents or any other institution. They are completely anonymous.

The time available for you to complete this survey is 30 minutes. Ten of the questionnaire items were adapted from others researchers' items and the necessary grant of permission was obtained for those items. The other twenty questions were prepared by the researcher.

If you have any questions about the questionnaire, please email me:

Thank you very much for your cooperation.

Creative Thinking Skills: generating ideas & possibilities, taking multiple perspectives, seeing other points of view.

I. Tick the appropriate boxes below to answer the questions in Personal Information Section.
Personal Information

1. Gender: Male () Female ()
2. How old are you?
 - 9-12 ()
 - 13- 15 ()
 - 16- 18 ()
3. How many foreign languages do you speak? 1() 2() 3 or more ()
4. How old were you when you first started learning a foreign language?
 - Less than 4 ()
 - 4 ()
 - 5 ()
 - 6 ()
 - 7 ()
 - Later than 7 ()
5. How long have been studying in this school?
 - Since I started studying in Primary School ()
 - Since I started studying in Middle School ()
 - Since I started studying in High School ()
6. Which program are you currently enrolled in?
 - PYP ()
 - MYP ()
 - DP ()
7. What is your mother's highest qualification?
 - PhD ()
 - Master's Degree ()
 - Bachelor's Degree ()
 - High School Diploma or equivalent degree ()
 - Less than high school diploma ()
8. What is your father's highest qualification?
 - PhD ()
 - Master's Degree ()
 - Bachelor's Degree ()
 - High School Diploma or equivalent degree ()
 - Less than high school diploma ()

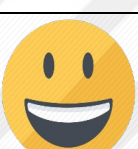
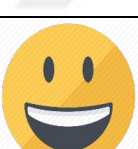
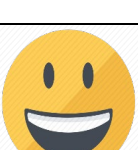
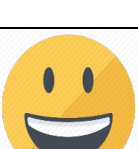
II. The following questions ask about your attitude towards 'Creative Thinking Skills and Creativity in English Classes'. Remember there are no right or wrong answers. Show how strongly you agree with the following statements by circling the appropriate face.

For the questions given below choose the answer that best describes your answer.

		
Agree	Neutral	Disagree

9. I can use any form (such as verbal, visual, dance, drama etc.) to demonstrate my knowledge.			
10. Even when my teacher does not tell me to come up with different solutions/ suggestions to the problems we have, I usually make an effort to come up with solutions.			
11. I always feel comfortable and welcomed even when I make mistakes in class.			
12. I can always articulate my ideas without fear of embarrassment.			
13. My teacher asks questions that require creative answers.			

14. My teacher encourages me to ask questions.			
15. My teacher asks me questions with more than one answer.			
16. My teacher expects me to solve problems through collaborating with my peers.			
17. My teacher expects me to be creative.			
18. My teachers' feedback helps me to be creative.			
19. I can be creative in English lessons regardless of my teacher's teaching style/ creativity.			
20. I am creative in English lessons because my teacher encourages me to be creative.			
21. When my teacher is creative, this inspires me to learn English better.			
22. I need to use my creativity in arts courses only.			

23. Creative thinking skills help me to learn English better.			
24. Creative thinking skills help me to write better.			
25. Creative thinking skills help me to speak better.			
26. Creative thinking skills strengthen my English skills.			
27. Creative thinking skills promote my abilities to create in English.			
28. Creative thinking skills raise my motivation for studying English.			
29. Creative thinking skills enhance my interest in learning English.			
30. Creative thinking skills enhance my participation in class.			

Appendix F

Written Outcome Criteria Pilot & Main

This analytic rubric for creative thinking skills is designed by the researcher based on the literature.

The criteria are given on the vertical axis, and the standards are given in terms of numbers from 1 to 4,

1 symbolizing the lowest and 4 symbolizing the highest performance.

Generating Ideas: The assessor is expected to focus on the number of meaningful ideas produced by the student to respond to the prompt.

Formulating Own Points of View: The assessor is expected to focus on the voice of the student, which indicates the points the student has formulated to support his/her opinion.

Taking Multiple Perspectives: The assessor is expected to focus on the evidence which indicates that the student can see the situation from others' perspectives by referring to what other people might think about the point given.

Enrichment and Explanation of Ideas: The assessor is expected to focus on the elaboration of ideas and to what extent the student can provide the necessary expansion and details.

	1	2	3	4
GENERATING IDEAS	The student generates a very limited number of ideas.	The student generates a limited number of ideas.	The student generates an adequate number of ideas.	The student generates a good number of ideas.
FORMULATING OWN POINTS OF VIEW	The student provides almost no evidence of his/her own points of view.	The student provides little evidence of his/her own points of view.	The student provides adequate evidence of his/her own points of view.	The student provides strong evidence of his/her own points of view.
TAKING MULTIPLE PERSPECTIVES	The student provides almost no evidence of	The student provides little evidence of	The student provides adequate evidence of taking	The student provides strong evidence of

	taking multiple perspectives.	taking multiple perspectives.	multiple perspectives.	taking multiple perspectives.
ENRICHMENT & EXPLANATION OF IDEAS	The student provides very limited enrichment and explanation of ideas. There is almost no attempt to provide details.	The student provides limited enrichment and explanation of ideas. There is an insufficient number of details.	The student provides adequate enrichment and explanation of ideas. There are some details.	The student provides good enrichment and explanation of ideas. There is a good number of details.

Adapted by the researcher from

McGuinness, C., Sheehy, N., Curry, C., Eakin, A., Evans, C., & Forbes, P. (2006). Building thinking skills in thinking classrooms. ACTS (Activating Children's Thinking Skills) in Northern Ireland. London, UK: ESRC's Teaching and Learning Research Programme, Research Briefing No 18.

Appendix G

Semi Structured Interview Questions

SEMI STRUCTURED INTERVIEW QUESTIONS

Semi-structured interview questions for 4th, 10th and 12th grade English teachers on their perspectives of creativity and creative thinking skills in their current IB program.

1. How would you define creativity and creative thinking skills in foreign language education?

Definition shown to teachers after they shared their definitions:

“generating ideas & possibilities; building and combining ideas; formulating own points of view; taking multiple perspectives & seeing other points of view”
(Scwartz & McGuinness, 2014).

2. What do you think of the role of creativity and creative thinking skills in foreign language learning?
3. What do you think of the role of creativity and creative thinking skills in IB curricula?
4. When you consider your teaching style, to what extent do you think you are able to promote creative thinking skills in your classes?
5. While designing formative assessment tasks, to what extent do you integrate creative thinking skills and creativity into such tasks?
6. While assessing your students’ written and spoken formative assessment tasks to what extent do you integrate creative thinking skills and creativity into your criteria for such tasks?

Prepared by the researcher

Appendix H

Written Curriculum Analysis Tool

Person approach focus on characteristics of creative individuals	curiosity/ risk taking/ tolerance of ambiguity/ autonomy/ collaboration/ thinking outside the box/ openness to experience and ideas/ adapting language to different situations/ thinking creatively/ Tenacity and lack of inhibition in expressing of opinion/ Self-confidence/ imagination/
Product approach focus on characteristics of creative products	novelty/ usefulness/ problem solving originality
Creative thinking skills	generating ideas/ taking multiple perspectives/ seeing other points of view & enrichment and explanation of ideas/ formulating own points of view brainstorming, formulation of questions & Building & combining ideas

Jones, R. H., & Richards, J. C. (Eds.). (2016). *Creativity in language teaching: Perspectives from research and practice*. Routledge.

Larraz-Rábanos, N. (2021). Development of creative thinking skills in the teaching-learning process. In *Teacher education-New perspectives*, 307-322.

(Swartz and McGuinness, 2014)

[Tin, TB \(2016\) in](#) Jones, R. H. (Ed.). (2015). *The Routledge handbook of language and creativity*. Routledge

From chapter 6 (Eanna O'Boyle) in Hayden, M., & Thompson, J. (Eds.). (2011). *Taking the MYP forward*. John Catt Educational Ltd.



Appendix I

List of IB Curriculum Documents

FREQUENCY ANALYSIS

PYP CURRICULAR DOCUMENTS

- The Learner
- Learning & Teaching
- The Learning Community
- Language Scope and Sequence
- Translanguaging
- Overview
- Multiliteracies
- Student Language Portraits

MYP CURRICULAR DOCUMENTS

- From Principles into Practice
- Language Acquisition Guide
- Language and Literature Guide

DP CURRICULAR DOCUMENTS

- From Principles into Practice
- Language A: Language and Literature Guide
- Language B Guide
- Language B Teacher Support Material

COMMON CURRICULAR DOCUMENTS

- What is an IB education?
- Program Standards and Practices

FOLLOW-UP ANALYSIS

- PYP: The Learner, Learning and Teaching
- MYP: From Principle into Practice
- DP: From Principles into Practice

Appendix J

Teacher Questionnaire of Main Study

Teacher Questionnaire

Creative Thinking Skills Questionnaire

This questionnaire has been designed to learn about your perceptions of ‘Creative Thinking Skills’ and ‘Creativity’ in English classes in continuum IB Schools in Türkiye.

The questionnaire is comprised of three parts and forty-two questions in total. It should take approximately twenty-five minutes. Sixteen questions of the questionnaire have been adapted from three different researchers’ questionnaires and the necessary permission has been obtained from each researcher. The other twenty-six questions have been prepared by the researcher.

The information you provide will be used for research purposes only and it will be kept strictly confidential. No personal information will be included in any publication or presentation.

Please respond to each statement that represents your views in the best way.

Thank you for your cooperation. Should you have any questions or comments, please feel free to contact:

I. Personal Information			
Tick the appropriate boxes and give a short answer if it is an open-ended question.			
Q1	What is your gender?	MC	Male / Female
Q2	What is your nationality?	Open ended	
Q3	How long have you been teaching English in an IB context?	MC	1-5 years / 6-10 years / 11-15 years / 16 years and more
Q4	Before you started working in your current institution, did you work in another IB school in Turkey or abroad?	MC	Yes / No
Q5	In which program are you currently teaching?	MC	PYP / MYP / DP
Q6	How long have you been teaching in your current IB program?	MC	1-5 years / 6-10 years / 11-15 years / 16 years and more
Q7	What is the highest level of education you received?	MC	Bachelor's Degree / Master's Degree / PhD
Q8	What teaching qualifications do you hold?	Open ended	
Q9	If you have you attended any workshops, seminars, or certificate programs focusing on 'creativity' 'creative thinking skills', could you please share their names?	Open ended	

Q10	Considering your primary/secondary/ high school education would you describe yourself as a creative student ?	MC	Yes / No
II. Creativity and Creative Thinking Skills The following questions are about ‘Creativity and Creative Thinking Skills’ in your English classes. Please click on the answer that applies to you the most.			
Classroom Climate			
Q11	I usually start my class by sharing an event, joke, story, or scenario to make my instruction effective.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q12	My students can use any form (such as verbal, visual, dance, drama etc.) to demonstrate their knowledge.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q13	Even if I do not tell my students to come up with different solutions/ suggestions to the cases we have, they usually make an effort to come up with solutions.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q14	I always reward my students if they propose original, extraordinary solutions and ideas in the classroom.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q15	My students always feel comfortable and welcomed even when they make mistakes.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q16	My students can always articulate their ideas without fear of embarrassment.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Teaching Style			
Q17	I ask questions that require creative answers.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q18	I encourage my students to ask questions.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q19	I ask my students questions with more than one answer (such as open-ended questions).	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q20	I enable my students to use their creativity to develop deep understandings within their learning.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q21	I direct my students to outside classroom activities (such as searching on the internet, resorting to reference books or knowledgeable adults around them).	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q22	I expect my students to use their knowledge and skills creatively to make reasoned conclusions or answers.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q23	I have my students experiment creatively.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q24	I encourage my students to think creatively.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q25	I encourage my students to take creative risks and be innovative.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q26	I frequently arrange problem solving instruction in the form of game activity in the classroom.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q27	I frequently design activities that enable students to think in a variety of ways.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q28	I enable my students to solve problems through collaboration with each other.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q29	My students know that I expect them to be creative.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q30	I encourage my students to consider existing ideas from new perspectives.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q31	I believe creativity helps my students cope with the complexity of language learning.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q32	I believe creativity helps my students develop strategies to deal with the unexpected in language learning.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

III. Creativity and Creative Thinking Skills in Curriculum

The following questions are about ‘Creativity and Creative Thinking Skills’ in IB Curriculum.

Q33	Do you use creative teaching methods?	MC	Yes / No
Q34	Do you think that you can integrate creativity into your own teaching methods?	MC	Yes / No
Q35	To what extent are you familiar with creative thinking skills in IB Curriculum?	MC	Not at all (1)--- To a great extent (5)
Q36	To what extent do you refer to creative thinking skills for your course design?	MC	Not at all (1)--- To a great extent (5)
Q37	What kind of actions do you take to integrate creative thinking skills into your classes? Please specify.	Open ended	
Q38	To what extent is it possible for you to integrate creative thinking skills into your classes?	MC	Not at all (1)--- To a great extent (5)
Q39	To what extent do you believe creative thinking skills contribute to students’ language learning?	MC	Not at all (1)--- To a great extent (5)
Q40	To what extent do you think students are aware of the role of creative thinking skills in curriculum?	MC	Not at all (1)--- To a great extent (5)

Q41	To what extent do you think students are able to use creative thinking skills in English classes?	MC	Not at all (1)--- To a great extent (5)
Q42	How much time is needed to observe the contribution of creative thinking skills to students' English language development?	MC	Less than a year / 1 year / 2 years / more than 2 years



Appendix K

Student Questionnaires of Main Study

PYP Student Questionnaire			
Dear Students, This questionnaire was prepared to collect data on ‘creativity’ and ‘creative thinking skills’ in English courses in IB Programs. There are two sections consisting of thirty items in total. Please read the instructions very carefully and answer all the questions. You need to give answers based on your current English classes and English teacher. Your responses will NOT be shared with your school, parents or any other institution. They are completely anonymous. The time available for you to complete this survey is 25 minutes. If you have any questions about the questionnaire, please email me: Thank you very much for your cooperation.			
I. Please choose the most appropriate answer in the Personal Information section.			
Q1	What is your gender?	MC	Female / Male
Q2	How old are you?	MC	9-12 / 13-15
Q3	How many foreign languages do you speak?	MC	1 / 2 / 3 or more
Q4	How old were you when you first started learning a foreign language?	MC	Younger than 4 years old / 4 / 5 / 6 / 7 / older than 7 years old

Q5	How long have you been studying in this school	MC	Since I started studying in Pre-K / Since I started in Primary School / I first started studying at a different school. Then, started studying here
Q6	If you started studying here later, was your former school an IB school?	MC	Yes / No
Q7	What is your mother's highest qualification?	MC	PhD / Master's Degree / Bachelor's Degree / High School Diploma or equivalent
Q8	What is your father's highest qualification?	MC	PhD / Master's Degree / Bachelor's Degree / High School Diploma or equivalent

II. The following questions ask about your attitude towards 'Creative Thinking Skills and Creativity in English Classes'. Remember there are no right or wrong answers. Choose the emoji that reflects your answer the best.

Creativity: It is the ability to produce many unique ideas, and make connections among these ideas to express yourself better. Creativity helps you to come up with more than one answer to a question.

Creative Thinking Skills: They consist of generating ideas & possibilities, taking multiple perspectives, and seeing other points of view. Creative thinking skills help you to think creatively in order to find various answers to a question.

Q9	I can use any form (such as verbal, visual, dance, drama etc.) to demonstrate my knowledge in English lessons.	MC	Agree / Neutral / Disagree
Q10	Even though it is not necessary for me to find a solution or have an answer to a question in class; I still make an effort to find a solution/ an answer.	MC	Agree / Neutral / Disagree
Q11	I always feel comfortable and welcomed even if I make mistakes in class.	MC	Agree / Neutral / Disagree
Q12	I can always share my ideas without fear of embarrassment in English lessons.	MC	Agree / Neutral / Disagree
Q13	My teacher's questions require creative answers. There is not a wrong or right answer to such questions.	MC	Agree / Neutral / Disagree
Q14	My teacher encourages me to ask questions during classes.	MC	Agree / Neutral / Disagree

Q15	My teacher asks me questions with more than one answer. I can answer my teacher's questions in many different ways.	MC	Agree / Neutral / Disagree
Q16	My teacher expects me to solve problems (or answer questions) by working cooperatively with my classmates.	MC	Agree / Neutral / Disagree
Q17	My teacher expects me to be creative in English classes. For example, my teacher expects me to use my creativity in writing and speaking.	MC	Agree / Neutral / Disagree
Q18	My teacher's feedback on my writing and speaking tasks helps me to be creative in the following writing and speaking tasks.	MC	Agree / Neutral / Disagree
Q19	I can be creative in English lessons at all times.	MC	Agree / Neutral / Disagree
Q20	I am creative in English lessons because my teacher encourages me to be creative.	MC	Agree / Neutral / Disagree
Q21	If my teacher is creative, this inspires me to learn English better.	MC	Agree / Neutral / Disagree
Q22	I need to use my creativity in arts courses only.	MC	Agree / Neutral / Disagree
Q23	Creative thinking skills help me to learn English better.	MC	Agree / Neutral / Disagree

Q24	Creative thinking skills help me to write better.	MC	Agree / Neutral / Disagree
Q25	Creative thinking skills help me to speak English better.	MC	Agree / Neutral / Disagree
Q26	Creative thinking skills strengthen my English skills (i.e. writing and speaking skills).	MC	Agree / Neutral / Disagree
Q27	Creative thinking skills promote my abilities to create in English (i.e. writing a text, or a short story or sharing my opinions on different topics).	MC	Agree / Neutral / Disagree
Q28	Creative thinking skills raise my motivation for studying English.	MC	Agree / Neutral / Disagree
Q29	Creative thinking skills enhance my interest in learning English.	MC	Agree / Neutral / Disagree
Q30	Creative thinking skills enhance my participation in class.	MC	Agree / Neutral / Disagree

MYP Student Questionnaire

Dear Students,

This questionnaire has been prepared to collect data on ‘creativity’ and ‘creative thinking skills’ in English courses in IB Programs.

There are two sections consisting of thirty items in total. Please read the instructions very carefully and answer all the questions based on your current English classes and English teacher(s).

Your responses will NOT be shared with your school, parents or any other institution. They are completely anonymous.

The time available for you to complete this survey is 20 minutes.

If you have any questions about the questionnaire, please email me:

Thank you very much for your cooperation.

I. Choose the answer that applies to you in the Personal Information Section.

Q1	What is your gender?	MC	Female / Male
Q2	How old are you?	MC	13-15 / 16-18
Q3	How many foreign languages do you speak?	MC	1 / 2 / 3 or more
Q4	How old were you when you first started learning a foreign language?	MC	Younger than 4 years old / 4 / 5 / 6 / 7 / older than 7 years old

Q5	How long have you been studying in this school	MC	Since I started studying in Primary School / Since I started studying in Middle School / Since I started studying High school
Q6	Did you enroll to PYP before?	MC	Yes / No
Q7	What is your mother's highest qualification?	MC	PhD / Master's Degree / Bachelor's Degree / High School Diploma or equivalent
Q8	What is your father's highest qualification?	MC	PhD / Master's Degree / Bachelor's Degree / High School Diploma or equivalent

II. The following questions ask about your attitude towards 'Creative Thinking Skills and Creativity in English Classes'. Remember there are no right or wrong answers.

Creativity: It is the ability to produce many unique ideas, and make connections among these ideas to express yourself better. Creativity helps you to come up with more than one answer to a question.

Creative Thinking Skills: They consist of generating ideas & possibilities, taking multiple perspectives, seeing other points of view. Creative thinking skills help you to think creatively in order to find various answers to a question.

Q9	I can use any form (such as verbal, visual, dance, drama etc.) to demonstrate my knowledge in English classes.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q10	Even though it is not necessary for me to find a solution or have an answer to a question in class; I still make an effort to find a solution/ an answer.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q11	I always feel comfortable and welcomed even when I make mistakes in class.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q12	I can always articulate my ideas without fear of embarrassment in English lessons.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q13	My teacher's questions require creative answers. There is not a right or wrong answer to such questions.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q14	My teacher encourages me to ask questions.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q15	My teacher asks questions with more than one answer. I can answer my teacher's questions in many different ways.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q16	My teacher expects me to solve problems (or answer questions) through collaboration with my peers.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q17	My teacher expects me to be creative in English classes. For example, my teacher expects me to use my creativity in writing and speaking	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q18	My teacher's feedback on my writing and speaking tasks helps me to be creative in the following writing and speaking tasks.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q19	I can be creative in English lessons regardless of my teacher's teaching style/creativity.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q20	I am creative in English lessons because my teacher encourages me to be creative.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q21	If my teacher is creative, this inspires me to learn English better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q22	I need to use my creativity in arts courses only.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q23	Creative thinking skills help me to learn English better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q24	Creative thinking skills help me to write better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q25	Creative thinking skills help me to speak better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q26	Creative thinking skills strengthen my English skills. (i.e writing and speaking skills).	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q27	Creative thinking skills promote my abilities to create in English (i.e. writing a text, or a short story or sharing my opinions on different topics).	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q28	Creative thinking skills raise my motivation for studying English.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q29	Creative thinking skills enhance my interest in learning English.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q30	Creative thinking skills enhance my participation in class.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

DP Student Questionnaire

Dear Students,

This questionnaire has been prepared to collect data on ‘creativity’ and ‘creative thinking skills’ in English courses in IB Programs.

There are two sections consisting of thirty items in total. Please read the instructions very carefully and answer all the questions based on your current English classes and English teacher(s).

Your responses will NOT be shared with your school, parents or any other institution. They are completely anonymous.

The time available for you to complete this survey is 20 minutes.

If you have any questions about the questionnaire, please email me:

Thank you very much for your cooperation.

I. Choose the answer that applies to you in the Personal Information Section.

Q1	What is your gender?	MC	Female / Male
Q2	How old are you?	MC	13-15 / 16-18
Q3	How many foreign languages do you speak?	MC	1 / 2 / 3 or more
Q4	How old were you when you first started learning a foreign language?	MC	Younger than 4 years old / 4 / 5 / 6 / 7 / older than 7 years old

Q5	How long have you been studying in this school	MC	Since I started studying in Primary School / Since I started studying in Middle School / Since I started studying High school
Q6	Which IB program(s) did you enroll before? If applicable, you can choose two answers.	MC (more than one possible)	PYP / MYP / Neither
Q7	What is your mother's highest qualification?	MC	PhD / Master's Degree / Bachelor's Degree / High School Diploma or equivalent
Q8	What is your father's highest qualification?	MC	PhD / Master's Degree / Bachelor's Degree / High School Diploma or equivalent

II. The following questions ask about your attitude towards ‘Creative Thinking Skills and Creativity in English Classes’. Remember there are no right or wrong answers.

Creativity: It is the ability to produce many unique ideas, and make connections among these ideas to express yourself better. Creativity helps you to come up with more than one answer to a question.

Creative Thinking Skills: They consist of generating ideas & possibilities, taking multiple perspectives, seeing other points of view. Creative thinking skills help you to think creatively in order to find various answers to a question.

Q9	I can use any form (such as verbal, visual, dance, drama etc.) to demonstrate my knowledge in English classes.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q10	Even though it is not necessary for me to find a solution or have an answer to a question in class; I still make an effort to find a solution/ an answer.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q11	I always feel comfortable and welcomed even when I make mistakes in class.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q12	I can always articulate my ideas without fear of embarrassment in English lessons.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q13	My English teacher's questions require creative answers. There is not a right or wrong answer to such questions.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q14	My teacher encourages me to ask questions.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q15	My teacher asks questions with more than one answer. I can answer my teacher's questions in many different ways.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q16	My teacher expects me to solve problems (or answer questions) through collaboration with my peers.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q17	My teacher expects me to be creative in English classes. For example, my teacher expects me to use my creativity in writing and speaking	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q18	My teacher's feedback on my writing and speaking tasks helps me to be creative in the following writing and speaking tasks.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q19	I can be creative in English lessons regardless of my teacher's teaching style/ creativity.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q20	I am creative in English lessons because my teacher encourages me to be creative.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q21	If my teacher is creative, this inspires me to learn English better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q22	I need to use my creativity in arts courses only.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q23	Creative thinking skills help me to learn English better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q24	Creative thinking skills help me to write better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Q25	Creative thinking skills help me to speak better.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q26	Creative thinking skills strengthen my English skills.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q27	Creative thinking skills promote my abilities to create in English (i.e. writing a text, or a short story or sharing my opinions on different topics).	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q28	Creative thinking skills raise my motivation for studying English.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q29	Creative thinking skills enhance my interest in learning English.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree
Q30	Creative thinking skills enhance my participation in class.	MC	Strongly disagree / Disagree / Neither agree nor disagree / Agree / Strongly agree

Appendix L

Highlights from the Pilot Study Teacher & Student Questionnaires

Summary of the Pilot Study Questionnaires

I. Teacher Questionnaire

1.1 Personal Information

Three English language teachers completed the questionnaire. Each teacher represented one of the IB Programs. All of these participants are females, two of whom are Turkish. One of the participants is Canadian. Two of the instructors have an MA degree and each of them holds various teaching qualifications such as Cambridge DELTA, British Council CERTELT, or Cambridge ICALT. One of them stated that she attended many seminars related to creativity, but she did not specify any of those seminars. Regarding their experience teaching in IB programs, their answers are as follows:

	T1	T2	T3
Q3 How long have you been teaching English in an IB context?	1-5 years	6-10 years	16 years and more
Q6 How long have you been teaching in this program?	1-5 years	1-5 years	6-10 years

None of the teachers worked in another IB context before they started working in their current context.

All three answered all the questions except for question 38. One of them skipped that question.

The quantitative data below represents the answers in percentages for each question in each section of the questionnaire.

1.2 Creativity and Creative Thinking Skills

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11. I usually start my class by sharing an event, joke, story, or scenario to make my instruction effective.			66.67% 2	33.33% 1	
12. My students can use any form (such as verbal, visual, dance, drama etc.) to demonstrate their knowledge.				33.33% 1	66.67% 2
13. Even when I do not tell my students to come up with different solutions/ suggestions to the cases we have, they usually make an effort to come up with solutions.				100.00% 3	
14. I always reward my students if they propose original, extraordinary solutions and ideas in the classroom.			33.33% 1	33.33% 1	33.33% 1
15. My students always feel comfortable and welcomed even when they make mistakes.				100.00% 3	

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
16. My students can always articulate their ideas without fear of embarrassment.				66.67% 2	33.33% 1
17. I ask questions that require creative answers.				66.67% 2	33.33% 1
18. I encourage my students to ask questions.				33.33% 1	66.67% 2
19. I ask my students questions with more than one answer (such as open-ended questions).				33.33% 1	66.67% 2
20. I enable my students to use their creativity to develop deep understandings within their learning.				33.33% 1	66.67% 2
21. I direct my students to outside classroom activities (such as searching on the internet, resorting to reference books or knowledgeable adults around them).				66.67% 2	33.33% 1
22. I expect my students to use their knowledge and skills creatively to make reasoned conclusions or answers.				33.33% 1	66.67% 2

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
23. I have my students experiment creatively.				33.33% 1	66.67% 2
24. I encourage my students to think creatively.				33.33% 1	66.67% 2
25. I encourage my students to take creative risks and be innovative.				66.67% 2	33.33% 1
26. I frequently arrange problem solving instruction in the form of game activity in the classroom.			33.33% 1	33.33% 1	33.33% 1
27. I frequently design activities that enable students to think in a variety of ways.				33.33% 1	66.67% 2
28. I enable my students to solve problems through collaboration with each other.				66.67% 2	33.33% 1
29. My students know that I expect them to be creative.				66.67% 2	33.33% 1
30. I encourage my students to consider existing ideas from new perspectives.				66.67% 2	33.33% 1

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
31. I believe creativity helps my students cope with the complexity of language learning.				66.67% 2	33.33% 1
32. I believe creativity helps my students develop strategies to deal with the unexpected in language learning.				66.67% 2	33.33% 1

1.3 Creativity and Creative Thinking Skills in Curriculum

	Yes	No
33. Do you use creative teaching methods?	100.00% 3	
34. Do you think that you can integrate creativity into your own teaching methods?	100.00% 3	

	Not at all 1	2	3	4	To a great extent 5
35. To what extent are you familiar with creative thinking skills in IB Curriculum?				33.33% 1	66.67% 2
36. To what extent do you refer to creative thinking skills for your course design?				66.67% 2	33.33% 1

	Yes	No
38. Do you teach creative thinking skills explicitly?	50.00%	50.00%
	1	1

	Not at all 1	2	3	4	To a great extent 5
39. To what extent do you believe creative thinking skills contribute to students' language learning?					100.00% 3
40. To what extent do you think students are aware of the role of creative thinking skills in curriculum?			66.67% 2	33.33% 1	
41. To what extent do you think students are able to use creative thinking skills in English classes?				66.67% 2	33.33% 1

	Less than a year	1 year	2 years	More than 2 years
42. How much time is needed to observe the contribution of creative thinking skills to students' English language development?	33.33% 1	66.67% 2		

II. MYP and DP STUDENTS

2.1 Personal Information

- In total 25 students completed the online questionnaire out of 44 students. 13 students from the MYP and 12 students from the DP program responded.
- 56.00% of the students are females and 44.00% are males.
- 84.00% of them are between the ages of 16 and 18 whereas 16.00% are between the ages of 13 and 15.
- 20.00% speak only one foreign language and 64.00% can speak two foreign languages while 16.00% can speak minimum three foreign languages. The youngest age that they started learning a foreign language is younger than 4. 20.00% of the students chose that option whereas 16.00% of them chose older than 7 as the age they started learning a foreign language.
- 48.00% have been studying in their current school since they started primary school. 16.00% have been studying in their current school since they started studying in middle school. 36.00%, on the other hand, have been studying there since they started studying in high school.
- 28.13% enrolled PYP before. The majority, 53.13% enrolled MYP while 18.75% of them enrolled neither.
- Their parents' highest qualifications are as follows:

	PhD	Master's Degree	Bachelor's Degree	High School Diploma or an equivalent degree
What is your mother's highest qualification?	25.00% 6	20.83% 5	50.00% 12	4.17% 1

	PhD	Master's Degree	Bachelor's Degree	High School Diploma or an equivalent degree
What is your father's highest qualification?	25.00% 6	45.83% 11	25.00% 6	4.17% 1

2.2 Creativity and Creative Thinking Skills

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
9. I can use any form (such as verbal, visual, dance, drama etc.) to demonstrate my knowledge in English classes.	8.00% 2		8.00% 2	44.00% 11	40.00% 10
10. Even when my teacher does not tell me to come up with different solutions, I can usually come up with various solutions.		4.00% 1	20.00% 5	48.00% 12	28.00% 7
11. I always feel comfortable and welcomed even when I make mistakes in class.		12.00% 3	40.00% 10	32.00% 8	16.00% 4
12. I can always articulate my ideas without fear of embarrassment.		20.00% 5	16.00% 4	44.00% 11	20.00% 5
13. My English teacher asks questions that require creative answers.			8.33% 2	37.50% 9	54.17% 13

14. My teacher encourages me to ask questions.		4.00% 1	4.00% 1	48.00% 12	44.00% 1
15. My teacher asks me questions with more than one answer.		4.00% 1	12.00% 3	32.00% 8	52.00% 13
16. My teacher expects me to solve problems through collaboration with my peers.			12.00% 3	40.00% 10	48.00% 12
17. My teacher expects me to be creative			8.00% 2	40.00% 10	52.00% 13
18. My teachers' feedback helps me to be creative.	4.00% 1		16.00% 4	44.00% 11	36.00% 9
19. I can be creative in English lessons regardless of my teacher's teaching style/ creativity.			32.00% 8	28.00% 7	40.00% 10
20. I am creative in English lessons because my teacher encourages me to be creative.	4.00% 1		16.00% 4	48.00% 12	32.00% 8
21. When my teacher is creative, this inspires me to learn English better.		4.00% 1	8.00% 2	40.00% 10	48.00% 12

22. I need to use my creativity in arts courses only.	44.00% 11	32.00% 8	12.00% 3	12.00% 3	
23. Creative thinking skills help me to learn English better		12.00% 3		44.00% 11	44.00% 11
24. Creative thinking skills help me to write better.			4.00% 1	48.00% 12	48.00% 12
25. Creative thinking skills help me to speak better			16.00% 4	52.00% 13	32.00% 8
26. Creative thinking skills strengthen my English skills.			8.33% 2	45.83% 11	45.83% 1
27. Creative thinking skills promote my abilities to create in English.			4.00% 1	56.00% 14	40.00% 10
28. Creative thinking skills raise my motivation for studying English.		4.00% 1	16.00% 4	40.00% 10	40.00% 10
29. Creative thinking skills enhance my interest in learning English.			12.00% 3	32.00% 8	56.00% 14
30. Creative thinking skills enhance my participation in class.				56.00% 14	44.00% 11

Vita

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Education

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Experience

Instructor, Bilkent University, Department of Foreign Languages, ELPP,
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HTU (Head of Teaching Unit), Bilkent University, Department of Foreign Languages, ELPP, 2008- 2017

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Instructor, Bilkent University, Department of Foreign Languages, ELPP,
2001-2008

ESP and EFL Instructor, Deulcom International Ankara, 2000-2001

Professional Training

- The British Council Certificate in English Language Teaching, January 2001
- University of Cambridge Examinations in English for Language Teachers- Level Two, December 2002

- University of Cambridge Certificate for Overseas Teachers of English, June 2002
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Publications

Chouseinoglou, S., & Ateşkan, A. (2025). Exploring creative thinking skills and creativity in English courses through the lenses of creative pedagogy in two continuum IB schools. *Thinking Skills and Creativity*, 101901. <https://doi.org/10.1016/j.tsc.2025.101901>