

## APPLYING DESIGN THINKING PRINCIPLES TO MODERN LEGAL ENGLISH EDUCATION

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**Abstract.** *This paper investigates the integration of design thinking principles into modern Legal English education to enhance critical thinking, creativity, analytical skills, and digital literacy among law students. Drawing on theoretical frameworks and practical examples, this study highlights the significance of design thinking in reshaping philological education, focusing on strategies for curriculum integration and the associated benefits for both students and educators.*

*Design thinking, a user-centered and iterative process celebrated for fostering innovation, is positioned as a transformative approach to addressing the evolving needs of Legal English education. The paper explores how the phases of empathizing with learners, defining educational challenges, ideating creative solutions, prototyping instructional strategies, and testing these methods in real-world educational settings can be employed to create engaging, adaptive, and effective learning experiences.*

*By presenting case studies and practical applications, this research demonstrates how design thinking enhances language proficiency, critical reasoning, and legal competencies in Legal English curricula. The findings underscore the potential of design thinking to align Legal English education with the demands of the digital age, fostering interaction, adaptability, and professional readiness. Furthermore, this study advocates for a systematic adoption of design thinking to bridge traditional teaching methodologies and innovative pedagogical practices.*

**Keywords:** *design thinking principles, ESP, Legal English, divergent thinking, convergent thinking, lateral thinking, prototyping.*

**Received:** 21 July 2024

**Revised:** 27 July 2024

**Accepted:** 01 August 2024

**How to cite:** Danylchenko-Cherniak O. (2024) Applying Design Thinking Principles to Modern Legal English Education. *Philological Treatises*, 16(2), 32-50 [https://www.doi.org/10.21272/Ftrk.2024.16\(2\)-4](https://www.doi.org/10.21272/Ftrk.2024.16(2)-4)



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## ЗАСТОСУВАННЯ ПРИНЦИПІВ ДИЗАЙН-МИСЛЕННЯ ДО СУЧАСНОЇ ОСВІТИ ЮРИДИЧНОЇ АНГЛІЙСЬКОЇ МОВИ

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**Анотація.** Стаття досліджує інтеграцію принципів дизайн-мислення в сучасну освіту з юридичної англійської мови з метою розвитку критичного мислення, креативності, аналітичних навичок і цифрової грамотності серед студентів-юристів. Спираючись на теоретичні основи та практичні приклади, дослідження підкреслює важливість дизайн-мислення у трансформації філологічної освіти, зосереджуючись на стратегіях інтеграції у навчальні програми та пов'язаних з цим перевагах для студентів і викладачів. Дизайн-мислення, орієнтоване на користувача й інтерактивний процес, який широко визнається інноваційним, представлено як прогресивний підхід до вирішення актуальних потреб у навчанні юридичної англійської мови. У статті розглядається, як етапи взаємодії зі студентами, визначення освітніх викликів, генерування креативних рішень, створення прототипів навчальних стратегій і тестування цих методів у реальних освітніх умовах можуть забезпечити залучаючий, адаптивний і ефективний навчальний досвід.

Демонструючи приклади практичного застосування, дослідження показує, як дизайн-мислення покращує мовну компетентність, критичне мислення та юридичні навички у навчальних програмах з юридичної англійської мови. Результати підкреслюють потенціал дизайн-мислення для адаптації юридичної англійської освіти до вимог цифрової епохи, сприяючи інтерактивності, гнучкості та професійній готовності. Більше того, стаття закликає до систематичного впровадження дизайн-мислення для поєднання традиційних методик викладання з інноваційними педагогічними практиками.

**Ключові слова:** принципи дизайн-мислення, англійська для спеціальних цілей, юридична англійська, дивергентне мислення, конвергентне мислення, латеральне мислення, прототипування.

**Отримано:** 21 липня 2024 р.

**Отримано після доопрацювання:** 29\7 липня 2024 р.

**Затверджено:** 01 серпня 2024 р.

**Як цитувати:** Данильченко-Черняк О. (2024). Застосування принципів дизайн-мислення до сучасної освіти юридичної англійської мови. *Філологічні трактати*, 16(2), 32-50 [https://www.doi.org/10.21272/Ftrk.2024.16\(2\)-4](https://www.doi.org/10.21272/Ftrk.2024.16(2)-4)

## Introduction

The need to find solutions to complex problems in an interconnected world has heightened the importance of twenty-first century skills (OECD, 2017; World Bank, 2019). Developing these skills should be a primary goal for universities. Despite the existence of various paradigms for twenty-first century skills in education (Wagner, 2006), they all emphasize analyzing problems, understanding them from multiple perspectives, and collaboratively finding suitable solutions (Lawson, 2005). Understanding complex problems requires cognitive flexibility to view them from different angles, while finding suitable solutions demands creativity to synthesize variables and generate practical ideas. Thus, collaborative projects that foster creativity are likely to promote the use of a broad range of twenty-first century skills.

In our research, we explore whether «Design thinking» activities in Legal English classroom (ESP) can enhance students' understanding of creativity and facilitate the use of twenty-first century skills. In Design thinking design teams develop solutions based on an empathetic understanding of end users (Brown, 2008). Consequently, it offers a process that can foster communication and creative collaboration. In this article, we describe how we implemented Design thinking in the ESP classroom, the learning environment and student engagement it promoted, and the learning outcomes and knowledge it generated. Also, we discuss the implications of our findings for future course development.

Moreover, in today's interconnected and rapidly evolving world, proficiency in English is increasingly vital for professional sphere. Whether you lead a global corporation,

develop software, advise clients, practice medicine, build homes, or work in state-of-the-art factories that require sophisticated computer skills to manage complex production challenges, mastering English can significantly enhance your effectiveness and opportunities. Just as the engine of growth in the Industrial Revolution was standardization, with executing tasks in «the one best way», today's growth is driven by ideas and ingenuity. This shift demands that everyone bring their intellectual capabilities to the forefront, collaborating to solve problems and adapt to ever-changing learning environments (Edmondson, 2018).

Design thinking acts as a driver of digitalization by offering structured frameworks for integrating technology in meaningful ways. It ensures that digital tools and systems address real-world challenges, enhancing their usability and relevance. For example, in education, design thinking helps educators identify barriers to engagement, while digital tools such as AI-powered platforms personalize learning experiences to overcome those challenges (Luckin et al., 2018).

Conversely, digital thinking enriches design thinking processes by introducing powerful tools and technologies. Big data enables deeper user insights, while AI and automation streamline complex tasks. Prototyping technologies like AR/VR further accelerate testing and refinement cycles.

Together, these approaches create adaptive and user-friendly solutions across various fields, including education, business, and urban development. By merging creativity with technology, design thinking and digitalization offer a dynamic framework for addressing evolving societal and organizational needs in a human-centered, innovative manner (Lindberg et al, 2010).

*According to this, research questions are:*

1. How can design thinking principles be effectively integrated into educational process and Legal English education?
2. What are the key challenges and opportunities identified in the case studies of Ukrainian and Polish educational institutions implementing design thinking methodologies in Legal English education?

### **Methodology**

*The methodology* involves a comprehensive literature review on design thinking principles, ESP, Legal English education, and modern pedagogical approaches, their cognitive differences, contextual elements, and recent innovations in education, academic papers, books, and articles about linguistics, design thinking, modern education. The analysis and practical implementation of the case studies from educational institutions of Ukraine and Poland implementing Legal English and Design thinking methodologies. The conceptual goal is to develop a framework for integrating Digital thinking principles into modern Legal English education based on literature synthesis and case study selection, to contribute valuable insights to guide educational institutions in adapting to the 21st-century landscape and fostering inclusive and impactful effective learning environments. Thus, one of the stages includes selecting the implementation methods of digital thinking principles into legal English education and considering diverse contexts.

Moreover, we use *qualitative analysis and thematic analysis* to identify common themes and derive insights from practical applications and studies on integrating linguistics and design thinking into education. Content analysis is utilized to evaluate educational materials, focusing on the presence and impact of Design Thinking principles and ESP (English for Specific Purposes) elements. Additionally, case studies are incorporated to explore the application of Design Thinking within ESP teaching, offering a detailed examination of implementation processes, associated challenges, and measurable outcomes. This multi-method approach ensures a comprehensive understanding of the interplay between linguistics, pedagogical strategies, and innovation, facilitating the development of evidence-based recommendations for effective integration.

### **Discussion**

Design thinking, a user-centered and iterative methodology for solving complex problems, has become a cornerstone of innovative practices across industries, including education (Edmondson, 2018). The application of design thinking to Legal English education, particularly within the framework of English for Specific Purposes (ESP), offers transformative potential. Legal English is a specialized discipline requiring a nuanced understanding of legal concepts, language structures, and professional communication. Integrating design thinking principles addresses key pedagogical challenges such as fostering critical thinking, enhancing learner engagement, and adapting to the demands of a digitalized world (Brown, 2009).

The question is how design thinking principles can be applied to modern Legal English education. By leveraging its empathic and iterative approach, design thinking aligns with contemporary educational goals, emphasizing collaboration, innovation, and adaptability (Edmondson, 2018). Design thinking offers a structured yet flexible framework that complements the principles of ESP. Based in empathy, design thinking emphasizes understanding users' needs - in this case, students' linguistic and professional requirements. In Legal English education, design thinking allows educators to empathize with learners by identifying their specific challenges, such as interpreting legal texts, mastering legal speaking, and developing persuasive argumentation skills (Kolko, 2015). By defining these challenges collaboratively, educators can co-create curriculum solutions tailored to students' needs.

Thus, empathy, the cornerstone of design thinking, transforms the traditional teacher-centered classroom into a learner-centered environment. In Legal English education, this involves understanding the diverse backgrounds and goals of students, such as future lawyers, paralegals, or legal scholars. For example, a law student preparing for international arbitration may require mastery of legal drafting, while another focusing on criminal law might prioritize courtroom language. Educators using design thinking principles conduct needs analyses and design differentiated instructional materials to address these varied goals (Stickdorn et al., 2018).

Digital tools enhance this empathic approach by facilitating personalized learning experiences (Luckin et al., 2018). Adaptive learning platforms like Moodle allow educators to track individual progress, assess strengths and weaknesses, and provide customized feedback. Empathy-driven pedagogy fosters student engagement and motivation, essential for mastering the complexities of Legal English.

Moreover, ESP, including Legal English, prioritizes purposeful language use in specific professional contexts. It shares common ground with design thinking in its emphasis on practicality and relevance. Both approaches encourage iterative processes: while design thinking focuses on refining solutions, ESP promotes continual language practice in realistic scenarios (Hutchinson & Waters, 1987). This synergy highlights the compatibility of design thinking with Legal English education, particularly in fostering real-world applicability.

The iterative nature of design thinking aligns with the dynamic requirements of Legal English education. Traditional ESP curricula often lack flexibility, focusing on static modules that may not address emerging legal trends. Design thinking, however, encourages ongoing revision and refinement. Educators can prototype instructional strategies - such as case-based learning, role-playing, or legal simulations - and test them in classroom settings, gathering feedback to improve subsequent iterations (Dam & Siang, 2018).

For instance, a design thinking-inspired Legal English module might begin with a prototype where students analyze a legal case and draft a memorandum (McKim, 1972). Feedback from peers and instructors guides the refinement of the activity, ensuring that it aligns with both linguistic and professional objectives. This iterative approach ensures that the curriculum remains relevant and effective, preparing students for real-world legal contexts.

Indeed, Legal English education often involves developing skills in teamwork and problem-solving, both of which are integral to design thinking. Collaborative projects such as mock trials, contract drafting, and negotiation exercises allow students to practice legal

language in realistic scenarios. Design thinking principles enhance these activities by fostering creativity and innovation (McKim, 1972). For example, during a negotiation simulation, students might use brainstorming techniques to propose solutions and visualize outcomes using digital tools like Canva or Lucidchart (Brown, 2009).

The intersection of design thinking and digitalization has transformative implications for Legal English education. Digital tools provide platforms for ideation, prototyping, and testing, core stages of the design thinking process (McKim, 1972). For instance, virtual reality (VR) can simulate courtroom environments, allowing students to practice oral arguments in realistic settings. Similarly, AI-powered language tools like Grammarly and LegalSifter offer real-time feedback on grammar, syntax, and legal terminology, supporting the iterative refinement of language skills (Luckin et al., 2018).

Moreover, digital collaboration platforms like Google Workspace and Microsoft Teams facilitate group projects, enabling students to co-create legal documents or analyze case studies. These tools align with the design thinking principle of ideation, encouraging students to generate and evaluate multiple solutions before selecting the most effective one.

These collaborative exercises not only improve linguistic proficiency but also develop critical soft skills, such as adaptability, empathy, and teamwork. By incorporating design thinking principles, educators create an interactive and immersive learning environment that mirrors professional legal settings (Plattne et al., 2009).

While integrating design thinking into Legal English education offers numerous benefits, it also presents challenges. One significant barrier is the resistance to change among educators accustomed to traditional methods. Training programs and professional development initiatives are essential to equip educators with the skills needed to implement design thinking principles effectively (Fischer, 2023).

Another challenge is ensuring equitable access to digital tools and resources. Students from underprivileged backgrounds may face difficulties accessing the technology required for design thinking activities. Addressing this issue requires institutional support and investment in infrastructure, such as providing laptops or subsidized internet access (UNESCO, 2020).

Despite these challenges, the opportunities are vast. Design thinking enhances student engagement, fosters creativity, and bridges the gap between theoretical knowledge and practical application (Plattne et al., 2009). Its integration into Legal English education equips students with the skills needed to navigate the complexities of the modern legal landscape, including critical thinking, problem-solving, and digital literacy.

Real-world examples demonstrate the potential of design thinking in Legal English education. For instance, at the Taras Shevchenko National University of Kyiv, educators implemented a design thinking framework to redesign a Legal English course. The process involved empathizing with students to identify challenges, such as difficulty understanding legal texts and expressing arguments persuasively. Through ideation and prototyping, educators introduced interactive activities like case analysis, debate sessions, and legal writing workshops, resulting in significant improvements in student performance and engagement.

Similarly, at the University of Warsaw, design thinking workshops were integrated into an advanced Legal English program. Students collaborated on drafting contracts and negotiating agreements, using digital tools to refine their language and argumentation skills. Feedback from these activities informed subsequent iterations of the curriculum, ensuring continuous improvement.

The integration of design thinking into Legal English education opens avenues for future research. Investigating the long-term impact of design thinking principles on student outcomes, such as employability and professional communication skills, is essential. Additionally, exploring the role of emerging technologies, such as AI and VR, in enhancing design thinking activities offers promising directions for innovation (Mavrikis & Holmes, 2019).

Educational institutions must also consider how design thinking principles can be scaled across diverse contexts, including online and hybrid learning environments (Plattner et al., 2009). Collaborative research initiatives involving multiple universities and stakeholders can provide valuable insights into best practices and implementation strategies.

Applying design thinking principles to modern Legal English education represents a transformative approach to addressing the challenges of the 21st-century educational landscape. By fostering empathy, collaboration, and innovation, design thinking aligns with the goals of ESP and equips students with the skills needed for professional success. The integration of digital tools further enhances the potential of design thinking, creating interactive and engaging learning experiences that prepare students for the complexities of legal practice in a digitalized world (Cleminson & Cowie, 2021).

While challenges such as resistance to change and unequal access to technology remain, the opportunities for innovation and improvement are immense. By embracing design thinking, educators can transform Legal English education into a dynamic, learner-centered, and future-ready discipline, ensuring that students are well-prepared for the demands of the modern legal profession.

### **Foreign language learning in a digital age**

Language is generally understood as the medium for communicating ideas and thoughts. Technological advances have improved the processes of language communication. When we speak about technology, we typically refer to computers and digital forms. However, technology encompasses anything developed to make life easier (Wang & Winstead, 2016).

Language is a complex and multifaceted concept, especially in the digital age where it is researched, learned, and utilized in various ways. It reflects thought and encompasses any form of synchronous or asynchronous communication that facilitates the negotiation of meaning. This includes not only spoken, written, and auditory language but also gestures, signs, and symbols used in both offline and online communication. Linguists study a wide range of linguistic components, such as grammar, utterances, code-switching, and sociolinguistic discourse (Gee & Hayes, 2011). Additionally, paralinguistic aspects like intonation and volume are analyzed for emotional and intentional cues (Lawson, 2005). Nonlinguistic forms of communication, related to the intended meaning of non-verbal behavior, have also been explored (Brown, 2008).

These modes of examination have been employed in both language and foreign language studies to analyze various language learner discourses and speech patterns. Examples include the study of phatic digital text communication in social media (Schön, 1983) and the segmentation of audio in non-digital vocalization (Plattner et al., 2009). The understanding of language, including English for Specific Purposes (ESP) and Legal English, depends on the perspective of its usage.

ESP, like other aspects of foreign language teaching, has evolved in the digital age, shifting from a single language focus to recognizing learners' multilayered language skills in a more plurilingual society. In ESP, particularly in Legal English, this evolving understanding influences how specialized language skills are taught and perceived in professional and academic contexts (Wang & Winstead, 2016). Legal English education must adapt to these changes, integrating digital literacy and critical thinking to meet the needs of modern law students and professionals. By acknowledging the plurilingual nature of learners and the specific demands of the legal field, Legal English instruction can better prepare students for the globalized and digitalized legal landscape.

The scope of what constitutes a «foreign» language is defined in comparison to what is considered a native language. To accurately identify a foreign language, educators must consider the roles of *first language*, and *second language*, as well as *dual immersion* and *bilingual programs*, to foster a comprehensive understanding of language learning (Mavrikis & Holmes, 2019). Similarly, when categorizing languages, researchers should take into account language status, subordination, and dominance both in the field of linguistics

and within global societies, and examine the implications of these hierarchies in the digital age while studying ESP.

The first language is the primary language spoken within the community in which one is born or resides, often referred to as the maternal language. However, plurilingual individuals frequently speak multiple languages that are learned and used from an early age. In some cases, both parents may speak different languages or dialects that are learned simultaneously. Plurilingualism is common in Ukraine too, especially in the western part. For instance, particularly in the western regions, is a significant cultural and social phenomenon. This linguistic diversity is rooted in the region's complex history, geopolitical shifts, and cultural interactions. Western Ukraine has historically been a melting pot of various ethnic groups and languages. The region's history includes periods of Polish, and Austro-Hungarian, each leaving a distinct linguistic imprint. The influence of these powers has contributed to a multilingual environment where Ukrainian, Polish, Hungarian, Romanian, and other languages coexist. Ukraine's education system accommodates this linguistic diversity. Schools offer instruction in minority languages, and there are cultural institutions dedicated to preserving and promoting these languages. For instance, Hungarian and Romanian schools operate in regions with significant Hungarian and Romanian populations, respectively. Also, they study English as the language of international communication, moreover, it can be additionally French or German (Hutchinson & Waters, 1987).

The Ukrainian government has also implemented language policies aimed at promoting the use of Ukrainian while respecting minority language rights. This includes ensuring that Ukrainian is taught as the primary language in schools while providing opportunities for minority language instruction.

Due to the lesser-known status of other languages, opportunities for primary language support in Western Ukraine would be limited, further marginalizing it as a first language and English as a foreign language or second language.

Therefore, it is crucial to clearly define what it means to be a second language, foreign language, heritage language, or bilingual learner. Foreign language learners study a language outside of their native language within their country of origin. For example, an *English foreign language* (EFL) learner studies English as a foreign language in Ukraine, or another country. The designation, therefore, depends on the context of the learner's situation as a foreign language or second language learner.

In the realm of foreign language education, the development of placement tests has emerged as a method to categorize students from diverse backgrounds into appropriate levels of foreign language courses at universities. By acknowledging and comprehending the varied contexts in which language learners exist, educators can gain insights to utilize suitable and tailored pedagogical approaches that align with learners' plurilingual experiences and proficiencies (UNESCO, 2020). Consequently, bridging the disparities between different educational fields and methodologies, such as *computer-assisted language learning*, which emphasizes communicative competence, could facilitate mutual benefits across disciplines like ESP and EFL (Al-Hashash, 2007). Pedagogy oriented towards digital platforms must be aimed at fostering multiple literacies across face-to-face, hybrid, and online classroom learning settings. From preschool to university settings, technology is reshaping the landscape of language education, altering both how languages are taught and learned, as well as our perceptions and conceptual frameworks. The evolution of technology in language learning necessitates new definitions within the field of language education. Similarly, the advent of innovations in foreign language learning, facilitated by technology, presents opportunities for exploration within second language, heritage language, and dual language online learning environments (Al-Hashash, 2007).

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exploration within second language, heritage language, and dual language online learning environments.

The transition from analog to digital mediums sparked what is often referred to as the Digital Revolution. This revolution was marked, in part, by the initial transition of television platforms in the 1980s and the widespread adoption of digital television platforms in the 1990s (Bonk & Zhang, 2008). Additionally, factors contributing to the digital revolution include the proliferation of electronic media (Cross, 1982), a surge in cellphone usage from the 1980s and 1990s to the present day (Chappell, 2016), with mobile phone usage surpassing internet usage rates, and the rapid development of high-tech industries. Highly skilled individuals from developing countries were also recruited to work as engineers and developers in education. The return of expatriates and transnational exchanges of information further fueled the growth of technology and digital revolutions worldwide (Kimbell, 2011).

Consequently, the expansion of the tech industry led to the widespread adoption of computers in homes, workplaces, and educational institutions globally (Chappell, 2016).

*Computer-assisted language learning* emerged as a prominent term in the field of computer-mediated language study. However, it might not encompass the full range of technological advancements in the digital age. While many digital devices, such as smartphones, contain microcomputers, it has been argued in the literature that computer-assisted language learning does not adequately capture the breadth of innovative and nuanced contexts of language learning (Hutchinson & Waters, 1987). The emergence of educational revolution 4.0 and 5.0 with its interactive web technology, mobile technology, and other new technologies (e.g., holograms, and artificial intelligence) propels education into a new realm beyond traditional desktop and laptop designations. Thus, there is a need for paradigmatic changes in the conceptual designations of computer-assisted language learning, necessitating review and updates (Fullan & Langworthy, 2014).

Instead, *technology-assisted language learning* might serve as a more comprehensive term that encompasses a broader spectrum of technological possibilities beyond just computers (Hutchinson & Waters, 1987). Furthermore, there may be a need to differentiate between various forms of technology-assisted language learning, including *technology-assisted foreign language learning*, *technology-assisted second language learning*, *technology-assisted ESP learning*, and *technology-assisted Legal English learning as well*.

*Integrating digital thinking principles into language education* amidst the technological revolution is imperative to harness the full potential of digital tools and platforms. By aligning language learning methodologies with digital thinking principles, educators can create dynamic and adaptive learning environments that cater to diverse learner needs and capitalize on emerging technologies (Wang & Winstead, 2016). Applying iterative design principles allows educators to continuously refine and enhance language learning platforms, ensuring they remain relevant and effective in a rapidly evolving digital landscape. Digital platforms enable real-time feedback loops, facilitating continuous improvement in language learning experiences. Educators can gather data on student progress and engagement to tailor instruction and interventions accordingly (Wang & Winstead, 2016). Digital thinking emphasizes accessibility and inclusivity, ensuring that language learning resources and platforms are accessible to learners with diverse needs and backgrounds, including those with disabilities or limited access to traditional educational settings. They facilitate collaborative learning experiences, allowing students to interact with peers and educators in virtual classrooms, discussion forums, and collaborative projects, regardless of geographical barriers, and adopt a user-centric approach, offering personalized learning experiences that cater to individual learner preferences, abilities, and goals (Al-Hashash, 2007).

Leveraging digital technologies enables students to engage with language learners and speakers from around the world, fostering cross-cultural understanding and collaboration, which is very helpful in learning and practicing Legal English. As an example, we can speak



about the collaboration of Ukrainian students with Polish and Americans while passing the Legal English course. They had common activities online during the second semester and were involved in common linguistics projects. Thus, we developed all professional skills, and language proficiency, and improved cross-cultural collaboration.

### **Design thinking in educational process**

According to Plattner et al. (2009), the design thinking process comprises six steps with iterative loops: understanding, observing, defining problems, ideating, developing prototypes, and testing. The first three phases, collectively referred to as the "problem space" (Lindberg et al., 2010), focus on identifying and analyzing the problem and its underlying causes (what the problem is and why it exists). The following three phases, known as the "solution space," explore potential solutions and their implementation. These process steps are briefly described below and then explained in greater detail step by step.

Design thinking offers a process that fosters the development of essential 21st-century skills such as empathy, creativity, cognitive flexibility, and critical thinking. It can create a motivating classroom environment that encourages deep thinking and collaboration, helping students find solutions to real-world problems (Fraillon, Ainley, 2014).

In a language class, design thinking can enhance communicative creativity and engage students creatively in language learning. For design thinking to be most effective in language classes, teachers need to thoroughly explain its core concepts using concrete examples and hands-on learning experiences, especially for students with lower language proficiency. Ideally, teachers should adjust their approach to code-switching based on their students' linguistic abilities. (Cleminson, Cowie, 2021).

Robert H. McKim, Emeritus Professor of Mechanical Engineering, addressed design thinking in his 1973 book «Experiences in Visual Thinking». McKim, an artist and engineer, concentrated on how visual thinking influences our ability to understand and solve problems. His book delves into various aspects of visual thinking and design methods, emphasizing the integration of left and right brain thinking to achieve a more holistic approach to problem-solving (McKim, 1972). The concepts in his book form the foundation of the design thinking methodology we use today.

Searching the history of design thinking, we can notice that in 1982, Nigel Cross made a significant impact in the field of design thinking with his seminal paper «Designerly Ways of Knowing» (Cross, 1982). In this paper, Cross explored the unique ways designers approach problem-solving, contrasting their methods with the everyday problem-solving processes used in non-design contexts. It's important to note that this paper is distinct from his later series of articles and papers with similar titles published in the 2000s.

Bryan Lawson, Emeritus Professor at the School of Architecture, University of Sheffield, UK, also contributed valuable insights through a series of intriguing tests. *These tests aimed to compare the problem-solving methods of scientists and architects when faced with the same ambiguous problem* (Lawson, 2005).

Lawson conducted an intriguing experiment with architectural and science students to understand their problem-solving approaches. He asked the students to arrange colored blocks according to a set of rules, some of which were unknown to them.

His test involved postgraduate architectural students (the «designers») and postgraduate science students (the «scientists»). The task required each group to arrange colored blocks while adhering to a set of rules. The results revealed key differences in their approaches:

«Scientists»:

- systematically explored every possible combination of blocks;

- formulated a hypothesis about the fundamental rule they should follow to

produce the optimal arrangement;

- tested their arrangement of blocks to see if it fit the rules.

«Designers»:

- quickly created multiple arrangements of colored blocks;

- focused on generating a large number of solutions and eliminated those which did not work (Lawson, 2005).

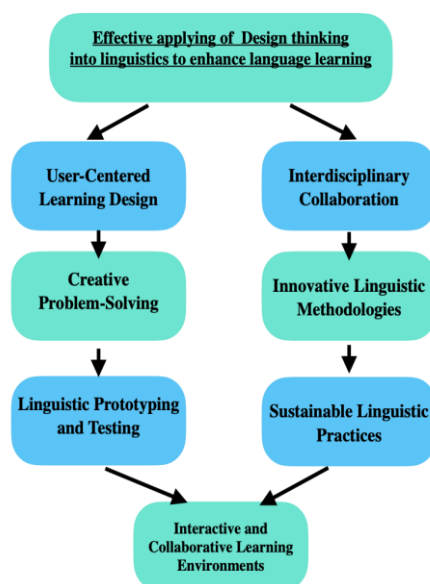
Lawson concluded that *scientists were problem-focused problem-solvers, whereas designers were solution-focused*. Designers generated many solutions quickly and refined them through elimination, a core concept in the "designerly" way of problem-solving (Lawson, 2005).

Thus, a central feature of design activity, then, is *its reliance on generating fairly quickly a satisfactory solution*, rather than on any prolonged analysis of the problem.

While the recent popularization of design thinking often overlooked earlier academic literature, Kimbell categorized the various discourses into three areas:

1. As a cognitive style, where researchers are problem-solvers.
2. As a general theory of design, focusing on the purpose of overcoming wicked problems.
3. Providing tools which are needed for innovation (Kimbell, 2011).

Thus, in education and language studying as well we can distinguish using design thinking principles for *creative education and scientific problem-solving, providing innovative approaches and designing personalized and engaging learning experiences, creating and testing new language learning apps or tools, interdisciplinary collaboration, developing new research methodologies* and others, which you can see in Figure 1.



**Figure 1. Effective applying of Design thinking into linguistics to enhance language learning**

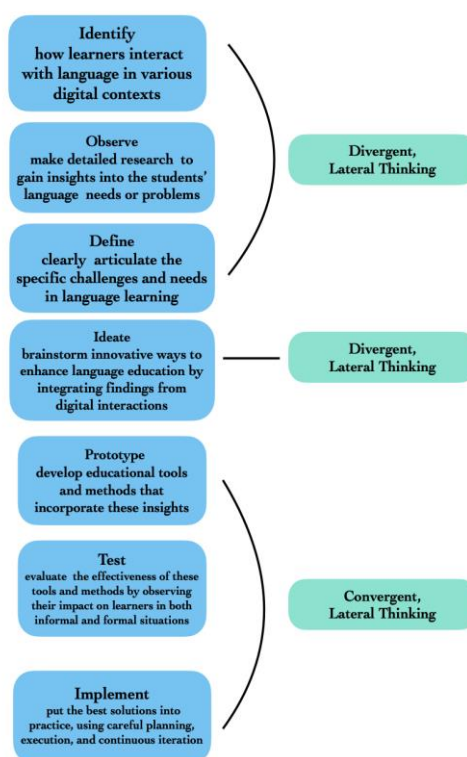
In all these areas, design thinking helps linguists and educators focus on the needs and experiences of users, leading to more effective, innovative, and user-friendly solutions in the field of linguistics.

Applying design thinking principles to learning Legal English involves considering the complexities of language acquisition alongside the unique requirements of

legal discourse. Just as design thinking integrates problem-solving processes with their contextual framework, learners of legal English must understand the nuances of legal language within its legal, cultural, and professional contexts.

But, first of all, let's discuss principles of design thinking. According to process of design thinking supplemented with the Double-Diamond model (Plattner, et al., 2009; Lindberg et al. 2010) we have 6 *stages of Design thinking process*, which are possible to adopted Legal English language learners. But it also would be useful to add phase 7, as in the *Figure 2*. Thus, we implement the best solutions into practice. This requires careful planning, execution, and continuous iteration based on feedback and changing needs.

Moreover, in a process of work special attention must be paid to *divergent thinking*, which involves generating numerous ideas in a free flowing process, where creativity is encouraged, and all possibilities are explored. And to *convergent thinking* as to the process of evaluating and narrowing down the ideas generated during the divergent thinking phase. It focuses on refining, selecting, and implementing the best solutions. *Lateral thinking*, a concept introduced by Edward de Bono, involves looking at problems from new and unexpected angles. It encourages breaking free from traditional linear thought processes to arrive at innovative solutions (Bono, 2010).



**Figure 2. Stages of Design thinking process**

In design thinking, the integration of divergent, convergent, and lateral thinking is essential for fostering creativity and innovation. Divergent thinking expands the range of possible solutions, convergent thinking refines and selects the most viable options, and lateral thinking ensures that the approach remains innovative and open to unexpected solutions (Bono, 2010). Together, these thinking processes enable design teams to tackle complex problems effectively and develop solutions that are both creative and practical.

Also, we must remember about psychological safety while our work. Psychological safety is broadly defined as a climate in which people are comfortable expressing and being themselves. It is about candor, about making it possible for productive disagreement and free exchange of ideas (Edmondson, 2018).

Systematic and holistic analysis of legal language and concepts is essential for effective learning. This involves breaking down legal texts and terminology, understanding their underlying principles, and applying them in relevant contexts. Collaboration among learners, legal experts, language instructors, and other stakeholders is vital for exchanging insights, addressing challenges, and fostering a deeper understanding of legal English (Wang & Winstead, 2016).

Creating an environment conducive to learning legal English requires careful consideration of the three Ps of design thinking: people, process, and place. People encompass both learners and instructors, who must engage actively in the learning process. The process involves structured methodologies for analyzing legal texts, practicing language skills, and applying legal concepts. The place refers to the learning environment, which should be conducive to collaboration, critical thinking, and creativity (Wang & Winstead, 2016).

Furthermore, partnerships play a crucial role in learning Legal English. Collaborating with legal professionals, language experts, and other stakeholders provides learners with diverse perspectives, real-world examples, and practical insights into legal language and practice. By integrating these partnerships into the learning process, learners can develop comprehensive Legal English proficiency and effectively navigate legal contexts in their professional careers.

Let's consider a practical example of applying design thinking principles to learning legal English.

*Problem identification is:* a group of law students from diverse linguistic backgrounds are struggling to comprehend complex legal texts and communicate effectively in English.

*Design thinking approach which is possible:*

1) *empathize* - understand the challenges and needs of the law students by conducting interviews, surveys, and observations, giving examples and appropriate glossary. Identify specific areas where they struggle, such as understanding legal terminology, interpreting statutes, or drafting legal documents;

2) *define* - narrow down the focus to specific learning objectives, such as improving legal vocabulary, enhancing comprehension of legal texts, or developing oral and written communication skills in legal contexts;

3) *ideate* - brainstorm potential solutions collaboratively with legal English colleagues, legal experts, and students. Generate ideas such as creating interactive legal English exercises, cases, projects, organizing mock trials or debates, or offering language immersion experiences in legal environments;

4) *prototype* - develop prototypes of cases, using legal vocabulary, ideate solutions, samples of legal English exercises, interactive online modules, or simulated legal scenarios. Test these prototypes with students to gather feedback and refine them accordingly;

5) *test* - implement the refined prototypes with a larger group of students and assess their effectiveness through pre- and post-tests, surveys, and observations. Gather feedback from students and instructors to identify areas for further improvement;

6) *practical implementation* - Interactive Legal English Workshops, organized by the law school, focusing on improving Legal English proficiency. *These workshops incorporate a variety of activities, including:* vocabulary-building exercises tailored to legal contexts, reading and analyzing legal texts, such as case law or statutes, role-playing exercises simulating legal negotiations, client interviews, or courtroom proceedings. Moreover, we can include writing exercises, such as drafting legal memos, contracts, or

briefs, legal firms' presentations, different kinds of letters, and peer feedback sessions to promote collaborative learning and communication skills.

An important part of work is a *partnerships*, because law school collaborates with language experts, legal professionals, and alumni to facilitate these workshops. Legal practitioners provide real-world insights and examples, while language teachers offer expertise in language acquisition and pedagogy.

7) *evaluation* - the effectiveness of the workshops is assessed through pre- and post-workshop assessments, feedback surveys, and observations of student performance in Legal English tasks. Continuous evaluation and feedback are used to refine and improve the workshops over time.

Thus, by applying design thinking principles to the development of these interactive legal English workshops, the law school can create a dynamic and effective learning environment that addresses the specific needs and challenges of its diverse students' needs.

Moreover, in today's interconnected and rapidly evolving world, proficiency in English is increasingly vital for professional sphere. Whether you lead a global corporation, develop software, advise clients, practice medicine, build homes, or work in state-of-the-art factories that require sophisticated computer skills to manage complex production challenges, mastering English can significantly enhance your effectiveness and opportunities. Just as the engine of growth in the Industrial Revolution was standardization, with executing tasks in «the one best way», today's growth is driven by ideas and ingenuity. This shift demands that everyone bring their intellectual capabilities to the forefront, collaborating to solve problems and adapt to ever-changing learning environments (Edmondson, 2018).

Immediate access to the internet provides us with opportunities to instantly access information and make connections with others and external resources. *Applying design thinking principles, we can leverage these virtual mediums to conduct extensive research on language, including words, phrases, logographs, and social pragmatics captured through online interactions.*

### **Design thinking and Legal English**

In an effort to theorize this rhetoric and counter earlier attempts to "scientize" the design process, Rittel and Webber ( Rittel &Webber, 1973) developed the "wicked problems" approach to design thinking. This theory posits that design problems arise from fundamental indeterminacy, meaning these problems lack definitive conditions and always have multiple possible solutions. However, despite the theory's apparent validity, it remains incomplete as no one has definitively proven why design problems are inherently indeterminate (wicked).

Similarly, in the realm of legal English and professional English learning, complex issues often exhibit comparable indeterminacy. Legal and professional challenges frequently lack definitive conditions and can have multiple valid interpretations and solutions, depending on the context and perspective. Just as in design thinking, the value in professional practice lies in navigating and resolving these complexities.

Thus, regardless of how design, legal, or professional problems are interpreted, the value lies in overcoming them. Research has shown that explanations of a designer's problem-solving approach often emphasize their methods over their thought processes (Cleminson & Cowie, 2021). This parallels both legal practice and professional English learning, where the emphasis is often on the procedural actions and strategies used rather than the underlying reasoning. This focus on the actions of professionals makes it easier for learners to adopt and utilize their tools to solve business or legal challenges, bypassing the need to first deeply "understand" the underlying theory (Rittel &Webber, 1973).

As an example we make the task for students, using the glossary of the topic «Intellectual property»:

<p><b>1. Intellectual Property:</b> creations of the mind, such as inventions, literary and artistic works, designs, symbols, names, and images used in commerce.</p>
<p><b>2. Exclusive Rights:</b> legal rights granted to creators and inventors to use their creations or inventions exclusively, preventing others from using them without permission.</p>
<p><b>3. Appellation:</b> a name or title that identifies a product, often used in relation to geographical indications.</p>
<p><b>4. Intangible Assets:</b> non-physical assets such as intellectual property, brand reputation, and goodwill.</p>
<p><b>5. Trademark:</b> a recognizable sign, design, or expression that identifies products or services of a particular source from those of others.</p>
<p><b>6. Geographical Indication:</b> a sign used on products that have a specific geographical origin and possess qualities or a reputation due to that origin.</p>
<p><b>7. Copyright:</b> legal protection given to the creators of original works of authorship, such as literature, music, and art.</p>
<p><b>8. Copyright Law:</b> legislation that grants exclusive rights to creators of original works and governs the use and distribution of these works.</p>
<p><b>9. Adopt Copyright Law:</b> the act of implementing or enacting legislation that provides copyright protection.</p>
<p><b>10. Apply for Copyright Protection:</b> the process of seeking legal protection for original works of authorship.</p>
<p><b>11. Copyright Protection:</b> legal measures that safeguard the rights of creators over their original works.</p>
<p><b>12. Copyright Protection Applies to:</b> the scope or range of works that are covered under copyright law.</p>
<p><b>13. Copyright Symbol:</b> the symbol used to indicate that a work is protected by copyright law.</p>
<p><b>14. Seek Damages for Copyright Infringement:</b> the act of pursuing legal compensation for unauthorized use of copyrighted material.</p>
<p><b>15. Violate a Copyright:</b> to use copyrighted material without permission, thereby infringing on the creator's exclusive rights.</p>
<p><b>16. Innovator:</b> a person who introduces new methods, ideas, or products.</p>
<p><b>17. Grant Protection:</b> to provide legal safeguards for intellectual property or other rights.</p>
<p><b>18. Industrial Design:</b> the ornamental or aesthetic aspect of an article, which can be protected by intellectual property law.</p>
<p><b>19. Trade Secret:</b> confidential business information that provides a competitive edge and is protected from unauthorized disclosure.</p>
<p><b>20. Layout Design:</b> the arrangement of elements on a page or within a space, often used in relation to integrated circuits or printed materials.</p>

<p><b>21. Integrated Circuit:</b> a set of electronic circuits on a small chip of semiconductor material, performing various functions.</p>
<p><b>22. Mediation:</b> a voluntary and confidential process in which a neutral third party, known as a mediator, assists the disputing parties in reaching a mutually acceptable agreement.</p>
<p><b>23. Franchise:</b> The right granted to an individual or group to market a company's goods or services in a particular territory.</p>
<p><b>24. License Out:</b> To grant permission to use intellectual property rights to another party, often in exchange for a fee or royalty.</p>
<p><b>25. Transact:</b> To conduct or carry out business or legal actions.</p>

*Scenario we use:*

You are an international lawyer working for a multinational corporation. Your task is to draft a contract clause that addresses the indeterminacy in cross-jurisdictional intellectual property disputes, using glossary «Intellectual property», which is given to you. This clause should be clear and adaptable to various legal contexts, reflecting the "wicked problems" nature of design thinking in legal practice.

*The task is:*

- *to design a research:* identify common challenges and differences in intellectual property laws across at least three jurisdictions (e.g., the United States, the European Union, and Japan);

- *to make a draft:* write a contract clause that addresses potential intellectual property disputes, ensuring it is adaptable and provides a clear process for resolution;

- *justification:* explain the reasoning behind your clause, highlighting how it reflects the indeterminate nature of legal problems and how it provides a practical solution;

- *presentation:* present your clause and justification to your peers, discussing how this approach can be applied to other areas of legal practice or professional English learning.

*Example clause:*

In the event of an intellectual property dispute arising under this agreement, the parties agree to resolve the matter through binding arbitration in a neutral jurisdiction. The arbitrator shall consider the intellectual property laws of the United States, the European Union, and Japan, and shall render a decision that balances the principles of these jurisdictions. This process shall involve an initial attempt at mediation, followed by arbitration if necessary. The decision shall be final and enforceable in all involved jurisdictions. Furthermore, this clause shall address exclusive rights and copyright protection as applicable, ensuring comprehensive coverage.

*Reasoning:* this clause addresses the indeterminate nature of legal problems by providing a structured yet flexible approach to resolving intellectual property disputes. Recognizing the "wicked problems" nature of cross-jurisdictional intellectual property law, it includes:

- binding arbitration: ensures a definitive resolution process, adaptable to various legal contexts;

- consideration of multiple jurisdictions: balances principles from the U.S., EU, and Japan, acknowledging different legal standards and enforcement mechanisms;

- mediation and arbitration: offers an initial non-adversarial approach (mediation) before resorting to arbitration, aligning with best practices in dispute resolution. This method provides a fair and adaptable solution, reflecting the complexity and indeterminacy of IP disputes across jurisdictions. It is designed to be clear, comprehensive, and enforceable, ensuring that parties understand their rights and obligations without the need for deep legal knowledge in multiple systems.

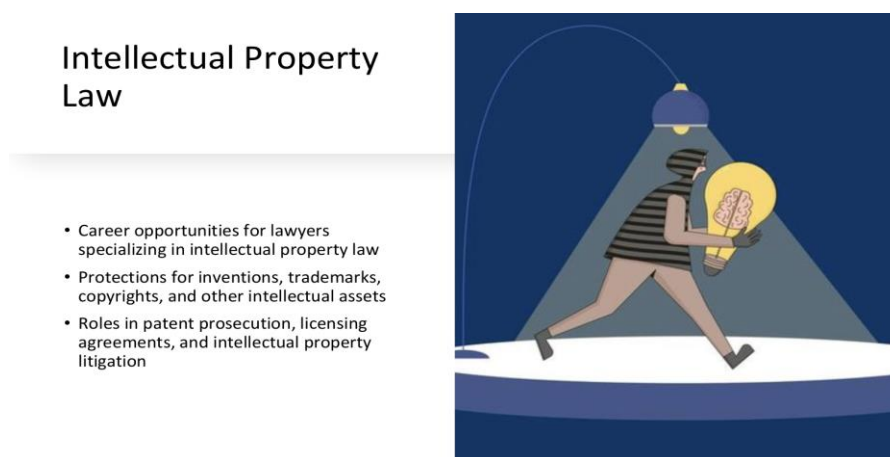
*Presentation outline:* brief overview of the task and the importance of addressing indeterminacy in cross-jurisdictional intellectual property disputes. Explanation of the «wicked problems» concept in design thinking and its relevance to legal practice.

*Research Findings:* highlight common challenges and differences in intellectual property laws across the U.S., EU, and Japan. Specific examples of how these differences impact IP dispute resolution. Present the drafted contract clause, explaining its components and how it aims to resolve disputes.

*Discuss the reasoning* behind the clause, emphasizing its adaptability and fairness. Highlight how the clause reflects the principles from the glossary, such as exclusive rights, copyright protection, and addressing potential violations. Illustrate how this approach can be applied to other legal practices, such as licensing out intellectual property or collaborating on technical drawings. Emphasize the value of focusing on practical, adaptable solutions in professional English learning and legal practice.

*Summarize the benefits* of the proposed clause and approach. Encourage peers to consider the principles of design thinking and adaptability in their own legal practices.

By presenting this clause and its justification, we demonstrate a thorough understanding of the complexities of cross-jurisdictional intellectual property law and offer a practical approach to resolving these «wicked problems» in a professional and accessible manner, using topical vocabulary what is needed as you see in Figure 3, which is an example of students' work.



**Figure 3. Intellectual Property Law**

This is an example of practical using design thinking principles in professional English while teaching Legal English in Taras Shevchenko National University of Kyiv (Ukraine). Thus, design thinking is a human-centered approach to innovation that leverages a designer's skills to align people's needs, technological possibilities, educational, and business success requirements.

### **Conclusion**

The findings of this research underscore the transformative potential of Design Thinking as a catalyst for fostering 21st-century skills within ESP (English for Specific Purposes) classrooms. By emphasizing dialogue and collaborative problem-solving, Design Thinking promotes a constructivist and highly engaging learning environment tailored to the needs of modern education.



Firstly, students reported finding the activities both enjoyable and confidence-boosting in terms of their communication and critical thinking abilities. The iterative nature of Design Thinking, involving cycles of divergent and convergent thinking, provided students with a platform to collaboratively discuss and address problems as a team. This approach granted them greater autonomy, allowing learning outcomes to emerge organically through the problem-solving process. Notably, the demand for creating solutions that are practical and fit for purpose makes Design Thinking especially suitable for learners who prioritize appropriateness in their creative expressions.

Secondly, Design Thinking encouraged innovative applications of English, particularly in the Legal English domain. Students developed and tested creative tasks that integrated Legal English grammar and communication skills, enabling them to produce and evaluate language products. This experiential approach offered invaluable insights into the real-world application of Legal English (Wang & Winstead, 2016). However, the complexity of certain design challenges occasionally prompted students to revert to Ukrainian during discussions. To mitigate this, educators are encouraged to adopt flexible approaches to code-switching, considering students' linguistic competence. Additionally, incorporating multimodal learning tools and concrete examples can enhance student engagement and facilitate a deeper understanding of creativity.

Applying Design Thinking to Legal English education offers unique advantages. Legal English demands precision, clarity, and a nuanced understanding of legal terminology and concepts. Through Design Thinking, students collaboratively solve legal problems, draft legal documents, and simulate real-world legal scenarios. This practical, hands-on approach not only enhances their legal language proficiency but also sharpens critical thinking and problem-solving skills within a legal context. By fostering an interactive and realistic learning environment, Design Thinking helps students gain confidence and practical expertise in using Legal English effectively.

In conclusion, Design Thinking emerges as an innovative and culturally adaptable framework for fostering 21st-century skills in ESP settings, particularly in specialized areas like Legal English. Its ability to merge creativity with practicality equips students with the competencies needed to thrive in modern academic and professional landscapes. By promoting engagement, collaboration, and innovative problem-solving, Design Thinking bridges the gap between theoretical knowledge and real-world application, preparing students for the complexities of their future careers.

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