

Evaluating transactional distance and student engagement in HyFlex art therapy education amidst the war in Ukraine

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Abstract

This study examines the utilization of flexible learning methods in an art therapy course and explores innovative approaches to enhance learning outcomes and manage stress. The course incorporates a HyFlex model, allowing students to participate in-person, synchronously online, or asynchronously through recorded classes, accommodating diverse student circumstances. This flexibility proves invaluable during challenging situations, such as rocket attacks or migration-related issues, as recorded classes provide accessibility and convenience. The design of art therapy assignments focuses on cognitive and emotional aspects, creating an inclusive and supportive learning environment. The assessment of transactional distance reveals high student satisfaction, positive learning experiences, and strong engagement with online art therapy tools. The findings underscore the importance of managing stress and promoting effective learning in art therapy education. By addressing stress signs and implementing student-centered approaches, art therapy courses can optimize learning outcomes and facilitate the acquisition of professional skills.

Keywords

flexible learning, art therapy course, hyflex model, stress management, innovation in learning, cognitive and emotional aspects, transactional distance, student satisfaction, online art therapy tools, professional skills acquisition

1. Introduction

Since the outbreak of hostilities in 2014, Ukrainian higher education has encountered significant obstacles stemming from the ongoing conflict with the Russian Federation. The Ukraine Conflict Monitor, along with various statistical and analytical sources, has highlighted the profound impact of this conflict on the country, including the displacement of individuals, infrastructure destruction, and disruption of various sectors, including education at all levels [1]. These challenges encompass a range of issues such as the internal forced migration of students [2, 3], the need to develop integration mechanisms for forced migrant students and veterans within the educational system, the relocation of universities from occupied territories [4], the implementation of distance and hybrid teaching methods amidst shelling and air raids, and the adaptation of entrance examinations National Multi-subject Test (NMT) for bachelor's and master's programs [5].

Considering these circumstances, Ukrainian universities have taken note of an educational model known as HyFlex Learning, which has gained attention. This model has become significant due to the presence of universities situated in conflict zones, where they face different challenges in providing uninterrupted education [2].

Some universities continue to offer full-time education on campus, while others adopt a combination of in-person laboratory sessions and remote learning due to ongoing shelling. Additionally, certain universities have adopted a hybrid approach, offering both in-person and remote sessions to accommodate the migration of students [5]. The term “HyFlex” is derived from the combination of “hybrid” and “flexible,” reflecting its ability to blend face-to-face and online learning methods, enabling students to

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select the mode of learning that suits their individual circumstances [6]. This adaptable approach has proven particularly beneficial in areas affected by the conflict, where access to physical classrooms may be restricted or unsafe.

Ensuring the quality of HyFlex training for undergraduate and graduate psychology programs presents an even greater challenge when utilizing information and communication technologies (ICT) [7, 2]. This requires a specific focus on implementing best practices of competence-based and practice-oriented education, particularly in relation to the standards of psychologist training [6, 8]. The training of psychologists necessitates the development of practical skills in counseling and psychotherapy, which traditionally involve laboratory work and case supervision. In an online format, the Zoom platform is employed to facilitate the development of counseling techniques through breakout rooms, which mimic group interactions within student triads consisting of the client, psychologist, and supervisor.

However, achieving the desired outcomes is contingent upon factors such as student motivation and transactional distance within the discipline [9, 10]. To address this, periodic online self-assessment of student skills, assessment of teaching (SET), and the utilization of learning analytics data become crucial for modifying curricula and syllabuses in response to evolving learning realities. This data includes an analysis of self-assessment of student learning skills and satisfaction at the course level, an evaluation of transactional learning distance at the faculty level, and an examination of faculty-level dropout rates [7].

2. Literature review

The assessment of student teaching, known as the Student Teaching Assessment (STE), is of great importance to Ukrainian university administrations [7]. These evaluations play a critical role in informing decisions related to academic recruitment, resource allocation, and curriculum changes [11]. However, as the manualization and digitalization of STE is being introduced in Ukrainian universities, it has become clear that some areas need improvement.

In our preliminary study, which included analysis of open data from 41 prominent Ukrainian universities, we focused on examining the effectiveness of these assessment tools in evaluating the quality of course content, teaching aids, and course design. Our main goal was to improve the online learning experience for students through a comprehensive study of existing STEs.

Based on our findings, we argue that there are certain shortcomings in the content of the course feedback form. Firstly, self-assessment of student competencies using the “qualifications framework”, which is commonly used in the European Union, is not standardized or validated in the Ukrainian context [12]. To ensure reliable and meaningful self-assessment, it is important to establish standardized and approved guidelines that are consistent with the Ukrainian education system.

Second, we identified the need to develop guidelines for obtaining intermediate online feedback from students. Intermediate feedback plays a vital role in evaluating student progress and promptly resolving any issues or concerns [11]. By establishing clear procedures and guidelines for collecting interim feedback in an online learning environment, universities can better understand the student experience and make the necessary adjustments to improve the quality of teaching and learning.

Finally, we highlight the importance of creating learning analysis procedures that provide insight into how learners interact with the digital learning environment [13]. Learning analytics can provide valuable insights into student engagement, performance, and learning patterns, enabling universities to make data-driven decisions [7]. By implementing robust learning analysis procedures, Ukrainian universities can gain a deeper understanding of students’ online learning experience and optimize the digital learning environment accordingly.

2.1. Art therapy course standards

In accordance with the standard training of psychologists in Ukraine, the education of art therapists encompasses the acquisition of practical skills that enable them to effectively utilize art as a means of expression and therapeutic intervention [12]. The design of art therapy courses may involve learning

various aspects, such as understanding and interpreting art [14], working with diverse artistic media (such as painting, sculpture, and collage) [1, 15], and developing communication techniques with clients through art [16]. Additionally, students are introduced to fundamental psychological theories and methods that serve as the foundation for art therapy practice. This includes exploring psychoanalytic and analytical approaches, expressive art therapies, programs such as Compassionate Arts Psychotherapy (CAP), and Mindfulness Art Therapy based on Trauma (MBAT) and other areas [17, 16]. Art therapy education incorporates concepts related to reframing, reforming, and reclaiming [15]. These concepts are integral to the art therapy process, allowing individuals to engage in self-exploration, introspection, and personal growth through their creative expressions. By incorporating reframing, reforming, and reclaiming, art therapists facilitate transformative experiences that promote healing, self-discovery, and empowerment.

During students' training, they also have opportunities to gain practical experience through internships and shadowing experienced art therapists, as well as practicing their skills under the guidance of a supervisor. Art therapy education incorporates concepts related to reframing, reforming, and reclaiming [15]. These concepts play a significant role in the practice of art therapy and guide the therapeutic process. Here is an explanation of each concept [1]:

1. Reframing involves shifting the perspective or interpretation of a situation, experience, or artwork. In art therapy, reframing helps individuals explore alternative meanings, narratives, or emotions associated with their art. By reframing their artwork, clients can gain new insights, challenge negative thought patterns, and discover different ways of perceiving themselves and their experiences.
2. Reforming in art therapy refers to the process of transforming or reshaping elements of one's art or creative expression. It involves making intentional changes, experimenting with different techniques, and exploring alternative forms of artistic representation. Through reforming, clients can explore personal growth, express emotions, and develop new ways of self-expression and communication.
3. Reclaiming involves the act of reclaiming personal power, identity, or aspects of oneself through art. It empowers individuals to explore and reconnect with their authentic selves, values, and strengths. Art therapy provides a safe and supportive space for clients to express themselves freely, heal from past traumas, and reclaim a sense of ownership over their experiences and narratives.

Upon completion of the art therapy course, students transition from being learners to becoming clients themselves or members of art therapy groups. It is noteworthy that the formation of novice art therapists is a dual process, benefiting both the training of future psychologists to work with clients and serving as a therapeutic experience for the students themselves. This duality is formed this HyFlex design Art therapy course.

2.1.1. Design HyFlex Art therapy course

The HyFlex art therapy course was developed based on the concept of "trickle down engagement" [18] and transactional distance in online learning [9]. Based on ideas of Saucier et al. [18], the empathic course development perspective, as a form of TDE, involves the intentional incorporation of empathy into the structure, goals, policies, and interactions of an art therapy course. By actively considering students' cognitive and emotional perspectives, this empathic course design perspective aims to enhance the collective experience of both students and faculty in war conditions in Ukraine.

Due to empathic course development, Art therapy course programs are based on a dual purpose: to provide information about the content, structure, and rules of the course, and to engage and engage students in their learning process [19, 14, 1]. It is unlikely that rocket attacks will help most Ukrainian students gain in-depth knowledge of their profession. And that is why predictable and clear schedules and wonderful future art therapy assignments form students' willingness to learn. Establishing clear weekly routines, such as regular communication about upcoming course events (e.g. planned videos

and online drawing tools) and assignments (sharing podcasts, editing and highlighting basic ideas book chapters for colloquiums), planned art materials for laboratory tasks, promotes predictability and reduces student stress and anxiety in the current environment of missile shelling.

The utilization of flexible learning methods in art therapy courses, which allow students to participate in in-person, synchronously online, or asynchronously through recorded classes, provides a responsive approach to accommodate diverse student circumstances [10]. This flexibility proves particularly valuable when students face challenges attending classes due to factors such as rocket attacks on Ukrainian territory or migration-related issues. The availability of recorded art therapy classes enables students to access course content at their convenience, even when military stress levels are high and class attendance is affected. Additionally, the implementation of responsive attendance policies allows students to choose alternative modes of attending classes or allows for a certain degree of absenteeism without academic penalties. In the context of the art therapy curriculum, an innovative approach is observed, where the integration of scores from university courses with Massive Open Online Courses (MOOCs) offered on platforms like Coursera is explored [20, 21]. This adaptive policy provides a successful solution that combines different learning resources to enrich the students' educational experience.

Moreover, the empathetic design of art therapy assignments focuses on analyzing casework related to topics such as therapeutic fairytales about bomb shelters and migration. These assignments are developed with a student-centered and meaningful approach, aiming to facilitate the successful demonstration of learning outcomes and enhance the overall learning experience for both students and faculty [22, 16]. By aligning assignments with student interests and encouraging active participation, the course fosters a positive and supportive learning environment.

The HyFlex art therapy course demonstrates an empathic approach to course design, incorporating considerate scheduling, flexible attendance policies, and student-centered assignments and assessments. By prioritizing the cognitive and emotional aspects of learners, the course aims to foster an inclusive, supportive, and engaging learning environment for all participants. Within this framework, transactional distance, as proposed by Moore and Anderson [9], encompasses three dimensions: learner-content interaction, learner-instructor interaction, and learner-learner interaction [17]. In the specific context of HyFlex Educational Art Therapy, transactional distance refers to the challenges and opportunities psychologists face in bridging psychological and communication gaps among themselves, the therapeutic content, their instructors, and fellow students [9].

While the HyFlex approach offers various benefits, there are limitations to consider in terms of transactional distance in the context of art therapy education [23]. First, the student's interaction with the content can present challenges for students, as interacting with art therapy content in an online environment may not fully reproduce the tactile and sensory aspects of artistic expression. To address this limitation, strategies such as the inclusion of interactive modules (Whiteboard, virtual mandala painting platform, Inspirograph, Virtual Spinner for therapeutic fairy tales, Virtual Sandtray, Online Puppets, Google Quick Draw, Pollock Painting, Bomomo Drawing) and virtual art galleries of projective cards have been implemented in our practice (figure 1). These tools aim to bridge the distance between transactions and enhance the immersive experience of art therapy. So, when working with therapeutic fairy tales, the combination of Virtual Spinner for therapeutic fairy tales was used for folding fairy tales, and Online Puppets for programming (figure 2).

Establishing effective channels of communication between psychology students and art therapy teachers plays a crucial role in overcoming the transactional distance in teaching art therapy and building self-motivation in wartime. In the realities of Ukrainian higher education, the interaction between a student and an art therapist in art therapy has two contexts: demonstration of sessions of artistic techniques by an instructor and observation of students' work. In addition, transactional distance defines the use of routine synchronous and asynchronous online discussions, video conferences, and personalized feedback on the Moodle platform to support art therapy tasks [24, 25].

The Moodle platform offers a structured environment where students can submit their art therapy assignments and receive personalized feedback from tutors [23, 26]. Teachers can provide detailed comments, provide feedback when evaluating art therapy case studies, and offer theoretical ideas

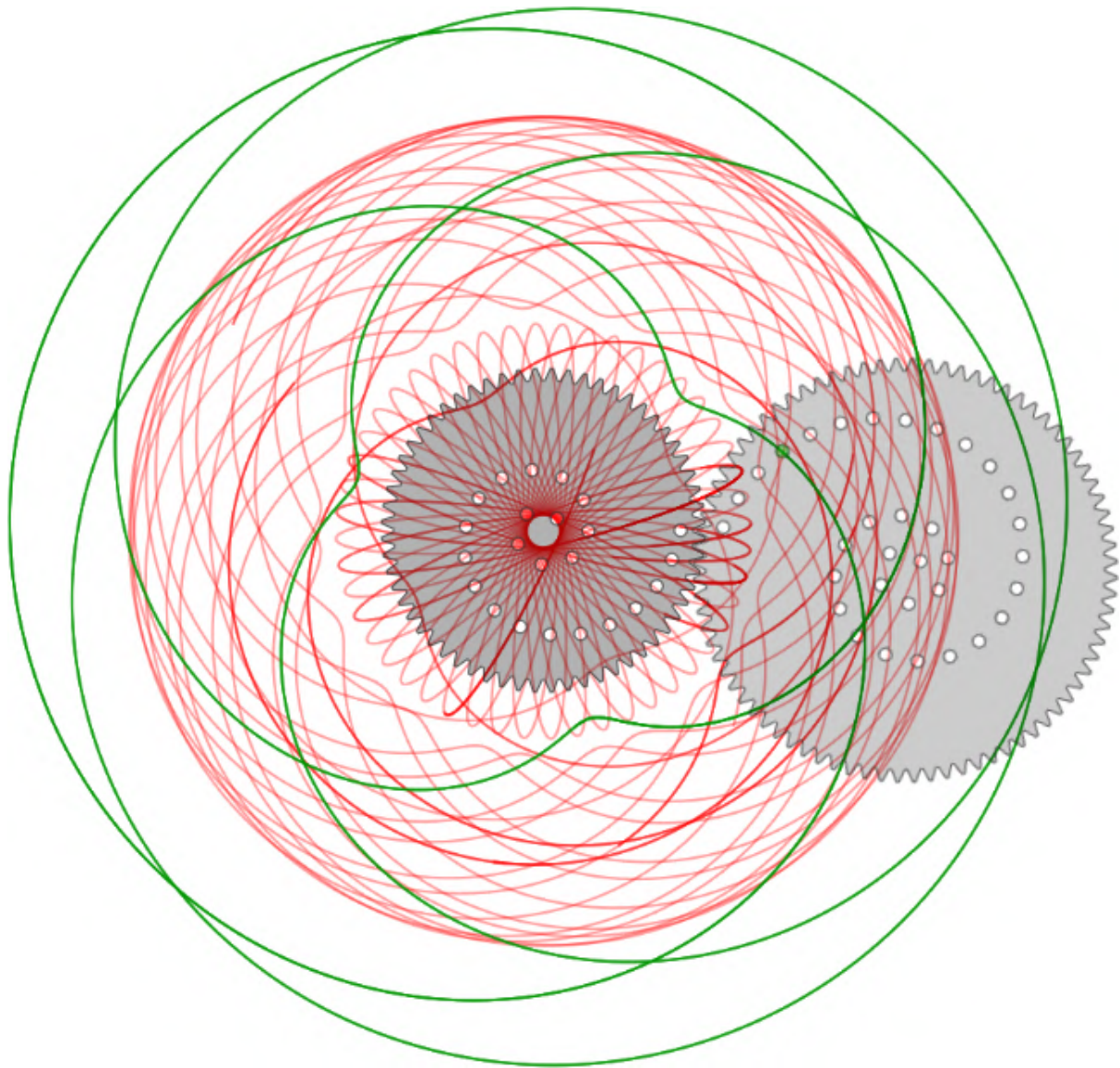


Figure 1: Interactive modules of inspirograph and virtual mandala painting platform.

related to the task. This mode of feedback promotes reflective practice, encourages self-assessment, and improves the integration of theoretical knowledge with practical application.

Student-to-student interaction plays a vital role in both reducing transactional distance and fostering the development of crucial skills for future art therapists. The significance of interaction as the third leading criterion for transactional distance highlights its importance in honing students' abilities in various art therapy techniques. Despite the challenges posed by two years of distance learning during the COVID-19 pandemic [27] and a subsequent year of HiFlex learning in a war context, online pairings have created opportunities for students to engage in collaborative activities. Discussion blitz voting in Survey Monkey, group graphic projects, and joint art therapy exercises enable the acquisition of reporting skills, the understanding of transference-countertransference dynamics, the analysis of drawing symbolism, and the provision of mutual support and learning from diverse perspectives.

Student-to-student interaction significantly contributes to the level of involvement and engagement in art therapy courses [15]. Active participation and collaborative exchanges among students foster a sense of belonging, motivation, and commitment to the learning process. Interaction facilitates the development of a supportive learning community, enhancing students' connection to the course content and their peers. Art therapy requires the mastery of various skills, such as conducting consultative

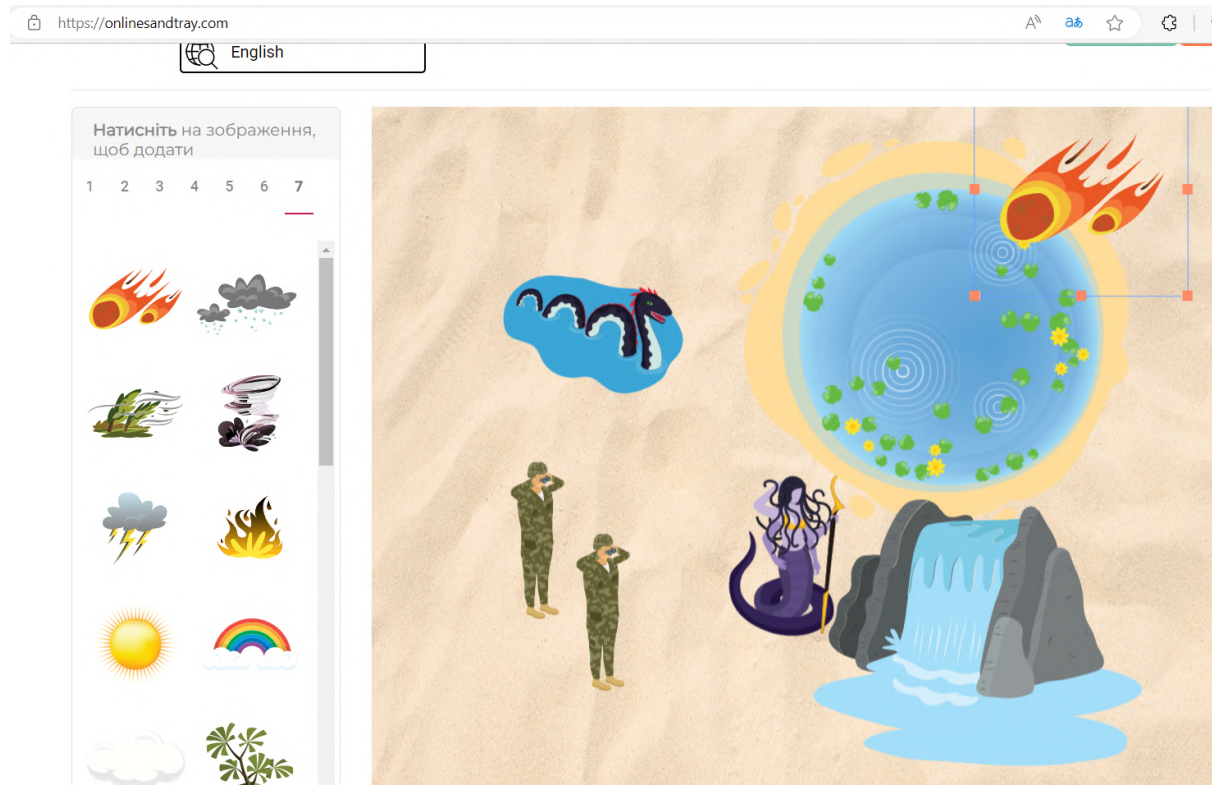


Figure 2: Interactive modules of Virtual Sandtray.

conversations, facilitating free or thematic drawing sessions, interpreting artistic media, and engaging in dialogue-based approaches [22]. The parameter of pairing or triplets within an art therapy group plays a decisive role in practicing these skills. Through online pairings, students can refine their abilities in these areas, even in the face of prolonged distance and hybrid learning contexts [23].

Conducting rapid-fire discussions through tools like Survey Monkey allows students to express their opinions, share perspectives, and vote on specific topics related to art therapy [1]. This method fosters critical thinking, encourages active participation, and enables the exploration of diverse viewpoints. Through these interactions, students refine their abilities to analyze, synthesize, and articulate their thoughts effectively.

Collaborative graphic projects within student groups provide a platform for creative expression, problem-solving, and the exploration of art therapy concepts [28]. By working together on visual representations, students learn to communicate ideas visually, interpret each other's artwork, and engage in constructive feedback (figure 3). This process enhances their skills in group dynamics, interpersonal communication, and collaborative decision-making.

In general, engaging in joint art therapy exercises, such as collective art-making or group discussions on assigned therapeutic themes, allows students to practice reporting skills, analyze transference-countertransference dynamics, and delve into drawing symbolism. These activities create an environment for mutual support and shared learning experiences, fostering a deeper understanding of art therapy principles and the therapeutic process.

In conclusion, our study highlights the importance of addressing deficiencies in the content of the course feedback form based on the concepts of “trickle-down engagement” and transactional distance in HyFlex, as well as the need for guidelines on obtaining mid-term online feedback and establishing procedures for learning analytics of big data in Ukrainian universities. By addressing these areas of improvement, the effectiveness of student teaching assessments can be enhanced, resulting in better decision-making, resource allocation, curriculum changes, and ultimately an improved online learning experience for students.

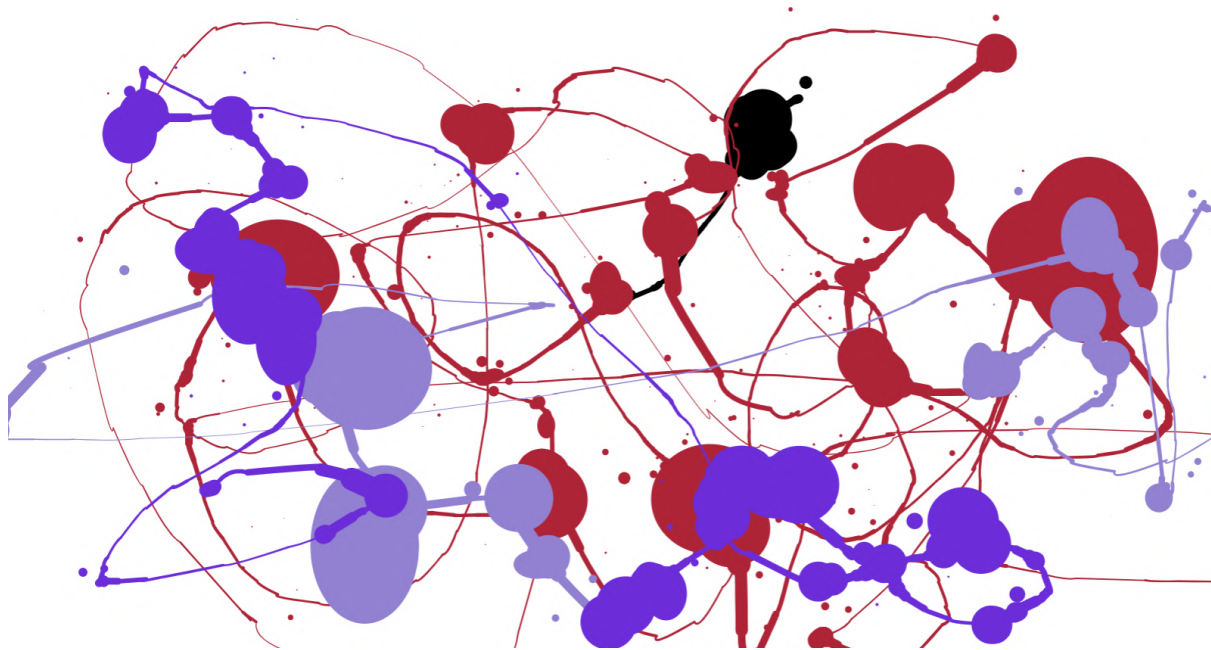


Figure 3: Interactive modules of Pollock Painting.

3. Research methodology and design

The objective of this study was to examine the impact of transactional distance on the teaching experience of art therapy, focusing on the development of an empathic course and fostering “flowing interaction” with psychology students studying in a HyFlex format amidst the war in Ukraine during the academic years 2021-2022 and 2022-2023. The study employed a mixed approach to investigate the transactional distance experienced by students enrolled in art therapy courses in a war-affected setting, utilizing Moodle as an asynchronous platform and Zoom for synchronous learning and showcasing of lab work. By integrating quantitative and qualitative data collection and analysis, the mixed method approach facilitated a comprehensive understanding of the research problem and shed light on the dynamics of teaching and learning in this particular context.

Examining the impact of transactional distance on the effectiveness of teaching art therapy among psychology students during times of war, considering stress factors (Scherbitsky scale), and utilizing the Zhang scale, the study employed various statistical analysis methods:

1. The quantitative data collected through the Zhang scale will be analyzed using descriptive statistics to identify patterns and trends in students’ perceptions of transactional distance.
2. Inferential statistical tests, correlation analysis, specifically employing the Pearson criterion, was used to determine the relationship between transactional distance scales, stress factors, and the effectiveness of art therapy training quantitatively. This analysis aimed to establish the strength and direction of the association between these variables.
3. Content analysis of open-ended responses using the k-means algorithm was conducted to analyze qualitative data. This involved examining participants’ open-ended responses regarding the course and modules to identify common themes and classify responses based on their similarities. This approach facilitated a systematic exploration of participants’ experiences and perspectives.

3.1. Research questions

Given the aforementioned prerequisites, the research inquiries will encompass the following:

1. How can an art therapy course be modified to incorporate interactive online psychotherapy tools?

2. What methods can be employed to evaluate the transactional distance encountered by students and their satisfaction levels while utilizing an integrated platform?

3.2. Research approach and data collection

To gather data, an online, asynchronous e-mail survey was designed to solicit feedback on Student Evaluations of Teaching (SET). The survey included the translation of Zhang’s scale of transactional distance, a list of stress factors (Scherbatiyh’s scale), and open-ended questions related to satisfaction in education. In this study, the questionnaire was administered to students utilizing various mobile devices such as computers, iPads, smartphones, and tablets. Ensuring easy accessibility for all participants, regardless of the type of mobile phone they had, was a fundamental aspect of the questionnaire design. This criterion was given utmost importance, and links were sent to different mobile phones to verify its effectiveness.

The Likert scale of Zhang’s scale and the client satisfaction questionnaire comprised closed questions and offered a five-point response range from “completely disagree” to “completely agree”. When employing a stress-factors-based questionnaire (Scherbatiyh’s scale), individual responses carry significant weight as they are not compared to the sample or other respondents. This approach helps mitigate potential biases that could influence the research results.

3.3. Sample select

The sample consisted of art therapy students who are currently enrolled in HyFlex courses or programs in the Psychology Department of Kryvyi Rih State Pedagogical University (2021-2022 and 2022-2023 academic years). The sample included ($N=139$) a diverse range of students in terms of age from 19 to 28 years. The sample was predominantly female, with 78% of the participants being female and 22% being male. The majority of the students (81%) had their first bachelor’s degree, while the remaining 19% had a second education. Prior Experience with Art Therapy: Among the students, 20% had previous experience with an art therapy course, indicating some familiarity with art therapy techniques. The remaining 80% did not have a background in art therapy or exposure to war trauma (table 1).

Table 1

Summary table of the sample structure regarding the type of training, conditions of access to training at the time of the course.

Department of student	<i>N</i>	The number of students remaining in the frontline territories	The number of students who became forced migrants	Number of students remaining in the occupied territories	HyFlex studding	Distancing studding	Dropout
Psychology	31	26	5	0	26	5	0
Primary education	38	31	6	1	31	7	1
Preschool education	34	29	4	1	29	5	2
Biology and psychology	14	12	2	0	12	2	0
Ukrainian Philology and Psychology	22	16	6	0	16	6	1
Total	139	114	23	2	114	25	4

3.4. Significance and consequences

The results of the study will contribute to understanding the transactional distance in HyFlex art therapy education. The results can help develop strategies, interventions and curricula to minimize the distance between transactions, improve the quality of learning and better prepare students to support people affected by war trauma in an online and HyFlex environment.

4. Data analysis

The first step of data analysis involved examining the main signs of stress using Scherbatiyh's scale among a sample of 139 students who participated in a course. The purpose was to identify factors that influence stress levels. The results showed a range of scores, with the highest being 33 and the lowest being 3.5. Evaluating the scores on a scale of 0 to 5, which represents a good level, it was found that 21% of participants did not experience significant levels of stress. Moderate stress, indicated by scores from 6 to 12, was reported by 14% of participants and could be managed through effective time management and periodic rest. For 36% of participants, scores from 13 to 24 indicated pronounced strain on their emotional and physiological systems, suggesting unsuccessful compensation for strong stressors. Special stress management methods were recommended for this group. Additionally, 29% of participants showed a high level of stress with scores ranging from 25 to 40.

The study explored various aspects of stress, including intellectual, behavioral, emotional, and physiological symptoms. The results revealed a significant prevalence of these symptoms within the sample. Intellectual signs, such as negative thoughts and difficulty concentrating, were noted by more than half of the participants. Behavioral manifestations, including chronic time pressure and changes in appetite, were also prominent. Emotional symptoms, such as restlessness and irritability, as well as physiological indicators like bodily pain and increased fatigue, were frequently reported. This analysis provides valuable insights into the manifestation of stress among the sampled student population. Top signs of stress sample ($N=139$):

1. *Intellectual signs of stress.* Predominance of negative thoughts: 60.4% of the sample reported experiencing negative thoughts. Deterioration of memory indicators: 56.3% of the students noted experiencing memory problems. Passivity, desire to transfer responsibility to someone else: 54.2% of the sample expressed a desire to transfer responsibility and showed signs of passivity. Difficulty concentrating: 54.2% of the students had difficulty concentrating.
2. *Behavioral signs of stress.* Chronic lack of time: 66.7% of the sample reported consistently feeling a lack of time. Loss of appetite or overeating: 50% of the students experienced changes in their eating habits. Low activity productivity: 49.7% of the students exhibited decreased productivity.
3. *Emotional symptoms of stress.* Anxiety, increased anxiety: 77.1% of the students reported feeling anxious or experiencing increased levels of anxiety. Irritability fits of anger: 66.4% of the sample exhibited signs of irritability and occasional anger outbursts. Gloomy mood: 52.1% of the students experienced a consistently low or gloomy mood.
4. *Physiological symptoms of stress.* Pains in various parts of the body of an unspecified nature, headaches: 70.8% of the students reported experiencing bodily pains and headaches without a specific cause. Increased fatigue: 64.6% of the sample reported feeling more fatigued than usual.

During the second stage of the assessment, we evaluated the impact of transactional distance on student experiences. The overall satisfaction with the course was rated at 4.08, with a standard deviation of 1.03, on a scale from 1 to 5 (SS = "Student satisfaction Overall, I am satisfied with this course"). Students rated their learning experience and achievement of learning goals with an average value of 3.91 (SL = Student learning "I have learned a great deal in this online class") and 4.01 (LG = Learning goals I have made tremendous progress towards my goal in the subject area of this course), respectively, with standard deviations of 0.61 and 0.32. The transactional distance between students and the teacher was perceived as close, with a mean rating of 4.08 and a standard deviation of 1.04 (table 2).

Students highly valued the interaction with the online art therapy tools used in the classes, including the Whiteboard, virtual mandala painting platform, Inspirograph, Virtual Spinner for therapeutic fairy tales, Virtual Sandtray, Online Puppets, Google Quick Draw, Pollock Painting, and Bomomo Drawing (SI average value 4.02, standard deviation 1.03).

However, there was a decline in student ratings for the Student-Student Transactional Distance (SS) with an average rating of 3.70 and a standard deviation of 0.20. In open-ended responses, students who studied online expressed feelings of fear when interacting with their fellow students. The Transactional

Table 2Indicators of the transaction distance of the sample ($N=139$).

Scales	Σ	σ
ST = Transactional distance between students and teacher	4.08	1.04
SC = Transactional distance between student and content	3.63	1.33
SS = Transactional distance between students and students	3.70	0.20

distance between the student and the content (SC scale) received the lowest ratings, with an average rating of 3.63 and a standard deviation of 1.33.

Based on our analysis of the empirical results, we employed inferential statistical tests, specifically correlation analysis using the Pearson criterion, to examine the quantitative relationship between transactional distance scales and the effectiveness of art therapy training. We observed that there were distinct groups of students: some consistently completed tasks and submitted reports on time, while others submitted their reports significantly later or did not complete certain tasks at all (table 3, column 2). This suggests that the systematicity of learning activity is influenced by students' personal learning styles. We used Pearson's correlation to demonstrate the effect, acknowledging that the evaluation of correlation may be slightly lower and not equal to 1. To establish statistical significance, additional non-parametric significance tests were applied due to the limited information on the distribution of our data.

Table 3Indicators of students' work systematicity on the base of assignments ($N=139$).

Assignment title	Number of reports that were uploaded on time	Correlation with the grade for quality	Correlation with the total number of reports that were uploaded on time
Transactional distance between student and content			
Visual Art Therapy (Google Quick Draw) Mandala (Virtual mandala painting platform, Inspirograph)	98	–	0.39
Therapeutic fairy tales and Drama Therapy (Virtual Spinner for therapeutic fairy tales, Online Puppets)	122	0.67	0.51
Sandplay Therapy (Virtual Sandtray) Digital Art Therapy (Pollock Painting, Bomomo Drawing)	89	0.31	0.67
Projective cards	90	–	0.62
	130	0.56	0.56
	130	0.51	0.74

The qualitative data analysis through thematic analysis provided valuable insights into students' experiences and highlighted key areas for improvement in the course. The identified clusters of feedback offer specific recommendations to enhance the learning environment and address transactional distance issues.

Cluster 1 emphasizes the need to allocate more time for in-depth study of art therapy methods and techniques, considering students' preferences for study times. Additionally, distributing the workload evenly throughout the course and providing opportunities for self-study can contribute to a comprehensive understanding of the subject.

Cluster 2 suggests enhancing the course content by including more topics such as projective maps and sand therapy. Incorporating materials in Ukrainian, along with English, and showcasing examples of art therapy practices by Ukrainian psychologists can make the content more relatable and engaging for the students. Organizing discussions and presentations of student work completed at home can foster an interactive and collaborative learning environment.

Cluster 3 focuses on improving the transactional distance between students and the course interface. Enhancing the clarity and user-friendliness of the Moodle platform interface can minimize confusion and increase student satisfaction. Optimizing course tasks to be more practical and applicable to real-world scenarios and introducing a variety of assignments, including quizzes and practice exercises, can maintain student interest and provide structured learning experiences in different formats.

5. Discussion

The experimentation with HyFlex teaching methods within art therapy courses yielded intriguing outcomes. It allowed students to engage in various modes, including in-person, synchronous online sessions [19], and asynchronous learning through recorded materials, accommodating diverse student circumstances [29]. The development of the HyFlex art therapy course, rooted in the concept of “trickle down engagement” [18] and considerations of transactional distance in online learning [9], has brought forth noteworthy trends in student engagement and activities, warranting a comprehensive examination and refinement of the course.

The launching of this arttherapy course based on inspiration from the insights of Saucier et al. [18], who advocated for the creation of an empathetic learning environment. This involved deliberately infusing empathy into the course’s structure, objectives, policies, and interactions within the art therapy curriculum. Leveraging online tools like isotherapy [14], sandplay activities, and metaphorical cards [1], we aimed to stimulate students’ cognitive and emotional perspectives. This empathetic course design sought to enhance the collective experience of both students and educators, particularly given the challenging backdrop of the war in Ukraine, with a particular focus on stress reduction during classes.

The findings revealed that 21% of participants reported minimal stress levels, signifying their adeptness in managing the course requirements without experiencing substantial stress-related challenges. Conversely, 14% of participants fell within the moderate stress category, scoring between 6 and 12, indicating that they grappled with manageable stress levels that could potentially be alleviated with improved time management and occasional relaxation strategies. However, the results took a concerning turn when 36% of participants exhibited stress scores ranging from 13 to 24, while another 29% demonstrated high stress levels with scores ranging from 25 to 40. These subgroups are confronting significantly heightened stress levels, demanding immediate attention and intervention to mitigate the potentially adverse effects on their academic performance and overall well-being.

The design of art therapy assignments in our program places a significant emphasis on analyzing casework related to essential topics, including therapeutic narratives concerning bomb shelters, grief, loss, and migration in war conditions in Ukraine. Throughout students’ art training, they are provided with valuable opportunities to acquire practical experience through internships, shadowing experienced art therapists, and honing their skills under the guidance of a supervisor within triangle groups (comprising the client, art therapist, and supervisor).

All class assignments were underpinned by key concepts integral to the practice of art therapy, specifically centered on the reframing of wartime situations, the reforming of imagination, and the process of reclaiming [15]. These concepts hold a pivotal role in guiding the art therapeutic journey. Reframing thought interactive modules (Virtual Spinner for therapeutic fairy tales, Virtual Sandtray, Online Puppets) and virtual art galleries of projective cards have been implemented in our practice involved shifting one’s perspective or interpretation of a situation or artwork. It gived some deep exploring alternative meanings, narratives, or emotions associated with their artistic creations about war experience [1, 15]. By reframing their art, students can challenge negative thought patterns, and discover new ways of perceiving themselves and their experiences in stressful conditions of war in

Ukraine. In art therapy course was use reforming pertains to the process of altering or reshaping elements within one's art or creative expression thought interactive modules (Whiteboard, virtual mandala painting platform, Inspirograph, Google Quick Draw, Pollock Painting, Bomomo Drawing) [16]. It encompassed intentional changes, experimentation with different techniques, and exploration of alternative artistic impresionistic forms in digital art. One of part Reclaiming was reconnecting with authentic selves, values, and strengths through rescription of trumatic experience by visualization [23]. These results we can compare with relevant studies by Noah Hass-Cohen et al. (2022) of Compassionate Arts Psychotherapy (CAP) program that is blends self-compassion and arts psychotherapy, guided by a compassionate arts media (CAM) continuum. A pilot study with 18 graduate students demonstrated substantial improvements in self-compassion and mindfulness, supported by qualitative findings of increased openness, present-moment awareness, and self-compassion. These results highlight CAP's clinical value and offer fresh insights into art therapy media [1].

These assignments were meticulously developed with a student-centric and meaningful approach analyzing personal and group arttherapy cases in-situ, aimed at facilitating the successful attainment of learning outcomes in crisis arttherapy interventions. By group aligning assignments with student interests and encouraging active participation by group expertise of cases, the course fosters, involves the intentional incorporation of empathy into the structure, goals, policies, and interactions of an art therapy course. In light of these findings, we can draw parallels with a recent study by Saucier et al. [18] that emphasizes the growing importance of empathy in academia. They introduce the "Empathetic Course Design Perspective", advocating for the deliberate infusion of empathy into courses. This commentary offers practical recommendations for integrating this perspective into various HyFlex courses, irrespective of level, modality, or academic discipline. The goal is to create more positive, supportive, and engaging learning environments for both instructors and students [18]. Within the art therapy curriculum, we've witnessed a successful and adaptable approach. Even students affected by war, who may avoid traditional in-person or online activities, can excel in their university courses through MOOCs available on platforms like Coursera [30, 31]. This flexible policy offers an effective solution that blends diverse learning resources to enhance the educational journey of our students.

6. Conclusions

The assigned signs of intellectual, behavioral, and physiological stress directly impact the productivity of learning and the development of professional skills in art therapy. These signs can hinder cognitive functioning, reduce engagement and focus, disrupt behaviors and productivity, and create physical discomfort and fatigue. To ensure optimal learning and skill acquisition, it is essential to address and manage these signs of stress effectively in the art therapy setting in HyFlex environment.

The assessment of transactional distance on student experiences revealed positive findings. The overall satisfaction with the course was high, with students rating it at 4.08 on a scale from 1 to 5. This indicates a generally positive perception of the course among the students. Additionally, students reported a valuable learning experience, with an average rating of 3.91 for student learning and a rating of 4.01 for achieving learning goals. This suggests that the course has effectively facilitated learning and helped students make progress in their subject area.

The transactional distance between students and the teacher was perceived as close, indicating a strong sense of connection and interaction. Students highly valued the use of online art therapy tools in the classes, as evidenced by the average rating of 4.02 for their interaction with these tools. This indicates that the incorporation of these tools in the course has enhanced the learning experience and engagement of the students.

Ethical considerations

The study complied with ethical principles, ensuring participant confidentiality, informed consent, and voluntary participation. Any potential risks or discomfort associated with a learning discussion were

considered appropriately and participants had the option to withdraw from the study at any time.

Limitations of the study include potential bias in student self-reports amid the stress of war, varying attendance conditions against the backdrop of students' general awareness of each student's individual trajectory, limited generalizability to other art therapy programs in university training

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