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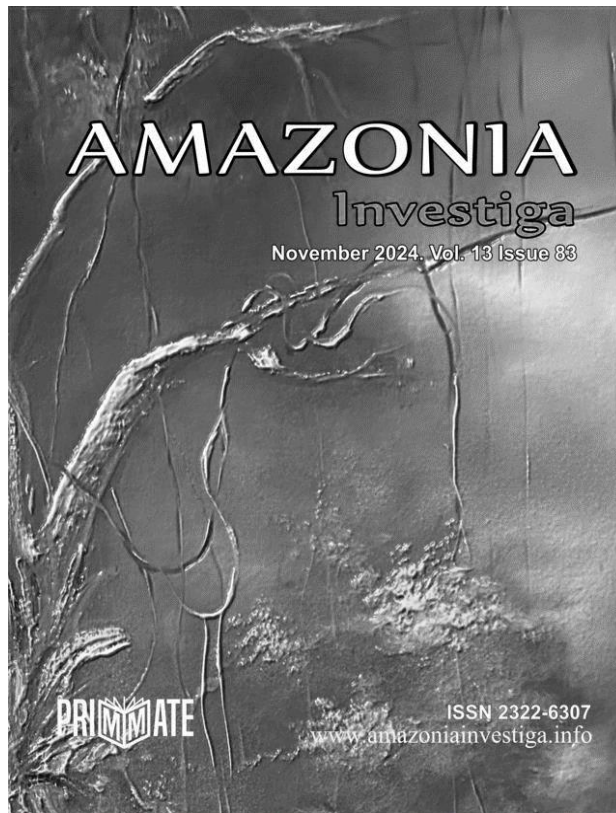
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"Science advances not only by expanding our knowledge but also by revealing the beauty and complexity of the universe we inhabit. Today we celebrate the tireless commitment of researchers who seek answers and solutions to improve our world."

"La ciencia avanza no solo expandiendo nuestro conocimiento, sino también revelando la belleza y la complejidad del universo que habitamos. Hoy celebramos el compromiso incansable de los investigadores que buscan respuestas y soluciones para mejorar nuestro mundo."

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Potencialidades medicinales de extractos a partir de las venas de las hojas de *Nicotiana tabacum* L.: Un estudio de control de calidad fitoquímico

Medicinal potentialities of extracts from the veins of the leaves of *Nicotiana tabacum* L.:
A phytochemical quality control study

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Resumen

En *Nicotiana tabacum* L. se ha comprobado la acción de metabolitos secundarios contra microorganismos patógenos y plagas de insectos. La producción de cigarrillos genera desechos sólidos (venas del tabaco), que pueden ser reciclados, ya que contienen metabolitos de interés por su acción insecticida. El objetivo del presente trabajo fue elaborar tinturas a partir de las venas de las hojas de *Nicotiana tabacum* L. para su futura aplicación como insecticida y escabida. En el estudio experimental se elaboraron tinturas 10 %, 12,5 % y 15 % y se determinaron sus parámetros de calidad. Los resultados mostraron que las tinturas tuvieron un pH entre $6,017 \pm 0,015$

Abstract


In *Nicotiana tabacum* L., the action of secondary metabolites against pathogenic microorganisms and insect pests has been proven. Cigarette production generates solid waste (tobacco veins), which can be recycled as they contain metabolites of interest due to their insecticidal action. The objective of this work was to prepare tinctures from the veins of *Nicotiana tabacum* L. leaves for future application as an insecticide and scabicide. In the experimental study, 10%, 12.5%, and 15% tinctures were prepared, and their quality parameters were determined. The results showed that the tinctures had a pH between 6.017 ± 0.015 and 6.030 ± 0.021 , and a refractive index between 1.3520 ± 0.0093 and


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y $6,030 \pm 0,021$, y un índice de refracción entre $1,3520 \pm 0,0093$ y $1,3666 \pm 0,0051$. La composición química cualitativa determinada mostró la presencia de triterpenos, flavonoides, cumarinas y alcaloides apoyando la potencial actividad insecticida y escabicida de las tinturas. El análisis sensorial mostró mayor aceptación de la tintura al 12,5%, siendo seleccionada como la de mayor calidad para uso insecticida y escabicida, destacándose en seis de los siete criterios medidos.

Palabras clave: escabicida, insecticida, metabolitos secundarios, tabaco, tintura.

Introducción

El uso de las plantas medicinales por el hombre es muy antiguo; el conocimiento empírico acerca de las mismas y sus efectos curativos se ha venido acumulando durante milenios. Cada día se llevan a cabo descubrimientos científicos que confirman el enorme potencial curativo que posee el mundo vegetal (Bermúdez del Sol et al., 2018). Aunque no existen datos precisos para evaluar la extensión del uso global de plantas medicinales, la Organización Mundial de la Salud (OMS) ha estimado que más del 80 % de la población mundial utiliza, rutinariamente, la medicina tradicional para satisfacer sus necesidades de atención primaria de salud y que gran parte de los tratamientos tradicionales implica el uso de extractos de plantas o sus principios activos (Bermúdez, Oliveira & Velázquez, 2005).

La abundancia de reportes especializados acerca del tabaco, revela la magnitud y los vínculos que han imperado entre los seres humanos y esa planta, a la vez que reseñan aspectos específicos de sucesos prehistóricos, históricos y contemporáneos. Desde el punto de vista etnobotánico, el tabaco se distingue como una planta con atributos sagrados que determinan su participación en rituales muy significativos para varios grupos indígenas. De acuerdo con las evidencias, los habitantes de América ya habían descubierto en el siglo I a C, las propiedades alucinógenas del tabaco, así como algunas prácticas para fumarlo, mascararlo, beberlo, o utilizarlo en enemas (Pastor, & Llorca, 2004).

El tabaco es la especie *Nicotiana tabacum* L., desde el punto de vista botánico pertenece a la familia *Solanaceae*, es empleada en la fabricación de productos comerciales, con fines ceremoniales y terapéuticos. Esta generalmente se registra entre las plantas originarias de Latinoamérica. A nivel etnobotánico es utilizada como insecticida natural, se usa por lo general para controlar plagas caseras o para eliminar garrapatas o pulgas que parasitan el ganado; también para el control de ácaros y pulgones parásitos de plantas. Se reportan, además, otros usos como alimenticios, ornamentales, aromáticos y estimulante (Cahuich-Campos et al., 2018). También se han realizado estudios para identificar usos no convencionales, principalmente reciclando los desechos sólidos (venas del tabaco) que se generan en la producción de cigarrillos (Geada et al., 2010).

Las solanáceas contienen diversos metabolitos secundarios, siendo los grupos más importantes los alcaloides, terpenos y componentes fenólicos. En la *Nicotiana tabacum* L. y otras especies de *Nicotiana*, se ha comprobado el papel fundamental de ciertos metabolitos secundarios en la defensa contra microorganismos patógenos y plagas de insectos, reportándose además, propiedades narcóticas, sedantes, diaforéticas, eméticas y por su acción pediculicida y escabicida es empleada en el tratamiento para afecciones de la piel, como las ectoparasitosis causadas por ácaros (*Pediculus corporis* y *Sarcoptes scabiei*). Este último, causante de la escabiosis o sarna, enfermedad que en todo el mundo, afecta aproximadamente a trescientos millones de personas todos los años (Chandler & Fuller, 2019).

Estudios sobre esta especie han dado a conocer que los alcaloides no solo están presentes en la planta fresca, sino tras las manipulaciones que lleva la elaboración del tabaco, estando perfectamente definidos la nicotina, nicotirina, nornicotina, anabasina, metilanabasina, anatabina, metilanatabina y 2-(3-piridil-piridina). Siendo la nicotina, sintetizada en las raíces y acumulada en las hojas, incluyendo sus nervaduras o venas, desde el punto de vista toxicológico y farmacéutico, más activa como insecticida (Gutiérrez Cayón, 2002).

1.3666 ± 0.0051 . The qualitative chemical composition showed the presence of triterpenes, flavonoids, coumarins, and alkaloids, supporting the potential insecticidal and scabicide activity of the tinctures. The sensory analysis showed greater acceptance of the 12.5% tincture, being selected as the one with the highest quality for insecticidal and scabicide use, standing out in six of the seven criteria measured.

Keywords: Scabicide, insecticide, secondary metabolites, tobacco, tincture.

Los alcaloides del tabaco pueden extraerse con varios solventes entre los que se encuentra el etanol, el cual es empleado en la formulación de tinturas. Las tinturas son preparaciones líquidas obtenidas generalmente a partir de materias primas vegetales o animales desecadas, mediante métodos de maceración, percolación u otros procedimientos apropiados y validados, utilizando alcohol etílico de graduación adecuada (Santos, 2019).

Las plantas medicinales que constituyen la materia prima para la elaboración de productos fitofarmacéuticos poseen variaciones en el contenido de sus principios activos y pueden sufrir deterioro y contaminación, motivo por el cual es importante realizar un control de calidad a las materias primas vegetales y a sus respectivos extractos o tinturas.

Objetivo general: Elaborar tinturas a partir de las venas de las hojas de *Nicotiana tabacum* L. para su futura aplicación como insecticida y escabicida.

Marco teórico

Los extractos vegetales son productos extraídos directamente de los frutos, hojas, semillas o raíces de una planta, los cuales contienen componentes que pueden realizar una función beneficiosa en el organismo. Son el resultado de macerar una planta en un disolvente (etanol, alcohol + agua, aceite, glicerina, entre otros). Gracias al proceso de maceración, los principios activos (que son la parte activa de la planta, la que tiene acción terapéutica) del vegetal pasan al disolvente. De esta forma, pueden ser utilizados con mucha más facilidad y precisión tanto en la industria farmacéutica, como la alimenticia (Ringuelet & Viña, 2013).

Las tinturas son soluciones alcohólicas o hidroalcohólicas preparadas con drogas vegetales que no requieren preservativos adicionales y cuyas concentraciones generalmente son de 10 % en las drogas potentes o muy activas (drogas heroicas) y de un 20 o 50 % en las drogas de menor actividad (drogas no heroicas). Se obtienen por maceración, percolación u otros procedimientos apropiados y validados, utilizando alcohol de graduación adecuada. Se pueden preparar igualmente, por disolución o dilución de un extracto en etanol de concentración adecuada. Generalmente se utiliza 1 parte de droga y 10 partes de disolvente de extracción; suelen ser transparentes y en reposo pueden formar un ligero sedimento, siempre que la composición de la tintura no se modifique de modo significativo (CECMED, 2017).

Metodología

Características generales de la investigación

Se realizó un estudio experimental con el propósito de elaborar tinturas a partir de las venas de las hojas de *Nicotiana tabacum* L. y evaluar los parámetros de calidad físicos, físico-químicos, químicos cualitativos y sensoriales de las tinturas elaboradas al 10 %, 12,5 % y al 15 %. El estudio se desarrolló en los Laboratorios de Tecnología Farmacéutica del Departamento de Farmacia de la Universidad de Oriente, con la colaboración de la Empresa LABIOFAM de Santiago de Cuba; en el período comprendido entre febrero a junio de 2024. La droga fue suministrada por la Empresa LABIOFAM.

Se elaboraron tres lotes: 240301, 240302, 240303 de tinturas a partir de las venas de las hojas del tabaco, comenzando por una concentración al 10 % de droga como establecen las bibliografías oficiales (CECMED, 2017) y se elaboraron a criterio de los investigadores dos tinturas más a concentraciones superiores (12,5 % y 15 %) para compararlas en cuanto a propiedades físicas y químicas. Se mantuvieron concentraciones por debajo del 20 %, puesto que en Cuba no existen formulaciones registradas en el Formulario Nacional de Medicamentos elaboradas a partir de esta especie o sus nervaduras (Ministerio de Salud Pública, 2014). Todos los ensayos se realizaron por triplicado.

Elaboración de las tinturas al 10 %, al 12,5 % y al 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L.

Las tinturas se obtuvieron por el método de maceración, según lo descrito por la Norma Ramal de Salud Pública 311: Extractos fluidos y tinturas. Procesos tecnológicos. (MINSAP, 1991a). El solvente empleado fue la solución hidroalcohólica al 70 %. De cada uno de los lotes elaborados de tintura, se tomaron muestras de 1L para la evaluación de la calidad de las formulaciones.

Determinación de los parámetros de calidad de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L.

Los parámetros de calidad establecidos para este tipo de extracto se realizaron por triplicado según la metodología descrita en la Norma Ramal de Salud Pública 312/91: Extractos Fluidos y Tinturas. Métodos de ensayos (MINSAP, 1991b). Las pruebas realizadas fueron las siguientes:

Determinación de los requisitos organolépticos (aspecto, color, olor).

Determinación del olor: Se tomó una tira de papel secante de aproximadamente 1 cm de anchura por 10 cm de longitud y se introdujo un extremo en las muestras de ensayo. Se olió y se determinó si corresponde con la característica del producto.

Determinación del color: Se tomó un tubo para ensayos bien limpio y seco, se llenó hasta las tres cuartas partes con las muestras de ensayo y se observó el color y la transparencia.

Determinación de pH: Se determinó con un pHmetro digital marca HANNA Instruments, por triplicado. Se informaron los valores medios de las determinaciones.

Determinación del índice de refracción: Sobre el prisma de medición de un refractómetro Abbe se coloca una gota de agua, utilizando para ello una varilla de vidrio que no tenga cantos agudos, se esperan unos minutos y se ajusta el instrumento al índice de refracción correspondiente al agua a una temperatura de 25 °C, con una tolerancia de +/- 0.2 °C. Se limpian los prismas cuidadosamente empleando un algodón humedecido con solución de alcohol y éter etílico 50 % v/v. Con la varilla de vidrio se coloca en el prisma fijo, sin tocarlo, una o dos gotas de la muestra de ensayo. Se cierra el doble prisma y se esperan unos minutos antes de efectuar la lectura, hasta que la temperatura sea estable. Si la muestra de ensayo es de color oscuro u opaco, se utiliza luz reflejada, o sea, se coloca una gota de la muestra de ensayo sobre el prisma de medición, se cierra el termoprisma y se enfoca la luz por medio del espejo, de modo tal que la misma incida sobre abertura de entrada del prisma de medición.

Método para los cálculos: Se hacen tres lecturas y se calcula el promedio de las mismas. Dos o más lecturas no pueden diferir en más de 0.002 nd.

Determinación de la densidad relativa: De la muestra de ensayo se tomó la cantidad necesaria de acuerdo con la capacidad del picnómetro (10 y 25 mL) enfriándose hasta los 25 °C. Se pesó el picnómetro limpio, vacío y seco con un error máximo permisible de ± 0,5 mg y se llenó con la muestra de ensayo de modo que no quedaran burbujas de aire. Se utilizó una tira de papel de filtro para extraer el exceso de la muestra. Se sumergió en un baño de agua a 25 ± 1 °C durante 30 minutos, al cabo de las cuales se taparon, se secaron y se pesaron. Se informó el valor medio de las determinaciones, así como la desviación estándar obtenida. Expresión de los resultados. La densidad relativa se calculó mediante la ecuación 1:

$$\text{Ecuación 1: } D = (m_1 - m) / (m_2 - m)$$

Donde: m- masa del picnómetro vacío (g).

m1- masa del picnómetro con la muestra de ensayo (g).

m2 - masa del picnómetro con agua (g).

Análisis capilar: Se vierten 20 mL de la muestra de ensayo en un vaso para precipitado de 100 mL de aproximadamente 5 cm de diámetro y 70 cm de altura y se introduce en la cámara protectora. Se coloca una banda de papel de filtro (whatman # 1) de 4 cm de altura por 15 cm de longitud verticalmente de manera que su borde superior esté fijado a una varilla metálica que permita la suspensión de la tira de papel y su extremo inferior esté sumergido dentro de la muestra de ensayo pero sin tocar el fondo ni las paredes del recipiente. Se cierra la cámara y se dejan transcurrir 2 horas garantizando la temperatura de (25+/-1) °C durante la corrida, finalizada esta se retira el papel y se deja secar. Una vez seco se procede a su inspección visual y caracterización.

Examen e interpretación de la imagen: Para el análisis e interpretación de la imagen se tienen en cuenta los aspectos siguientes:

- Color

- Altura
- Descripción de las diferentes partes
- Cambios de coloración con vapores de amoníaco
- Examen bajo luz ultravioleta.

Determinación de sólidos totales: De la muestra de ensayo previamente homogenizada se transfirió 5 mL a una cápsula de porcelana limpia, seca y previamente tarada. La cápsula se colocó en un baño de agua hasta evaporación de manera tal que el contenido quedara aparentemente seco. Posteriormente se colocó la cápsula en una estufa a una temperatura de 105 ± 2 °C durante 3 horas. Se retiró la cápsula de la estufa y se depositó en una desecadora hasta que alcanzara la temperatura ambiente para proceder al pesado. Se repitió el proceso anterior, pero empleando solo 60 minutos más de secado a la estufa las veces que fueron necesarias para alcanzar un peso constante. El ensayo se realizó por triplicado.

Los sólidos totales (St) se calcularon mediante la ecuación 2 y se expresaron en porcentaje:

$$\text{Ecuación 2: } St = (Pr-P) / V \times 100$$

Donde:

- Pr..... masa de la cápsula más el residuo (g).
 P..... masa de la cápsula vacía (g).
 V..... volumen de la porción de ensayo (mL).
 100..... factor matemático

Se establecieron otros parámetros no incluidos en esta norma como la determinación de la composición química cualitativa, a través de un tamizaje fitoquímico, de acuerdo a la metodología descrita por Ochoa, López & Colombat (1999). Los ensayos que se realizaron para la identificación de cada metabolito secundario se muestran en la Tabla 1.

Tabla 1.

Identificación de metabolitos secundarios en las tinturas al 10 %, 12,5 % y al 15 % de Nicotiana tabacum L.

Metabolitos	Ensayos
Alcaloides	Dragendorff, Mayer, Wagner
Triterpenos y Esteroides	Solkowski, Lieberman-Burchard, Rosemheim
Quinonas	Borntrager
Cumarinas	Baljet
Saponinas	Espuma
Resinas	Resinas
Azúcares reductores	Fehling, Benedict
Fenoles y Taninos	Cloruro férrico
Aminoácidos libres y aminos en general	Ninhidrina
Flavonoides	Ácido sulfúrico concentrado, Shinoda, Álcalis, Rosemheim

Fuente: Elaborada por los autores

Determinación del grado de aceptación sensorial de las tinturas al 10 %, 12,5 % y 15 % de Nicotiana tabacum L.

Para la determinación del grado de aceptación sensorial de las tinturas se tuvo en cuenta la selección del panel de jueces, el cual estuvo constituido por 22 estudiantes universitarios (posibles consumidores), becados en la sede Antonio Maceo de la Universidad de Oriente, con interés y disponibilidad y que dieron su consentimiento para participar en el estudio a través de un modelo de consentimiento informado que recogió los aspectos que se describen a continuación:

Consentimiento informado

Yo: _____

Manifiesto que:

Estoy de acuerdo y consiento en participar en la determinación del grado de aceptación sensorial de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L., que contribuirá a seleccionar la formulación con mayor calidad para uso insecticida y escabicida. Para dar este consentimiento se me ha explicado las características de la investigación, siendo mi participación absolutamente voluntaria.

Dado a los ____ días del mes de _____ del año _____

Conforme (firma del panelista): _____

Presentación de las muestras

Las muestras de tinturas al 10 %, 12,5 % y al 15 % fueron envasadas en viales de 1,5 mL, acompañado por un aplicador que facilitó su evaluación sensorial.

Los atributos evaluados fueron:

- Olor: que las tinturas presentaran olor característico a *Nicotiana tabacum* L.
- Color: que las tinturas presentaran el color determinado en las pruebas organolépticas para la especie.

Pruebas de evaluación sensorial

Pruebas analíticas discriminativas: Pruebas de diferenciación Prueba de comparación de pares: Se presentaron a los panelistas dos de las tres muestras de tinturas, seleccionadas y codificadas como A1, A2 y A3 respectivamente, según el nivel de concentración que presentaban (10 %, 12,5 % y 15 %), de forma tal que se estableciera una comparación entre: A1- A2, A2- A3, A3- A1.

Las comparaciones se establecieron entre dos muestras de forma tal que solo se seleccionara una por atributo evaluado entre cada par de muestras. Se les entregó a los panelistas un formulario que permitió evaluar los atributos olor y color. De las dos formulaciones evaluadas por cada juez, estos sólo pudieron escoger una por cada atributo analizado.

Criterios establecidos para la selección de la tintura con mayor calidad

1. Se seleccionó la tintura que presentó parámetros de calidad físicos, físico- químicos y químicos cualitativos más adecuados para la aplicación futura de la forma farmacéutica como insecticida y escabicida:
 - Requisitos organolépticos: olor y color característico a la especie y transparencia.
 - pH entre 4,5-7 teniendo en cuenta que el pH cutáneo es de 4,5- 5,9 y las tinturas pueden tener un uso tópico contra la escabiosis.
 - Valor más próximo a un índice de refracción de 1,36
 - Mayor densidad relativa
 - Mayor porcentaje de sólidos totales
 - Mayor presencia de alcaloides, triterpenos, flavonoides y cumarinas teniendo en cuenta que son metabolitos con actividad insecticida y escabicida.
2. Se seleccionó la tintura mejor aceptada por el panel sensorial.
 - Se seleccionó la tintura que cumplía con el mayor número de los parámetros antes declarados en los criterios de selección 1 y 2.

Análisis estadístico y procesamiento de los resultados

Para el procesamiento matemático y análisis estadístico de los resultados, se utilizaron los softwares Microsoft Excel contenido en el paquete Microsoft Office 2010 y el software IMM SPSS Statistics. Se

realizó la prueba ANOVA de un factor para determinar las diferencias significativas en los resultados; para las que se observó diferencias, se realizó la prueba de comparaciones múltiples Post hoc, Tukey. Para el análisis sensorial se realizó una prueba de independencia Chi-Cuadrada, para un nivel de confianza del 95,0 %, empleando para ello el software estadístico Statgraphics Centurion XV versión 15.2.14.

Resultados

La elaboración de los tres lotes de tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L. fue realizada por maceración, como método de extracción y el tiempo de maceración fue de 7 días. Se utilizó como menstruo etanol al 70% considerando que según Jordán Galdámez (2014) los extractos etanólicos y tinturas poseen medios que favorecen a la fijación de la nicotina (principio activo del tabaco que aporta propiedad insecticida) ya que este metabolito en el tabaco no se encuentra en su forma libre, sino que está combinada con algunos ácidos. Una concentración al 70 % logra no solo su extracción, también la de otros metabolitos como compuestos fenólicos y flavonoides (Leal, Moreno, Albornoz, Mercado, Zampini e Isla, 2023; Rodríguez Chaves, 2020).

Determinación de los parámetros de calidad de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L.

En la tabla 2 se muestran los resultados obtenidos en cuanto a los parámetros de calidad color, olor y aspecto.

Tabla 2.

Pruebas organolépticas para los tres lotes de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L.

Pruebas organolépticas para los tres lotes de tinturas			
Parámetros de calidad	Tintura al 10 %	Tintura al 12,5 %	Tintura al 15 %
Color	Marrón claro	Marrón claro	Marrón claro
Olor	Característico	Característico (+)	Característico (++)
Aspecto	Transparente	Transparente	Transparente

Leyenda: Mayor intensidad (++)

Fuente: Elaborada por los autores

Los resultados obtenidos para la determinación de pH en los tres lotes de las tinturas al 10 %, 12,5 % y 15 % de *Nicotiana tabacum* L, se recogen en la tabla 3.

Tabla 3.

Determinación del pH de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L. por lotes

Determinación del pH (M ± DS)			
Tinturas	Lotes		
	240301	240302	240303
Tintura al 10 %	6,030 ± 0,020 ^a	6,020 ± 0,017 ^a	6,027 ± 0,025 ^a
Tintura al 12,5 %	6,020 ± 0,020 ^a	6,030 ± 0,021 ^a	6,020 ± 0,021 ^a
Tintura al 15 %	6,027 ± 0,018 ^a	6,017 ± 0,015 ^a	6,023 ± 0,025 ^a

Letras iguales significan no diferencias estadísticas ($p > 0,05$)

Leyenda: Media (M) y Desviación estándar (DS)

Fuente: Elaborada por los autores

El índice de refracción es una constante característica de cada sustancia, la cual representa la relación entre el seno del ángulo de incidencia de la luz y el seno del ángulo de refracción, cuando la luz pasa oblicuamente a través del medio. Este parámetro varía según la composición química presente en los extractos (Mettler Toledo, 2023). En la tabla 4 se muestran los resultados de la determinación del índice de refracción para los tres lotes de las tinturas de *Nicotiana tabacum* L.

Tabla 4.

Índice de refracción de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L. por lotes

Índice de refracción (M ± DS)			
Tinturas	Lotes		
	240301	240302	240303
Tintura al 10 %	1,3590 ± 0,0040 ^a	1,3520 ± 0,0093 ^a	1,3530 ± 0,0053 ^a
Tintura al 12,5 %	1,3621 ± 0,0045 ^a	1,3583 ± 0,0082 ^a	1,3592 ± 0,0058 ^a
Tintura al 15 %	1,3666 ± 0,0051 ^a	1,3629 ± 0,0088 ^a	1,3643 ± 0,0056 ^a

Letras iguales significan no diferencias estadísticas ($p > 0,05$)

Leyenda: Media (M) y Desviación estándar (DS)

Fuente: Elaborada por los autores

La densidad relativa es un parámetro de calidad que permite conocer la relación existente entre la masa y el volumen de la sustancia a analizar a 25 °C con respecto a la masa de un volumen igual de agua a la misma temperatura. Este término equivale a peso específico. Los resultados de la determinación de la densidad relativa en las tinturas de *Nicotiana tabacum* L. se exponen en la tabla 5.

Tabla 5.

Densidad relativa de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L. por lotes

Densidad relativa (g/mL) (M ± DS)			
Tinturas	Lotes		
	240301	240302	240303
Tintura al 10 %	0,9036 ± 0,0039 ^a	0,9032 ± 0,0011 ^a	0,9021 ± 0,0036 ^a
Tintura al 12,5 %	0,8960 ± 0,0021 ^b	0,8961 ± 0,0019 ^b	0,8939 ± 0,0020 ^b
Tintura al 15 %	0,8959 ± 0,0023 ^b	0,8958 ± 0,0017 ^b	0,8936 ± 0,0018 ^b

Letras iguales significan no diferencias estadísticas ($p < 0,05$)

Leyenda: Media (M) y Desviación estándar (DS)

Fuente: Elaborada por los autores

El Análisis capilar es un análisis basado en la imagen que deja una tintura o extracto fluido al ascender por una tira de papel de dimensiones y características especificadas, fundamentado en los fenómenos de absorción y partición de las sustancias disueltas en el extracto o tintura a través de los espacios capilares del papel y del agua que contiene la celulosa del mismo (MINSAP, 1991b). Este parámetro constituye uno de los aspectos a evaluar cuando de calidad de formas farmacéuticas obtenidas a partir de plantas medicinales se trata. Los resultados del análisis capilar de los lotes de las tinturas de *Nicotiana tabacum* L. estudiados se muestran en la tabla 6.

Tabla 6.

Análisis capilar de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L. por lotes

Análisis capilar			
Tinturas	Altura (cm)		
	Lote 240301	Lote 240302	Lote 240303
Tintura al 10 %	13,7	13,4	13,3
Tintura al 12,5 %	14,3	14,3	13,9
Tintura al 15 %	15,1	14,4	14,0
Color	Muy poco coloreadas		

Fuente: Elaborada por los autores

Del análisis realizado se obtuvieron imágenes con tonalidades de muy poca coloración en las bandas de papel de filtro. Con respecto a la altura de la imagen capilar, todas clasifican como altas ya que muestran una altura superior a los 8 cm, con valores similares que oscilan entre los 13,3 cm y 15,1 cm (Sampietro et al., 1997).

En el análisis de la imagen capilar se pudieron observar diferentes zonas: franja, subfranja, banda y subbanda. La franja obtenida en las imágenes es igual para todos los lotes de tinturas mostrando una forma lineal de color marrón claro. La subfranja en todas las tiras de papel de filtro cubre una gran longitud y es una región muy poco coloreada. La banda fue similar en todas las concentraciones por lotes y la subbanda percibida en todas las muestras de tinturas siempre mostró una longitud de 1 a 2 cm.

Luego de observar las características de las diferentes zonas de la imagen capilar, los papeles de filtro fueron sometidos a la luz ultravioleta a una longitud de onda de 366 nm. En ninguno de los lotes ensayados se observó fluorescencia en las zonas de la imagen a esta longitud de onda, lo que pudiera estar atribuido a la no existencia de sustancias fluorescentes o que incidió en la prueba algún factor extrínseco como la calidad del papel de filtro, temperatura a que se realizó el ensayo y tiempo de corrida, o intrínseco como el tiempo de fabricación de la tintura.

Los sólidos totales representan la cantidad de sustancia extraída por el menstuo expresada en unidades de masa. Esta característica lo hace de especial interés pues representa la capacidad del menstuo y del método de extracción para extraer los metabolitos presentes en una droga en estudio (Padró-Rodríguez et al., 2017). En la tabla 7 son mostrados los valores de los sólidos totales, expresados en %, obtenidos para cada lote de las tinturas.

Tabla 7.

Sólidos totales de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L. por lotes

Sólidos totales (%) (M ± DS)			
Tinturas	Lotes		
	240301	240302	240303
Tintura al 10 %	1,70 ± 0,0240 ^a	1,68 ± 0,0237 ^a	1,71 ± 0,0233 ^a
Tintura al 12,5 %	1,90 ± 0,0198 ^a	1,88 ± 0,0191 ^a	1,79 ± 0,0085 ^a
Tintura al 15 %	1,57 ± 0,1881 ^a	1,58 ± 0,1937 ^a	1,60 ± 0,1907 ^a

Letras iguales significan no diferencias estadísticas ($p > 0,05$)

Leyenda: Media (M) y Desviación estándar (DS)

Fuente: Elaborada por los autores

Determinación de la composición química cualitativa

El tamizaje fitoquímico ofrece solo una posible composición química cualitativa de la planta, por lo que estos resultados no pueden tomarse en ningún caso como un resultado concluyente, pues dependen de la concentración de los metabolitos, la solubilidad en el disolvente empleado y las interferencias que pueden causar otros componentes (Gutiérrez Gaitén, 2011). En la tabla 8 se muestran los resultados obtenidos de cada tintura para todos los lotes analizados.

Tabla 8.

Composición química cualitativa de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de Nicotiana tabacum L. por lotes

Tamizaje fitoquímico para las Tinturas al 10%, 12,5% y 15% de los tres lotes			
Metabolitos	Ensayos	Resultados	Evidencias
Alcaloides	Dragendorff	+++	Precipitado color rojo ladrillo
	Mayer	+++	Precipitado coposo color amarillo
	Wagner	-	Color verde negruzco/interferencia por aminoácidos y taninos
Triterpenos y esteroides	Solkowski	+	Color amarillo rojizo
	Lieberman-Burchard	-	-
Quinonas	Borntrager	-	-
Cumarinas	Baljet	++	Aparición de coloración amarilla
Saponinas	Espuma	-	-
Resinas	Resinas	-	-
Aceites esenciales y sustancias grasas	Sudán III	-	-
	C/ papel blanco sin reactivo	-	-

Azúcares reductores	Fehling	-	-
	Benedict	-	-
Fenoles y taninos	Cloruro férrico	+	Color rojo-vino/Presencia de compuestos fenólicos en general
Aminoácidos y aminas en general	Ninhidrina	+	Color azul- violáceo
Flavonoides	Ácido sulfúrico concentrado	+	Color anaranjado/Presencia de flavonas
	Shinoda	+	Color amarillo-naranja/Presencia de flavonas
	Álcalis	+	Color amarillo/Presencia de flavonas, flavononol e isoflavonas
	Rosemheim	+	Color rojo naranja/Presencia de antocianidinas

Leyenda: Mayor evidencia (++++)

Fuente: Elaborada por los autores

Como se puede observar se presenciaron alcaloides, con resultados positivos en los ensayos de Dragendorff y Mayer (Ochoa, López & Colombat, 1999) obteniendo precipitados coloreados característicos de cada prueba, en cuanto al ensayo de Wagner el resultado fue negativo debido a que se obtuvo un color verde negruzco en vez de un precipitado carmelita (Ochoa, López & Colombat, 1999), lo que puede estar dado a una interferencia causada por la presencia de aminoácidos y taninos presentes en las muestras. De igual forma se obtuvieron triterpenos y esteroides para el reactivo de Solkowski, presenciándose un color amarillo rojizo y para el ensayo de cumarinas, una coloración amarilla (Ochoa, López & Colombat, 1999).

En ninguno de los lotes de las diferentes tinturas se obtuvieron quinonas, saponinas, resinas, aceites esenciales y sustancias grasas, ni azúcares reductores. De manera general se evidenciaron compuestos fenólicos, aminoácidos y aminas. En cuanto a las evidencias obtenidas en los ensayos de flavonoides los resultados pueden inferir la presencia de flavonas, flavononol e isoflavonas y el ensayo de Rosemheim que arrojó la evidencia de antocianidinas presentes en las tinturas (Ochoa, López & Colombat, 1999), aunque las bibliografías consultadas no hacen referencia a estos específicamente.

Determinación del grado de aceptación sensorial de las tinturas al 10 %, 12,5 % y 15 % de *Nicotiana tabacum* L.

El análisis sensorial estuvo dirigido a la evaluación de las características del producto en cuanto a color y olor, lo que permitió el empleo de un panel de jueces que funcionaron como instrumento de medición. La tabla 9 muestra las comparaciones realizadas y la cantidad de panelistas que descartaron una de las muestras en la evaluación del olor.

Tabla 9.

*Aceptación sensorial de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L. en cuanto al olor*

Comparaciones	Muestra descartada	Total de Panelistas	Criterios
A1- A2	A1	20	Mayor percepción del etanol
A2- A3	A3	22	Mayor percepción del olor a tabaco
A3- A1	A3	22	Mayor percepción del olor a tabaco

Fuente: Elaborada por los autores

Como se puede apreciar en la tabla 9 cada vez que se establecía una comparación entre A2- A3 y A1- A3 la muestra A3 era descartada por todos los panelistas, pues ellos declaraban que tenía un olor mucho más fuerte a tabaco que las demás muestras. Esto se debe a que A3 tenía una mayor concentración de la droga (15 %). Sin embargo, aunque A1 (tintura al 10 %) es menor que A2 (tintura al 12,5 %) en cuanto a concentraciones, 20 de los panelistas descartaron la muestra A1 por presentar un olor más fuerte a etanol. En este caso a menor concentración de la droga (10 %) el solvente (etanol al 70 %) era más perceptible.

La única muestra que no fue descartada en este atributo evaluado (olor) fue la A2, que en este caso correspondía a la tintura de tabaco al 12,5 %. En cuanto al color todos los panelistas emitieron que las tres muestras presentaban un color marrón claro sin diferencias entre ellas, lo que coincide con las pruebas organolépticas previamente realizadas a las tinturas.

La figura 1 muestra el análisis estadístico de la prueba de comparación de pares del análisis sensorial, teniendo en cuenta ambos atributos, color y olor y la aceptación de los panelistas en cuanto a las muestras evaluadas. El análisis estadístico de la prueba de independencia chi-cuadrada reveló que el valor- P es menor que 0,05 (valor- P= 0,00) entonces se puede rechazar la hipótesis de que filas y columnas son independientes con un nivel de confianza del 95,0 %. Por lo tanto, la fila observada para un caso particular, está relacionada con su columna.

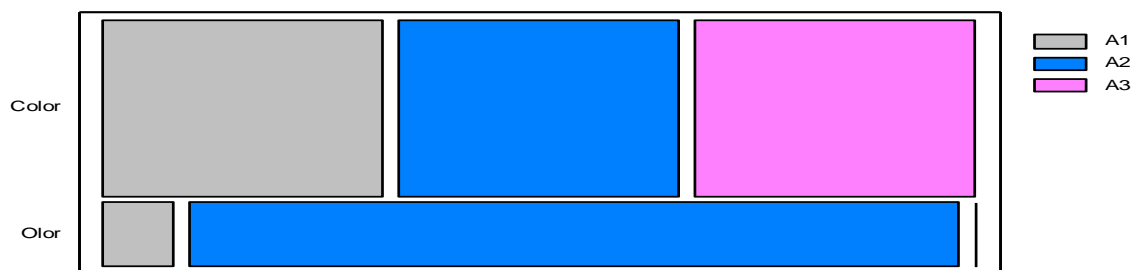


Figura 1. Análisis estadístico de la prueba de comparación de pares del análisis sensorial de las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L. (Aceptación sensorial)
 Fuente: Elaborada por los autores

Como se observa en la figura 1 todos los panelistas aceptaron las tres muestras teniendo en cuenta el color, al declarar que este se correspondía al resultado obtenido en las pruebas organolépticas anteriormente realizadas (color marrón claro). Sin embargo, en cuanto al olor solo 2 miembros del panel de jueces aceptaron la muestra A1 y ninguno, la muestra A3, porque con respecto a las demás muestras (A1 y A2), esta última presentaba un olor más fuerte a tabaco, desagradable al olfato de las personas. Por ello la mayor aceptación sensorial por parte de los 22 entrevistados lo alcanzó la muestra A2 (tintura al 12,5 %).

Discusión

Los resultados de las características organolépticas de los tres lotes de tinturas al 10 %, 12,5 % y 15 % de *Nicotiana tabacum* L. muestran que las mismas resultaron iguales sin variaciones significativas a señalar. El color marrón claro obtenido en las tinturas puede estar dado a las características de los componentes químicos presentes en las nervaduras de la planta del tabaco como la nicotina, la cual muestra coloraciones tales como amarillo pálido, marrón o cristalino (Gutiérrez Cayón, 2002).

El olor característico a tabaco, con cierto aroma alcohólico que es aportado por el disolvente empleado, puede relacionarse con sustancias aromáticas que se forman durante el curado de las hojas, por ejemplo, la nicotianina o alcanfor de tabaco (Claus & Tyler, 1989). Sin embargo, en todos los lotes se obtuvo como resultado un olor más intenso para la tintura al 15 % con respecto a las tinturas de 12,5 % y 10 %, dado por la mayor concentración de la droga. En cuanto al aspecto, los diferentes lotes de tinturas resultaron ser transparentes, característico de los sistemas homogéneos, no observándose partículas en suspensión tal como lo describen las bibliografías (Centro para el Control Estatal de Medicamentos, Equipos y Dispositivos Médicos (CECMED, 2017).

Como se puede apreciar el valor de pH de los tres lotes de tinturas en sus tres concentraciones estuvo entre $6,017 \pm 0,015$ y $6,030 \pm 0,021$ lo que corresponde a un pH ligeramente ácido. Esto puede estar justificado por la presencia de compuestos resultantes de la extracción que aportan estas características, o bien debido a la combinación de las características ácidas y básicas aportadas por los diferentes grupos de familias químicas presentes en el medio.

Entre los compuestos que aportan características ácidas se encuentran los triterpenos y esteroides, flavonoides, fenoles y taninos, y con características básicas los alcaloides, aminas y aminoácidos (Miranda & Cuéllar, 2001); todos identificados en el tamizaje fitoquímico. Yerovi Sanaguano (2018) también determinó un pH semejante de 6,1 en el control de la calidad de extractos alcohólicos de *Nicotiana*

tabacum L. El análisis estadístico no mostró diferencias estadísticamente significativas entre las concentraciones de tinturas, ni entre los lotes, para un nivel del 95,0 % de confianza.

Los valores de índice de refracción de las muestras analizadas oscilan entre $1,3520 \pm 0,0093$ y $1,3666 \pm 0,0051$, siendo estos numéricamente similares. Estos resultados son atribuibles a la presencia en las tinturas de sustancias capaces de refractar la luz y, que son resultado del proceso extractivo efectuado (Ringuelet & Viña, 2013), ejemplo de ello son el diterpeno cis-abienol y el alcaloide nicotina, ambos reportados para la especie (Biblioteca Digital de la Medicina Tradicional Mexicana, 2009), los cuales pueden tener la capacidad de refractar la luz incidente (Taiz & Zeiger, 2006; Baas Espinola, 2022). Yerovi Sanaguano (2018) obtuvo también un índice de refracción de 1,36 en extractos etanólicos de *Nicotiana tabacum* L. El análisis estadístico no mostró diferencias estadísticamente significativas entre las concentraciones de tinturas, ni entre los lotes, para un nivel del 95,0 % de confianza.

Teniendo en cuenta el comportamiento del parámetro densidad relativa en los tres lotes de tinturas evaluados, podemos observar que los resultados son coherentes con el índice de refracción, observándose también semejanzas numéricas en los valores obtenidos. Estos resultados son atribuidos a las características propias de la materia prima y al método de extracción utilizado donde siempre van existir sustancias (metabolitos secundarios y otras) solubles que aporten densidad al medio, producto del proceso extractivo (Koudela et al., 2018). En el análisis estadístico realizado para el parámetro densidad relativa no existe una diferencia estadísticamente significativa entre los lotes de las tinturas, para un nivel del 95,0 % de confianza. Sin embargo, se encontraron diferencias estadísticamente significativas entre las concentraciones de tinturas por lotes para un nivel de confianza del 95,0 %. El método empleado para discriminar entre las medias fue el procedimiento de diferencia honestamente significativa (HSD) de Tukey, el cual declaró que, para todos los lotes, la tintura al 10 % de tabaco era diferente a las otras dos concentraciones de tinturas a un mayor porcentaje de droga.

En los extractos etanólicos de esta especie evaluados por Yerovi Sanaguano (2018) se obtuvo una mayor densidad relativa en menores concentraciones de droga, al igual que los resultados obtenidos en esta investigación. Esto puede estar dado según el autor por la presencia de metabolitos disueltos en los extractos y que podrían estar formando puentes de hidrógeno con el solvente. Este resultado también podría estar influenciado por cambios en la temperatura ya que no se trabajó en un ambiente controlado y es conocido que si la temperatura desciende, el volumen es menor y la densidad aumenta (GUÍA OIML G 14, 2011).

Al analizar los resultados de los sólidos totales se puede observar que no existe una gran diferencia numérica entre los lotes estudiados, encontrándose los valores de este parámetro entre $1,57 \% \pm 0,1881$ y $1,90 \% \pm 0,0198$. Esto nos permite inferir que la disolución hidroalcohólica al 70 % empleada como menstruo en la preparación de las tinturas al 10 %, 12,5 % y 15 % de *Nicotiana tabacum* L., ejerce una influencia significativa en los valores de sólidos totales obtenidos, pues es capaz de extraer los metabolitos del material vegetal ya sean activos o no (Jordán Galdámez, 2014; Leal et al., 2023). La solubilidad de los metabolitos presentes estará condicionada por las características estructurales de los mismos y la polaridad del medio, estableciéndose la relación estructura- solubilidad que se evidencia a través de la posible presencia de metabolitos (Miranda & Cuéllar, 2001). El análisis estadístico no mostró diferencias estadísticamente significativas entre las concentraciones de tinturas, ni entre los lotes, para un nivel del 95,0 % de confianza. Se obtuvo el resultado más alto para las tinturas al 12,5 % de todos los lotes, por lo que puede inferirse que a tales concentraciones hay un mayor porcentaje de compuestos sólidos extraídos de las nervaduras del tabaco, como alcaloides, flavonoides, cumarinas, entre otros, dado quizás, a que a esta concentración específica la extracción de sólidos solubles es más eficiente.

Dentro de los metabolitos encontrados los responsables de la actividad insecticida en las tinturas según las bibliografías, están los triterpenos, flavonoides, cumarinas y alcaloides como la nicotina principalmente, en el caso de especie *Nicotiana tabacum* L. La nicotina, además, experimentalmente ha demostrado ejercer un control adecuado de minadores en varios cultivos, generando nuevos impulsos que provocan contracciones espasmódicas, convulsiones y finalmente la muerte de los insectos (Gutiérrez Cayón, 2002; Jordán Galdámez, 2014; Yerovi Sanaguano, 2018).

Con la evidencia positiva en el ensayo para la determinación de aminas en general y aminoácidos, podemos inferir que coexiste un compuesto en las tinturas que presenta enlace peptídico, a pesar de que los estudios fitoquímicos reportados no evidencian aminoácidos para la especie; sin embargo, se podría relacionar

también con la presencia de aminos libres en los alcaloides determinados o por disímiles factores como son: la composición del suelo, el clima, el uso de fertilizantes, plaguicidas, entre otros (Dirzo, 1985).

En el ensayo con cloruro férrico el resultado de manera general arrojó la presencia de compuestos fenólicos, los cuales constituyen uno de los compuestos más importantes de las solanáceas, junto con los terpenos y alcaloides. De ellos se ha comprobado su defensa contra microorganismos patógenos como el *Sarcoptes scabiei* (ácaro causante de la escabiosis) y plagas de insectos. Cabe aclarar que la gran mayoría de los metabolitos secundarios identificados en las tinturas coinciden con los reportados para la especie y con investigaciones realizadas a extractos etanólicos (Gutiérrez Cayón, 2002; Biblioteca Digital de la Medicina Tradicional Mexicana, 2009; Rodríguez Chaves, 2020).

Estos valores obtenidos no pudieron compararse, porque no se encontró ninguna norma publicada que establezca parámetros de calidad físicos, físico- químicos, químicos cualitativos y sensoriales para las tinturas al 10 %, 12,5 % y 15 % a partir de las venas de las hojas de *Nicotiana tabacum* L. En Cuba tampoco están registradas esta clase de tinturas en el Formulario Nacional de Medicamentos (Ministerio de Salud Pública, 2014).

Para la selección de la tintura con mayor calidad se tuvieron en cuenta los criterios de selección anteriormente declarados. Se escogió entonces, la tintura que cumplió con el mayor número de estos, los resultados se muestran en la tabla 10.

Tabla 10.

Selección de la tintura elaborada a partir de las venas de las hojas de Nicotiana tabacum L. con mayor calidad

Crterios de seleccin	Tintura al 10 %	Tintura al 12,5 %	Tintura al 15 %
Olor y color caracterstico a la especie y transparencia	X	X	X
pH entre 4,5- 7	X	X	X
Valor ms prximo a un ndice de refraccin de 1,36		X	X
Mayor densidad relativa	X		
Mayor porcentaje de slidos totales		X	
Mayor presencia de alcaloides, triterpenos, flavonoides y cumarinas	X	X	X
Aceptacin sensorial		X	

Fuente: Elaborada por los autores

En la tabla 10 se puede observar que para los criterios de seleccin: olor y color caracterstico a la especie y transparencia, pH entre 4,5- 7 y mayor presencia de alcaloides, triterpenos, flavonoides y cumarinas, todas las tinturas de tabaco cumplieron. Sin embargo, la mayor densidad relativa la present la tintura de tabaco al 10 %. Aun as, la que tena un mayor porcentaje de slidos totales y que, adem s, fue seleccionada en el anlisis sensorial fue la tintura de tabaco al 12,5 %, alcanzando el mayor nmero de criterios (seis de los siete establecidos), por lo tanto, fue seleccionada como la tintura de mayor calidad para uso insecticida y escabicida.

Conclusiones

Las tinturas elaboradas a partir de las venas de las hojas de *Nicotiana tabacum* L. mostraron parmetros de calidad fsicos y fsico- qumicos como caractersticas organolpticas, pH, ndice de refraccin, densidad relativa, anlisis capilar y slidos totales acorde a los normados para este tipo de extracto de uso medicinal. La composicin qumica cualitativa determinada muestra metabolitos que avalan la posible actividad insecticida en las tinturas, estos compuestos son los alcaloides, triterpenos, flavonoides y cumarinas.

La tintura al 12,5 % fue seleccionada como la de mayor calidad para uso insecticida y escabicida, destacndose en seis de los siete criterios medidos. Esta formulacin una vez realizados los ensayos *in vivo* en *Sarcoptes scabiei hominis*, ácaro causante de la escabiosis, y comprobada su eficacia, permitir contar con un nuevo tratamiento contra esta enfermedad de gran importancia para la salud pblica, que a pesar de la implementacin de un programa para combatirla, Cuba al igual que el resto del mundo, contina siendo afectada con un incremento sustancial de esta parasitosis. Aunque esta infestacin no constituye un riesgo

para la vida, produce malestar, inquietud y prurito que imposibilita el sueño reparador y otros trastornos de salud que incluyen las infecciones secundarias y las dermatitis, siendo motivo de preocupación en la atención primaria y secundaria de salud.

Se sugiere además, la realización de bioensayos para evaluar la acción de esta tintura en el control de plagas de insectos pequeños y artrópodos de cuerpo blando como: mosca blanca, áfidos (pulgones) y trips.

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Confucianism and Hồ Chí Minh's Thought

Nho giáo và tư tưởng của Hồ Chí Minh

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Abstract

This paper explores the profound influence of Confucianism on the ideological framework of Hồ Chí Minh, a pivotal figure in Vietnam's history. Confucianism, rooted in political ethics and moral education, entered Vietnam early and played a dominant role in shaping its intellectual and social fabric. Hồ Chí Minh, born into a family deeply embedded in Confucian traditions, was extensively exposed to its principles from a young age. This study examines how Hồ Chí Minh adopted and adapted Confucian ideals, particularly its emphasis on moral integrity, education, and the value of people as the foundation of governance. It highlights Hồ Chí Minh's capacity to extract positive elements from Confucian teachings, such as "tu thân" (self-cultivation) and "dĩ dân vi bản" (people as the root), while rejecting outdated doctrines like patriarchal subjugation and hierarchical elitism. The paper also discusses Hồ Chí Minh's synthesis of Confucianism with Marxist-Leninist philosophy to address Vietnam's revolutionary needs. By bridging traditional values with modern ideologies, Hồ Chí Minh crafted a unique philosophical paradigm that harmonized Eastern cultural heritage with Western revolutionary thought, illustrating the enduring relevance of Confucian values in contemporary contexts.

Keywords: Confucianism, cultural integration, Hồ Chí Minh, ideological influence, Vietnamese philosophy.

Introduction

Confucianism, one of the most enduring philosophical traditions in Eastern thought, has profoundly influenced the socio-political and cultural development of East Asian nations, including Vietnam

Tóm Tắt

Bài viết này khám phá ảnh hưởng sâu sắc của Nho giáo đến khuôn khổ tư tưởng của Hồ Chí Minh, một nhân vật quan trọng trong lịch sử Việt Nam. Nho giáo, bắt nguồn từ đạo đức chính trị và giáo dục đạo đức, đã du nhập vào Việt Nam từ sớm và đóng vai trò chủ đạo trong việc định hình cấu trúc trí tuệ và xã hội của đất nước. Hồ Chí Minh, sinh ra trong một gia đình ăn sâu bám rễ vào truyền thống Nho giáo, đã được tiếp xúc rộng rãi với các nguyên tắc của Nho giáo ngay từ khi còn nhỏ. Nghiên cứu này xem xét cách Hồ Chí Minh tiếp thu và điều chỉnh các lý tưởng của Nho giáo, đặc biệt là sự nhấn mạnh vào tính chính trực về mặt đạo đức, giáo dục và giá trị của con người như là nền tảng của sự cai trị. Bài viết nêu bật khả năng của Hồ Chí Minh trong việc trích xuất các yếu tố tích cực từ giáo lý Nho giáo, chẳng hạn như "tu thân" và "dĩ dân vi bản", đồng thời bác bỏ các học thuyết lỗi thời như chế độ gia trưởng và chủ nghĩa tinh hoa phân cấp. Bài viết cũng thảo luận về sự tổng hợp Nho giáo với triết học Mác-Lênin của Hồ Chí Minh để giải quyết các nhu cầu cách mạng của Việt Nam. Bằng cách kết nối các giá trị truyền thống với các hệ tư tưởng hiện đại, Hồ Chí Minh đã tạo ra một mô hình triết học độc đáo, hài hòa di sản văn hóa phương Đông với tư tưởng cách mạng phương Tây, minh họa cho sự liên quan lâu dài của các giá trị Nho giáo trong bối cảnh đương đại.

Từ khóa: Nho giáo, hội nhập văn hóa, Hồ Chí Minh, ảnh hưởng tư tưởng, triết học Việt Nam.

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(Nawrot, 2020; Ulaşan, 2022; Wu & Cao, 2024). Emerging in ancient China during the societal upheavals of the Zhou dynasty's decline, Confucianism was formalized by Confucius (551–479 BCE) during the Spring and Autumn period (771 - 476 BCE), building upon earlier contributions from figures like Duke Zhou (Zhou & Zhang, 2023). It advocated for moral governance, ethical conduct, and the prioritization of collective well-being, aiming to restore social order and prosperity modeled after the Zhou dynasty (Nguyen, Pham et al., 2023).

By the Han dynasty (206 BCE – 220 CE), Confucianism had become the state ideology in China (Chen, 2024; Liu, 2024), spreading widely across East Asia through cultural and political exchanges. In Vietnam, it entered relatively early, gaining prominence under Chinese domination but only becoming the official doctrine of the state in the 15th century (Nizhnikov & Bac, 2023; Thi Lan, 2022b). For centuries thereafter, Confucian principles emphasizing personal virtue, social harmony, and hierarchical relationships deeply shaped Vietnam's governance, education, and family structures, embedding themselves as central tenets in the spiritual and cultural life of Vietnam's society (Nguyen & Nguyen, 2024; Nguyen, Pham, et al., 2023).

Hồ Chí Minh (1890 – 1969), one of Vietnam's most celebrated leaders, emerged as a revolutionary figure committed to the liberation and modernization of his nation (Fernandez, 2011; Huynh & Cao, 2021; Nguyen, 2024). Born into a family steeped in Confucian tradition, Hồ Chí Minh was exposed to its teachings through both formal and informal education (Ali, 2020). His early exposure to the works of Confucius, Mencius (372 – 289 BCE), and other Confucian scholars fostered a strong moral foundation and an appreciation for the importance of education, ethical leadership, and community welfare.

This paper seeks to explore the extent to which Confucian philosophy influenced Hồ Chí Minh's thought and leadership. Although Hồ Chí Minh later adopted Marxism-Leninism as the ideological cornerstone for Vietnam's independence and socialism, he retained significant elements of Confucianism, demonstrating a selective and pragmatic approach. For instance, he valued Confucianism's emphasis on self-cultivation (“*tu than*”) and governance based on the welfare of the people, while discarding outdated notions such as rigid hierarchies and gender inequality. This adaptability underscores his ability to harmonize traditional values with revolutionary ideals, creating a unique ideological framework tailored to Vietnam's cultural and political landscape.

The introduction provides a historical overview of Confucianism's integration into Vietnamese society, followed by an analysis of its impact on Hồ Chí Minh's personal and ideological development. It also highlights Hồ Chí Minh's innovative approach to blending traditional Eastern philosophies with modern revolutionary ideologies, emphasizing his role as a cultural synthesizer. By examining the works, speeches, and actions of Hồ Chí Minh, this study illustrates how Confucian ideals, adapted to the context of 20th-century Vietnam, shaped his vision for a just and equitable society.

This investigation not only sheds light on Hồ Chí Minh's philosophical evolution but also underscores the relevance of Confucian principles in addressing contemporary challenges. In doing so, it contributes to a deeper understanding of the intersection between traditional values and modern ideologies in the context of national development and social transformation.

Literature Review

Confucianism in Vietnam

Historical context of Confucianism's introduction and development in Vietnam. Confucianism was introduced to Vietnam during the Han Dynasty (206 BCE - 221 AD) as part of Chinese cultural and administrative expansion (Nguyen, Pham, et al., 2023). Initially, it served as a tool for consolidating Chinese domination, laying the groundwork for a hierarchical and centralized governance model (Nguyen, Nguyen et al., 2023; Nguyen, Pham et al., 2023). Over centuries, Confucianism was assimilated into Vietnamese society, evolving into a foundational ideology that shaped political, social, and educational frameworks (Nguyen & Nguyen, 2024; Nguyen, Nguyen, et al., 2023). By the 15th century, during the Lê dynasty, it became the state ideology, influencing governance and moral codes (Nguyen & Nguyen, 2024; Nizhnikov & Bac, 2023).

Confucianism's integration into Vietnam's statecraft brought with it the principles of moral governance and societal harmony. Governance was influenced by Confucian ethics that emphasized the moral rectitude of rulers as a foundation for political stability. Education, modeled after the Chinese Confucian system, included rigorous civil service examinations (Thi Lan, 2022b), which became instrumental in shaping Vietnam's intellectual and administrative elites. Despite its positive contributions, Confucianism perpetuated gender inequality and class stratification, reflecting its feudal origins (Pham et al., 2023).

Its role in shaping Vietnamese governance, education, and cultural values. In governance, Confucianism provided the framework for a paternalistic model where rulers were expected to embody ethical leadership and prioritize the collective good. Confucian values of filial piety, community harmony, and respect for hierarchy were deeply ingrained, ensuring social cohesion. However, this often resulted in rigid societal structures that hindered individual autonomy and social mobility.

Education in Vietnam was heavily influenced by Confucian ideals. The emphasis on moral cultivation alongside intellectual achievement fostered a societal respect for learning and created an administrative class that adhered to Confucian virtues (Nguyen, Pham et al., 2023). However, the hierarchical nature of this system also excluded large segments of the population, particularly women and lower-class individuals, from accessing education and participating in governance.

Culturally, Confucianism shaped Vietnamese family structures and social interactions. It promoted patriarchal values and the "Three Obediences and Four Virtues" for women, reinforcing traditional gender roles. At the same time, Confucianism's integration with indigenous and Buddhist traditions led to a uniquely Vietnamese interpretation, where communal values and spiritual harmony were emphasized (Nguyen & Nguyen, 2024; Pham et al., 2023).

Hồ Chí Minh's intellectual foundations

Overview of Hồ Chí Minh's early exposure to Confucian ideals. Born into a family deeply rooted in Confucian traditions, Hồ Chí Minh was exposed to its principles from an early age. His father, *Nguyễn Sinh Sắc*, was a Confucian scholar and nationalist who instilled in him the values of moral integrity, patriotism, and education (Nguyen, 2022). Hồ Chí Minh's early education included both formal lessons and self-directed studies, where he engaged with Confucian classics like *The Analects* and *Mencius*. These teachings laid a moral foundation that deeply influenced his personal values and political vision.

Living in Hue, a cultural and political center of Confucian scholarship during the *Nguyễn* dynasty (1802 – 1945), further immersed Hồ Chí Minh in Confucian traditions (Fernandez, 2011). Despite his later adoption of Marxism-Leninism, his intellectual foundations remained influenced by Confucian values, particularly the emphasis on self-cultivation (*tu thân*), moral governance, and education (Nguyen & Nguyen, 2024; Pham Thi, 2022a).

The influence of Confucian ethics on his personal values and leadership philosophy. While Hồ Chí Minh rejected the feudalistic and patriarchal aspects of Confucianism, he embraced its positive elements. The concept of *nhân* (benevolence) and *ngĩa* (righteousness) resonated with his belief in ethical leadership and social justice. Hồ Chí Minh's philosophy of "serving the people" as the root of governance reflects the Confucian ideal of "the people as the foundation of the nation" (Nguyen & Nguyen, 2024; Nguyen, Pham, et al., 2023). His leadership style emphasized humility, integrity, and dedication to collective welfare, blending Confucian ethics with revolutionary pragmatism.

Previous studies on Hồ Chí Minh's ideology

The interplay between Confucianism and Hồ Chí Minh's thought. Scholars have extensively analyzed how Hồ Chí Minh integrated Confucian ideals into his revolutionary ideology (Nguyen & Nguyen, 2024; Nguyen, Nguyen et al., 2023). He adopted Confucian principles such as moral self-cultivation and societal harmony, aligning them with Marxist-Leninist tenets. For instance, Hồ Chí Minh's emphasis on moral rectitude among revolutionary cadres reflects the Confucian ideal of ethical leadership. His ability to reinterpret Confucian concepts, such as redefining *trung* (loyalty) and *hiếu* (filial piety) as loyalty to the nation and service to the people, demonstrates his pragmatic approach (Nguyen, Pham, et al., 2023; Pham et al., 2023).

Integration with Marxism-Leninism. Hồ Chí Minh's ideology represents a unique synthesis of Confucianism and Marxism-Leninism. He utilized Marxist principles to address socio-economic inequities while grounding his approach in Confucian ethics. This fusion created a revolutionary framework that emphasized collective welfare, moral responsibility, and cultural continuity. Scholars argue that this synthesis was instrumental in mobilizing support for Vietnam's independence and socialist reconstruction, showcasing the adaptability of traditional values in modern revolutionary contexts.

Through this integration, Hồ Chí Minh demonstrated his ability to harmonize traditional and modern ideologies, creating a cohesive philosophical paradigm that addressed Vietnam's socio-historical realities. His approach highlights the enduring relevance of Confucian ethics in shaping leadership and governance while adapting to the demands of contemporary society.

Methodology

This study employs a qualitative research approach, focusing on primary and secondary sources to examine the integration of Confucian principles in Hồ Chí Minh's philosophy. The primary sources analyzed include Hồ Chí Minh's extensive writings, speeches, and testamentary documents. These texts offer direct insight into his ideological adaptations and interpretations of Confucian thought. Secondary sources, including historical and philosophical analyses of Confucianism and its evolution in Vietnam, provide context and critical perspectives.

The research investigates Confucian concepts within Hồ Chí Minh's thought, particularly notions like self-cultivation and "people as the root". By contextualizing these ideas within the framework of Hồ Chí Minh's revolutionary activities, the study illustrates the transformation of traditional ethics into practical governance and leadership strategies.

Data sources

The primary data for this study includes Hồ Chí Minh's works, such as *The Revolutionary Path (Đường Kách Mệnh)*, *Testament (Di chúc)*, and other writings archived in *The Complete Works of Hồ Chí Minh*. Confucian texts, such as *The Analects* and the works of Mencius, are referenced to trace the origins of key philosophical concepts.

Secondary literature includes scholarly analyses of Vietnamese history, the role of Confucianism in shaping governance and culture, and existing studies on Hồ Chí Minh's ideological synthesis. Sources like Nguyen and Nguyen (2024) and Pham et al. (2023) provide a comparative lens for examining the interplay between Confucianism, Marxism-Leninism, and Hồ Chí Minh's thought.

Analytical framework

The analytical framework is grounded in textual analysis, focusing on how Confucian principles are reinterpreted in Hồ Chí Minh's works. Key Confucian concepts, such as *tu thân* (self-cultivation), *chính danh* (rectification of names), and *dĩ dân vi bản* (people as the root), are identified and analyzed in the context of Hồ Chí Minh's revolutionary leadership.

The framework also considers the dialectical synthesis of Confucian ethics with Marxist-Leninist principles. For example, the study examines how Hồ Chí Minh redefined traditional virtues, such as *nhân* (benevolence) and *trung hiếu* (loyalty and filial piety), to align with revolutionary goals and the realities of Vietnam's socio-political landscape.

This methodology enables a comprehensive understanding of Hồ Chí Minh's philosophical adaptation of Confucian values, highlighting their practical application in governance and social transformation.

Limitations of the methodological approach

While this study provides valuable insights into the integration of Confucian principles in Hồ Chí Minh's philosophy, it acknowledges several limitations. First, the qualitative approach relies heavily on textual interpretation, which can introduce subjective biases in analyzing and contextualizing philosophical

concepts. Additionally, primary sources, such as Hồ Chí Minh's writings, may reflect a strategic narrative tailored to specific political contexts, limiting the ability to fully discern his authentic philosophical intent. Secondary sources, though valuable, often interpret Hồ Chí Minh's philosophy through varying theoretical lenses, which can lead to divergent conclusions. Furthermore, the study focuses primarily on written texts and may not fully account for the influence of oral traditions or less-documented aspects of Confucianism in Vietnam.

Despite these limitations, the study aims to provide a robust analysis by triangulating insights from diverse sources and maintaining a critical perspective on the data. Future research could address these limitations by incorporating a comparative analysis of other ideological influences or exploring alternative methodological approaches, such as ethnographic studies or oral histories, to complement the findings.

Results and Discussion

1. Influence on Hồ Chí Minh's Early Education

Hồ Chí Minh, a revolutionary leader and cultural figure, developed his ideology under the significant influence of Confucianism, particularly during his early education. Rooted in Confucian ethics, he absorbed values such as *tu thân* (self-cultivation), *nhân* (benevolence), and *dĩ dân vi bản* (people as the root), which later became integral to his leadership and governance philosophy. However, Hồ Chí Minh's innovation lay in adapting these principles to meet Vietnam's revolutionary needs while discarding outdated, feudalistic aspects.

Self-cultivation and ethical governance

The Confucian principle of *tu thân*, or self-cultivation, was central to Hồ Chí Minh's worldview. Traditionally, Confucianism taught that moral self-cultivation was the foundation for societal harmony, achieved through *tề gia, trị quốc, bình thiên hạ* (managing the family, governing the state, and bringing peace to the world). Hồ Chí Minh internalized this idea but expanded it to suit revolutionary ethics. He emphasized that revolutionary morality is cultivated through constant practice and perseverance, stating, "Revolutionary morality does not fall from the sky; it develops through persistent daily struggle and training... jade becomes brighter through polishing, and gold purer through refinement" (Ho, 2011a, p. 612).

By promoting self-discipline and moral fortitude among leaders, Hồ Chí Minh adapted *tu thân* as a transformative tool for revolutionary governance. Unlike traditional Confucianism, which placed moral development within a rigid hierarchical context, Hồ Chí Minh democratized the concept, advocating for leadership that reflected collective morality and integrity.

Ethical governance, another critical Confucian value, also shaped Hồ Chí Minh's leadership philosophy. Confucius emphasized that rulers must govern with virtue, asserting that moral leadership naturally inspires trust and loyalty among the people. Hồ Chí Minh echoed this belief, stating, "You must first be upright yourself to help others be upright" (Ho, 2011b, p. 130).

While retaining this moral foundation, Hồ Chí Minh rejected Confucianism's feudal hierarchies, advocating instead for collective leadership and democratic governance as tools to empower the masses.

The value of the people in governance

The Confucian principle of "people as the root" (*dĩ dân vi bản*) profoundly influenced Hồ Chí Minh's political thought. In Confucianism, the welfare of the people was seen as the cornerstone of a stable state, but it relied heavily on the moral integrity of rulers. Hồ Chí Minh redefined this principle, elevating the people to active agents of governance and revolution. He famously declared, "The people are the roots of the nation. Strong roots make the tree durable, and victory's tower is built on the foundation of the people" (Ho, 2011c, p. 325).

By centering governance on the people's needs and aspirations, Hồ Chí Minh laid the foundation for Vietnam's Democratic Republic. His assertion that "if the people are hungry, the Party and Government are at fault" underscores his commitment to prioritizing the well-being of citizens (Ho, 2011d, p. 518). This

reinterpretation transformed the passive, subject-focused role of the people in Confucian governance into an active, participatory model suited for revolutionary change.

Education and morality

Hồ Chí Minh's emphasis on education and moral development reflects a deep Confucian influence, reinterpreted through revolutionary goals. Confucius, revered as the "Model Teacher for All Generations," viewed moral education as foundational to societal harmony. Similarly, Hồ Chí Minh promoted a comprehensive educational philosophy that prioritized morality (*đức*), intellect (*trí*), physical health (*thể*), and aesthetics (*mỹ*). He criticized the narrow focus on academic achievements in Vietnamese schools, advocating for expanded ethical education (Ho Chi Minh Institute, 1996).

Moreover, Hồ Chí Minh valued lifelong learning, aligning with Confucian teachings that "among three people walking, there is always someone I can learn from" (Ho, 2011a, p. 528). Despite limited access to formal education, Hồ Chí Minh embodied this principle through self-directed learning, demonstrating that knowledge and morality must develop continuously. His educational reforms, including literacy campaigns and democratized access to education, reflect his synthesis of Confucian values with the revolutionary imperative of empowering the masses.

Leadership and moral exemplars

Confucianism's ideal of the *quân tử* (gentleman) provided a model for Hồ Chí Minh's vision of revolutionary leadership. The *quân tử* embodied virtues such as *nhân* (benevolence), *nghĩa* (righteousness), *trí* (wisdom), *tín* (trustworthiness), and *liêm* (integrity). Hồ Chí Minh redefined and expanded these traits to include *dũng* (courage), reflecting the needs of revolutionary leadership. He stated, "A revolutionary must have revolutionary morality as a foundation to accomplish the glorious mission of the revolution" (Ho, 2011a, p. 601).

Hồ Chí Minh's leadership philosophy also emphasized humility and service. Drawing on Mencius' principle that "the people are more important than the state, and the state is more important than the king" (Ho, 2011e, p. 455), he prioritized servant leadership that placed the welfare of the people above all else.

The findings presented here are closely tied to the study's methodology, which relied on a qualitative analysis of Hồ Chí Minh's writings and relevant Confucian texts. By identifying and contextualizing key principles—*tu thân*, *dĩ dân vi bản*, and *nhân*—the study illustrates how Hồ Chí Minh adapted Confucian values to align with revolutionary goals. Primary sources such as *The Revolutionary Path* and *Testament* provide direct evidence of his ideological reinterpretation, while secondary sources offer critical perspectives on Confucianism's historical evolution and cultural influence in Vietnam.

Hồ Chí Minh's early Confucian education deeply influenced his values and worldview, particularly in the areas of self-cultivation, ethical governance, education, and leadership. By creatively reinterpreting Confucian principles through the lens of revolutionary Marxist-Leninist ideology, he developed a unique philosophical framework that balanced cultural heritage with modern political realities. This synthesis not only resonated with Vietnam's historical values but also provided a dynamic foundation for its revolutionary and social transformation.

2. Adapting Confucian Values to The Revolution

Retaining progressive elements of Confucianism

Hồ Chí Minh's reinterpretation of Confucian values reflects a deliberate and pragmatic adaptation of traditional principles to suit the revolutionary needs of Vietnam. The study's textual analysis reveals that Hồ Chí Minh retained progressive Confucian ideals, such as *tu thân* (self-cultivation), *nhân* (benevolence), and *dĩ dân vi bản* (people as the root), as foundational elements of his leadership philosophy. These values, deeply rooted in Confucian thought, were redefined to serve a collective and revolutionary purpose.

For example, Hồ Chí Minh's emphasis on *nhân* moved beyond individual moral cultivation to reflect the solidarity of the masses. He reinterpreted *nhân* to highlight the primacy of the people, stating, "Benevolence and righteousness are the people. Under the sky, nothing is more precious than the people" (Ho, 2011f,

p. 453). This interpretation aligns with *dĩ dân vi bản*, a Confucian principle that governance must prioritize the welfare of the people. By linking Confucian moral tenets to his revolutionary objectives, Hồ Chí Minh established a clear ideological foundation that connected ethical leadership with the struggle for national liberation.

Furthermore, the study examines Hồ Chí Minh's focus on education as a transformative tool, rooted in Confucian ideals. Inspired by Confucius' advocacy for universal education, Hồ Chí Minh initiated large-scale literacy campaigns to empower the population. His belief in lifelong learning resonates with Confucian ideals of continuous self-improvement. He famously stated, "As long as I live, I must continue learning" (Ho, 2011c, p. 113). Through education, Hồ Chí Minh sought to eradicate ignorance and equip individuals with the knowledge necessary for nation-building and social progress, bridging traditional pedagogy with revolutionary objectives. This analysis highlights how Hồ Chí Minh adapted Confucian educational principles into practical strategies for societal transformation, addressing the urgent needs of post-colonial Vietnam.

Rejecting outdated patriarchal and hierarchical norms

Hồ Chí Minh's revolutionary approach also involved a critical rejection of Confucianism's outdated patriarchal and hierarchical elements. This study identifies key areas where Hồ Chí Minh diverged from traditional Confucian doctrines, particularly the "Three Bonds" (ruler-subject, father-son, husband-wife) and the "Three Obediences" for women. These doctrines reinforced rigid hierarchies and gender inequality, which Hồ Chí Minh considered incompatible with the principles of liberation and equality central to the revolution.

He declared, "Women make up half of humanity. If women are not liberated, society is not liberated" (Ho, 2011e, p. 512). His advocacy for women's emancipation and inclusion in leadership reflects a profound break from Confucian patriarchal norms. Hồ Chí Minh's will urged the government to promote and support women's roles in all aspects of society (Ho, 2011c). By addressing gender inequality, he reinterpreted societal roles to align with the socialist vision of equality and collective participation.

Additionally, Hồ Chí Minh rejected the traditional Confucian disdain for manual labor and the division between intellectual and physical workers. He emphasized the dignity of labor, asserting, "In our society, no profession is inferior; only laziness and dependence are shameful" (Ho, 2011g, p. 69). This egalitarian perspective aligns with Marxist-Leninist principles, promoting the value of collective contributions to national development and dismantling hierarchical class divisions.

Reinterpreting Confucian concepts for revolutionary ideals

The study's analytical framework further explores how Hồ Chí Minh redefined key Confucian virtues, such as *trung* (loyalty) and *hiếu* (filial piety), within the revolutionary context. Traditionally, *trung* signified loyalty to the monarch, and *hiếu* emphasized filial piety within the family. Hồ Chí Minh broadened these concepts to align with collective responsibility and national priorities, explaining, "In the past, morality meant loyalty to the king and filial piety to one's parents. Today, morality means loyalty to the nation and filial piety to the people" (Ho, 2011h, p. 170).

This reinterpretation reflects a strategic adaptation of Confucian values to inspire patriotic duty and social responsibility. Hồ Chí Minh emphasized that loyalty to the nation and service to the people were the highest moral duties in the revolutionary struggle, transforming traditional ethics into tools for mobilizing collective action.

Further analysis reveals how Hồ Chí Minh applied Confucian virtues like *cần* (diligence), *kiệm* (thrift), and *liêm* (integrity) to the demands of modern governance. He described diligence as intelligent and efficient effort for productivity and thrift as the responsible use of resources for communal benefit (Ho, 2011b, 2011i). These adaptations preserved the essence of Confucian ethics while aligning them with socialist values of resourcefulness, hard work, and collective welfare.

This study demonstrates that Hồ Chí Minh's engagement with Confucianism was guided by a dialectical approach, combining traditional values with Marxist-Leninist principles and Western thought. As highlighted in the methodology, the research contextualizes Hồ Chí Minh's reinterpretations within his

writings and revolutionary activities. His statement, “Society now develops every day. Thoughts and actions must also evolve. Holding onto old ideas without change will lead nowhere” (Ho, 2011j, p. 55), exemplifies his pragmatic approach to ideological synthesis.

Hồ Chí Minh viewed Confucianism as a cultural heritage to be critically examined and selectively applied. By integrating Confucian moral values with revolutionary ideals, he created a cohesive ideological framework that emphasized ethical governance, collective solidarity, and social justice. This dynamic synthesis allowed him to harmonize tradition and modernity, preserving the cultural foundations of Vietnamese society while advancing progressive, revolutionary goals.

By creatively adapting Confucian principles to fit Vietnam’s revolutionary needs, Hồ Chí Minh demonstrated the transformative potential of cultural synthesis. His ability to reinterpret traditional values while rejecting outdated norms highlights his visionary leadership in bridging Vietnam’s cultural heritage with modern governance and social reform.

3. Synthesis of Confucianism with Marxism-Leninism

Hồ Chí Minh’s revolutionary philosophy represents a remarkable synthesis of Confucian principles with Marxist-Leninist ideology, tailored to Vietnam’s socio-political context. This synthesis was not merely theoretical but manifested as a pragmatic framework guiding Vietnam’s revolutionary path and social transformation. Hồ Chí Minh’s approach demonstrated a profound understanding of both traditions, blending Confucian ethics with the scientific materialism and revolutionary methodology of Marxism-Leninism.

Integration with Marxism-Leninism

While Confucianism provided a moral and cultural framework, Marxism-Leninism offered Hồ Chí Minh the scientific methodology and ideological tools necessary for Vietnam’s liberation. Marxist-Leninist principles of class struggle, dialectical materialism, and proletarian leadership were integrated into Hồ Chí Minh’s vision, creating a cohesive philosophy that resonated with Vietnam’s historical and cultural realities.

The fusion of these traditions is evident in Hồ Chí Minh’s reinterpretation of “people as the root”. While Confucianism emphasized the people as the foundation of governance to ensure societal stability, Hồ Chí Minh extended this concept within a Marxist framework to advocate for the people as the true masters of the state. This was enshrined in the constitution of the Democratic Republic of Vietnam, ensuring that governance and policies prioritized the welfare and empowerment of the masses (Ho, 2011f).

Similarly, Hồ Chí Minh adapted the Confucian concept of loyalty (*trung*), traditionally directed toward monarchs, to signify loyalty to the nation and the revolutionary cause (Ho, 2011h). This shift from feudal allegiance to collective responsibility underscores his innovative integration of Confucian virtues with Marxist principles of equality and collective struggle.

Practical applications in policies and writings

Hồ Chí Minh’s writings and policies illustrate the practical application of this synthesis. His revolutionary ethics demanded that leaders demonstrate moral rectitude and serve as role models for the people. This is evident in his emphasis on the virtues of diligence (*cần*), thrift (*kiệm*), and integrity (*liêm*) for both cadres and citizens. These virtues, drawn from Confucian ethics, were expanded to include Marxist values such as collective solidarity and self-sacrifice for the greater good (Ho, 2011f).

Hồ Chí Minh’s leadership during the land reform campaigns and his directives to combat corruption reflect his commitment to ethical governance grounded in both Confucian morality and Marxist egalitarianism. For instance, his insistence that “cadres must lead by example” aligns with Confucian notions of moral leadership while serving the Marxist goal of building a just and equitable society (Ho, 2011b, pp. 126-127).

Harmonizing cultural heritage with revolutionary ideals

Hồ Chí Minh's ability to harmonize Confucian and Marxist principles highlights his respect for cultural heritage and his pragmatic approach to revolutionary transformation. By retaining the ethical core of Confucianism and enriching it with the scientific rigor of Marxism-Leninism, he created a philosophy that resonated deeply with the Vietnamese people.

Hồ Chí Minh's synthesis demonstrates that revolutionary ideologies need not reject traditional values. Instead, by critically engaging with cultural legacies, these values can be transformed into powerful tools for social and political progress. This dynamic integration of Confucian ethics and Marxist-Leninist ideals continues to serve as a model for applying revolutionary principles in culturally specific contexts.

4. Implications for Governance and Leadership

Cultural synthesis as a governance framework

Hồ Chí Minh's synthesis of Confucianism with Marxist-Leninist ideology provides a compelling model for governance that blends traditional cultural values with revolutionary principles. By harmonizing Confucian ethics, such as *tu thân* (self-cultivation) and *nhân* (benevolence), with Marxist ideals of equality and collective welfare, Hồ Chí Minh demonstrated how cultural traditions can be adapted to address contemporary challenges. His ability to retain the moral essence of Confucianism while rejecting feudalistic and patriarchal elements, such as rigid hierarchies and gender inequality, highlights a pragmatic approach to leadership that values both heritage and innovation (Ho, 2011f).

This cultural synthesis offers significant lessons for modern governance, particularly in societies navigating the balance between tradition and globalization. Leaders can draw from Hồ Chí Minh's example to build inclusive frameworks that respect cultural heritage while addressing contemporary socio-political realities.

The role of people-centric leadership

A core tenet of Hồ Chí Minh's philosophy is the Confucian idea of *dĩ dân vi bản* (people as the root), reinterpreted through a Marxist-Leninist lens to emphasize the empowerment of the masses. Hồ Chí Minh's assertion that "the people are the most precious" resonates with Mencius's emphasis on the populace's centrality but extends the concept by advocating for active participation in governance (Ho, 2011f, p. 453). His view that "strong roots make the tree durable" underlines the importance of fostering citizen agency and community empowerment (Ho, 2011c, p. 325). This people-centric governance model provides a counterpoint to centralized systems that prioritize state control over individual participation. Modern leaders can apply this philosophy to develop policies that prioritize citizen well-being, encourage democratic participation, and build societal resilience.

Moral integrity and ethical leadership

Hồ Chí Minh's leadership philosophy places significant emphasis on morality, echoing Confucian ideals of *liêm* (integrity), *trí* (wisdom), and *nhân* (benevolence). By redefining these values within a revolutionary context, Hồ Chí Minh crafted a moral framework that prioritizes accountability, humility, and public service (Ho, 2011k). This ethical leadership approach is particularly relevant for addressing modern challenges, such as corruption and political distrust.

For instance, Hồ Chí Minh's insistence on moral governance aligns with his belief that leadership must embody ethical conduct to inspire collective trust and unity. This focus on integrity remains a valuable lesson for leaders seeking to foster transparent and responsible governance.

The transformative power of education

Hồ Chí Minh's vision of governance highlights the transformative role of education in cultivating a socially conscious and ethical citizenry. Drawing from Confucian ideals that emphasize moral education, he prioritized eradicating illiteracy and promoting universal learning. Education, in Hồ Chí Minh's view, was both a means of individual empowerment and a tool for national advancement.

His campaigns to mobilize the masses through education align with Confucius's assertion that "education without class distinctions" (Ho, 2011a, p. 602). By democratizing access to knowledge, Hồ Chí Minh emphasized the role of education in fostering equality, critical thinking, and social responsibility—qualities essential for societal progress and sustainable governance. This approach highlights the need for modern leaders to invest in education systems that promote not only technical skills but also ethical awareness and civic responsibility.

Global implications for cross-cultural governance

Hồ Chí Minh's ability to integrate Eastern Confucian values with Western revolutionary ideologies demonstrates the potential of cross-cultural synthesis in governance. His reinterpretation of *nhân nghĩa* (benevolence and righteousness) as "loyalty to the people and devotion to the nation" illustrates how traditional concepts can be adapted to inspire collective action and social harmony (Ho, 2011h, p. 170).

In an era marked by increasing cultural pluralism and ideological diversity, Hồ Chí Minh's synthesis offers a valuable framework for fostering inclusive governance. Leaders facing cultural and political polarization can draw on his philosophy to build systems that harmonize ethical traditions with practical solutions for societal challenges.

The findings presented above are grounded in a rigorous qualitative analysis of Hồ Chí Minh's writings, speeches, and related Confucian texts. The methodological approach, as outlined in this study, focused on identifying key Confucian concepts such as *tu thân*, *dĩ dân vi bản*, and *liêm* and analyzing their reinterpretation within Hồ Chí Minh's revolutionary context. By triangulating insights from primary and secondary sources, the study illustrates how Hồ Chí Minh's leadership philosophy reflects a deliberate synthesis of traditional ethics and modern ideologies (Nguyen & Nguyen, 2024; Pham et al., 2023).

This connection between results and methodology ensures that the study's conclusions are firmly rooted in textual evidence and critical analysis, providing a comprehensive understanding of Hồ Chí Minh's governance philosophy.

While the study offers valuable insights, it acknowledges certain limitations. The reliance on textual analysis introduces potential subjectivity in interpreting Hồ Chí Minh's philosophical intent. Additionally, the primary sources, such as Hồ Chí Minh's writings, may reflect strategic narratives shaped by specific political contexts, limiting a full understanding of his authentic ideological motivations.

Secondary sources, though insightful, often present varying interpretations, leading to divergent conclusions. Moreover, this study primarily focuses on written texts, which may overlook oral traditions or less-documented influences of Confucianism in Vietnam. Future research could address these limitations through interdisciplinary approaches, such as ethnographic studies or oral histories, to provide a more holistic perspective.

Hồ Chí Minh's synthesis of Confucian principles and Marxist-Leninist ideology offers profound implications for governance, leadership, and society. His emphasis on people-centric leadership, ethical governance, and the transformative power of education demonstrates the enduring relevance of traditional values in addressing contemporary challenges.

By creatively adapting Confucian ethics to align with revolutionary goals, Hồ Chí Minh crafted a legacy that transcends time and geography. His philosophy provides a valuable blueprint for modern leaders seeking to harmonize cultural heritage with innovation, foster inclusive governance, and build resilient societies in an interconnected world.

In short, Hồ Chí Minh's approach underscores the transformative potential of cultural synthesis in achieving progress, unity, and social justice, offering enduring lessons for governance in the 21st century.

Conclusions

This study highlights the profound influence of Confucianism on Hồ Chí Minh's thought and its pivotal role in shaping his leadership philosophy. From his early exposure to Confucian ethics, Hồ Chí Minh internalized key principles such as *tu thân* (self-cultivation), *nhân* (benevolence), and *dĩ dân vi bản* (people

as the root), which became the moral foundation for his vision of governance and societal harmony. However, he pragmatically adapted these principles to align with Vietnam's revolutionary goals, rejecting feudalistic and patriarchal elements, such as rigid hierarchies and gender inequality, while retaining their progressive aspects.

Hồ Chí Minh's synthesis of Confucian ethics with Marxist-Leninist ideology created a cohesive framework that harmonized traditional Vietnamese values with modern revolutionary ideals. By combining the moral focus of Confucianism with the scientific rigor of Marxist principles, he emphasized ethical governance, education, and people-centric policies. This pragmatic integration not only served as a blueprint for Vietnam's social and political transformation but also showcased the adaptability of cultural traditions in addressing contemporary challenges.

The significance of Hồ Chí Minh's philosophy extends beyond Vietnam, offering valuable insights for modern governance and leadership. His approach underscores the enduring relevance of cultural heritage in addressing contemporary issues, highlighting the importance of moral integrity, collective welfare, and ideological flexibility.

Future research can build on this study by exploring comparative analyses of Hồ Chí Minh's philosophical synthesis with other leaders who integrated traditional values with modern ideologies. Additionally, studies could examine the practical application and long-term impact of Hồ Chí Minh's philosophy on contemporary Vietnamese policies and governance. A broader investigation into the role of Confucianism in other socialist or post-colonial contexts would further illuminate how cultural traditions can adapt to modern political frameworks. Lastly, interdisciplinary approaches, including oral histories and ethnographic studies, could provide deeper insights into the lived experiences of Confucian and Marxist values in Vietnamese society.

In conclusion, Hồ Chí Minh's ability to harmonize Confucianism and Marxist-Leninism reflects a profound understanding of cultural adaptation and ideological synthesis. His legacy offers a timeless model for ethical leadership and the interplay between tradition and modernity, inspiring ongoing discussions on progress, unity, and social justice.

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Information influence on the formation of social competence in higher education students

Вплив інформації на формування соціальної компетентності студентів вищої освіти

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
Abstract


The article reveals the content of social competence and the role of information in forming social competence among higher education students. Methodological approaches to conducting the study involve establishing worldview positions, general pedagogical patterns of information influence on the formation of social competence of higher education students, and identifying their impact on the results obtained. An experimental study was conducted to assess the optimality of the process of information influence on the formation of social competence of higher education students, the result of which is the integrative quality of the personality-social competence. The conducted cross-section of the levels of formation of social competence of respondents after the completion of the formative experiment showed significantly greater positive changes in the formation of social competence of higher education students in the EG through information influence. In the conclusions, we noted


Анотація


У статті розкрито зміст соціальної компетентності та роль інформаційного впливу на формування соціальної компетентності здобувачів вищої освіти. Методологічні підходи до проведення дослідження передбачають встановлення світоглядних позицій, загальнопедагогічних закономірностей інформаційного впливу на формування соціальної компетентності вищої освіти та виявлення їх впливу на отримані результати. Проведено експериментальне дослідження з метою оцінки оптимальності процесу інформаційного впливу на формування соціальної компетентності здобувачів вищої освіти результатом якого є інтегративна якість особистості – соціальна компетентність. Здійснений зріз рівнів сформованості соціальної компетентності респондентів після завершення формувального експерименту показав в ЕГ значно більші позитивні зміни сформованості соціальної компетентності здобувачів вищої освіти шляхом

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that we experimentally verified the effectiveness of the proposed method of using information technologies in the formation of social competence and monitored the dynamics of the growth of the levels of formation of social competence of students.

Keywords: information influence, formation of social competence, students of higher education, information technologies, multimedia, cloud, social media technologies.

Introduction

In the conditions of today's challenges, with the constant informatization of society, the basis of personal development and professional development of the future specialist is social competence, which provides opportunities for self-realization of the individual and is an integral quality of a modern professional due to the positive formed social experience of a person (Kurlishchuk & Shvyrka, 2021).

One of the leading competencies of a modern specialist is social competence as a complex, integrative characteristic of the personality, a set of value orientations, social knowledge, skills, experience, psychophysiological and psychological qualities that allow achieving socially significant goals and self-realization based on the productive fulfillment of social roles, constructive interaction with the social environment, effective problem-solving in constantly changing social conditions. Therefore, the need for purposeful formation of social competence of student youth as an integral component of a competent specialist is currently undeniable. The problem of forming social competence of students of higher education institutions in the activities of self-government bodies is interdisciplinary, considered in the context of philosophy, sociology, pedagogy, theory, and practice of social work (Benkovska, 2023).

The formation of social competence of specialists in the conditions of informatization of society should ensure the life position of the future competitive specialist, which involves his attitude to the environment, awareness of himself as a successful person, attitude to the natural world, its representatives, characterized by the ability to understand interpersonal and social processes, approaches to others, to oneself, the ability to act by the assigned tasks. With such an approach to the formation of social competence of future specialists, social competence becomes one of the priority directions of the functioning of the modern educational system in higher education. Intellectually spiritual, all-round development of the personality and its self-realization is provided by the modern concept of education both in the professional sphere and in the social sphere based on formed social competence and successful socialization of the personality (Makar, 2021).

The tasks of the article are:

- To conduct an experimental study to assess the optimality of the process of information influence on the formation of social competence of higher education applicants;
- To conduct a cross-section of the levels of formation of social competence of respondents
- To check the effectiveness of the proposed methodology for using information technologies in the formation of social competence;
- To monitor the dynamics of the growth of the levels of formation of social competence.

The influence of information on the formation of social competence is currently a relevant issue of the theory and methodology of teaching in the educational process. Based on this, we considered the following issues in the article:

- 1) The content of social competence and the role of information influence the formation of social competence in higher education students.
- 2) Characteristics, components, and functions of social competence.
- 3) The essence and structural components of the content of socio-cultural competence.
- 4) The influence of ICT tools on the formation of social competence of higher education students.

інформаційного впливу. У висновках ми зауважили, що експериментально перевірили ефективність запропонованої методики використання інформаційних технологій у формуванні соціальної компетентності та відслідкували динаміку зростання рівнів сформованості соціальної компетентності учнів.

Ключові слова: інформаційний вплив, формування соціальної компетентності, здобувачі вищої освіти, інформаційні технології, мультимедійні, хмарні, соціомедійні технології.

- 5) The most important information technologies that contribute to the effective formation of social competence.
- 6) An experimental study was conducted to assess the optimality of the process of information influence on the formation of social competence in higher education students.
- 7) The range of tools for implementing the developed methodology for using information technologies in the formation of students' social competence is described.

The relevance of the problem under study, its social and practical significance, and the absence in domestic pedagogical science of a holistic study that would reveal the content of social competence and the role of informational influence on the formation of social competence of higher education students, determined the choice of the topic of the article.

The purpose of the study. To show the role of informational influence on the formation of social competence of students of higher education.

Literature Review

Given that social competence is an important characteristic of a person that ensures effective interaction with society and optimizes a person's relations with various social institutions, scientists focus on various aspects of its formation. Thus, I. Kurlishchuk & V. Shvyryka (2021) devoted their research to the theoretical justification and determination of the pedagogical conditions for the development of social competence in future specialists using volunteering.

We share the opinion of O. Kuchai, N. Hrechanyk, A. Pluhina, A., Chychuk, L. Biriuk & I. Shevchuk (2022), who note that currently in the field of informatization of education in terms of increasing social competence, one of the priority areas is the introduction and development of multimedia products, multimedia equipment in the educational process. Multimedia tools are of particular importance, which, with the development of the Internet, are oriented towards web technologies and can be used for educational purposes.

The features of the implementation of the leading provisions of the competency-based approach in the educational process of educational institutions of different levels are disclosed in scientific works. T. Tulpa (2020) describes social competence as personal development, a quality integrative category that combines specific personality qualities, valuable understanding of social reality, abilities, skills, social knowledge as a guide to action, as a subjective readiness for application in the main areas human activities of social experience, as the ability to analyze the consequences and implement socially perspective transformative influences. L. Nos & M. Stakhiv (2021) considered the problem of forming socio-cultural competence in future elementary school teachers using information and communication technologies.

Analysis of social and educational practice shows that often, graduates of higher pedagogical schools are not ready to implement the requirements that society places on them not only as specialists but also as carriers of a high moral culture, which they will try to transmit to their students as effectively as possible in their further professional activities. Active scientific discussion around the problems of ensuring harmonious interaction of a modern specialist in the educational field with the constantly changing surrounding information space mainly boils down to the question of what competencies a graduate of a higher pedagogical educational institution should master. The current state of education development is characterized by the presence of scientific and methodological foundations for the development of competency models of educational activity, while there is a virtual absence of conceptually sound works related to the description and explanation of the processes of competence formation, in particular, social. Given the constantly growing need for specialists in the social and humanitarian field, the training of specialists with a high level of social competence formation is of particular importance.

The philosophical and purely pedagogical understanding of the interdependence of social phenomena and pedagogical reality was consistently reproduced in their fundamental research. V. Polishchuk (2022) revealed the potential possibilities of a systematic approach to the formation of social responsibility among future specialists in the process of their professional training and through the improvement of the content and technological support of the research process and the activation of students' motivation, the practical plane of the implementation of this task was characterized. V. Kovalenko (2020) analyzed the crucial importance of the interrelationship of culture and communication between speakers of different social

groups and different cultures; the factors that most influence the socialization process of language majors in the communication space of higher education institutions are analyzed; in the aspect of sociocultural and intercultural communication, the emphasis is on the main influencing factors in the process of socialization (tolerance, mutual understanding, respect for the culture of the partner, tolerance, communication, at the same time as awareness of the cultural and social values of one's society. The study of L. Makar (2021) is devoted to the specifics of the formation of social competence in future social workers during their practical training – educational and industrial. The importance of the practical component in preparation for a bachelor of social work is emphasized; the issue of the level of requirements for the specialist's competence, which is due to the characteristics of professional activity, is highlighted in the field of social services provision; the issue of the role of practice among social workers in the process of formation of social competence is revealed.

The problem of the formation and development of social competence of students was considered in his scientific works by N. Oleksiuk (2024). He emphasized the importance of developing social and professional competencies for higher education students. The concept of "professional competence" and "social competence" is revealed, and their essence is determined. A close connection between professional competence and social competence has been proven because the very acquisition of skills and abilities characteristic of a qualified specialist is impossible without interaction with society, and it is precisely the high level of a person's social competence that will provide the opportunity to be successful in professional activity.

According to the results of studying the works of Ukrainian and foreign scientists, it was found that the problem of the influence of information on the formation of social competence of higher education students, as a complex problem, was not the subject of separate special studies. The need to study and solve this problem and its relevance is due to the existing contradictions between:

- Between the need of modern society for an educational system that would ensure the formation of a student's social competence and the lack of scientific, methodological, and technological support for the implementation of this system in practice;
- Between the rapid increase in requirements for the level of professional and pedagogical activity of a teacher, an integral part of which is the manifestation of social competence, and the insufficient preparation of a graduate of a higher pedagogical primary school to solve specifically social and pedagogical tasks;
- Between the objectively perceived need for the formation of a student's social competence in the process of studying at a higher pedagogical school and the lack of substantiated didactic mechanisms for its formation as a leading component of the active social position of a future teacher.

Methodology

The methodological basis of the study is presented at four hierarchically subordinate levels: philosophical, general scientific, specifically scientific, and technological.

In the process of research, we applied general scientific and pedagogical research methods. In particular: synthesis and analysis, comparison, generalization of scientific publications, reference literature, methodical literature in order to determine the state of development of the outlined problem; induction, deduction, comparison, systematization and generalization for the purpose of clarifying different views on outlining ways to solve a scientific problem; comparing the views of various scientists on the specified problem for a comprehensive and objective coverage of the researched issue; terminological analysis in order to specify the definition and essence of concepts; observation of the educational process in institutions of higher education in order to find out the specifics of informational influence on the formation of social competence of higher education; classification for ordering and logical distribution of scientific principles, approaches to the development of social competence of future specialists; generalization and systematization of scientific information for formulating conclusions; pedagogical observation for the purpose of obtaining primary information about the object of research, building a theory of the researched problem and verifying it in practice; questionnaire, expert assessment, self-assessment and self-analysis, pedagogical experiment with the aim of obtaining the most accurate results; mathematical and statistical for processing actual research material, evaluating its results.

We can state, based on the analysis of several scientific sources, that the methodological approaches to conducting research involve the establishment of worldview positions, general pedagogical patterns of informational influence on the formation of social competence of higher education, and the identification of their influence on the obtained results.

The implementation of the pedagogical experiment was carried out in three stages: preparatory, main, and final.

At the preparatory stage, the goal and objectives of the study were determined, the experimental plan was developed, methods of measurement and processing of results were identified, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, the experiment was conducted.

At the final stage, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

The reliability and validity of the obtained results and the objectivity of their assessment were ensured by the methodological soundness of the initial positions and the qualimetric mechanism for assessing the quality under study, the use of a complex of complementary research methods, and the involvement of a group of respondents from a higher educational institution in the analysis of its results.

Research relies heavily on the accuracy and reliability of data. In research, the quality of data collection and analysis not only adds weight to the research but also contributes to the formation of sound conclusions, which is key to academic success. The following digital data collection tools were useful in the study: MS Excel and SPSS (Statistical Package for Social Science) programs.

We used quantitative methods in our study to study a large group of people and subsequently analyzed the data obtained using statistical methods.

The criteria were determined during the research

A cognitive-cognitive criterion with indicators: student youth's perception of the world, the ability to arbitrarily regulate one's own cognitive activity, the ability to express one's thoughts, analyze what one hears and sees, the ability to navigate the Internet, master the main flow of information from the mass media.

Socio-emotional criterion with indicators: the ability to evaluate one's activities, oneself, attitude towards others, transfer information received from mass media and the Internet into one's own life; the ability to identify virtues, one's own traits (positive and negative); the ability to navigate in the names of feelings, emotions, the specifics of their manifestation.

Activity-behavioral criterion with indicators: the ability to prevent the occurrence of conflicting situations to resolve promptly; higher education students' awareness of rules and generally accepted norms of behavior in various social situations; the ability to find adequate forms of interaction and cooperation in mass media, to use them in joint activities with others.

During the research, based on the specified criteria and indicators, the levels of formation of social competence of higher education students through informational influence using multimedia technologies were characterized as high, medium, and low.

Conducting an ascertaining experiment and the obtained results made it possible to show the shortcomings of the formation of social competence through informational influence, which is a significant and integral element of ensuring the educational process, purposeful and conscious socialization of the young generation using mass information, multimedia, etc. The social formation of the personality remains outside the attention of teachers in conditions of increased informational influence.

We have proposed (for EG students) a range of tools for the implementation of the developed method of using information technologies in the formation of students' social competence, which gives reason to talk about the pedagogical expediency and the possibility of its application in higher education.

A formative experiment was conducted to check the effectiveness of the developed method of using information technologies in the formation of students' social competence.

The total sample size in the article is 120 respondents. When creating the sample, the criteria of content, representativeness, and equivalence were taken into account. The sample of respondents was formed by random selection using the technical procedure of calculating the selection step.

Tasks of the formative stage of the pedagogical experiment:

- 1) Experimentally verify the effectiveness of the proposed method of using information technologies in the formation of students' social competence;
- 2) To monitor the dynamics of growth in the levels of social competence formation of students.

We note that the distribution of students according to the three-level system at the end of the pedagogical experiment in the CG group did not change significantly compared to the changes in the EG, as can be seen from the study.

The cross-section of the levels of formation of the social competence of the respondents after the completion of the formative experiment showed significantly greater positive changes in the formation of the social competence of the students of higher education through informational influence in the EG.

Based on the developed methodology for using information technologies in the formation of social competence, we have identified its main components. The methodology for using information technologies in the formation of social competence involves:

- Participation of students in training sessions to practice social skills and abilities necessary for socialization and the formation of social competence;
- The ability to use information technologies for communication in society;
- Viewing a fragment of a film and discussing its impact on society or the individual with further discussion of the behavior of the characters, a problematic socially significant situation;
- Checking tasks using information technologies, multimedia tools, cloud technologies, and social media technologies in the formation of social competence of students for mini-groups (group work);
- Tasks for the formation of social competence of higher education applicants through information influence, which should help in the acquisition of practical skills and abilities;
- Specially organized classes aimed at the practical application of knowledge from the information component since students must learn to conduct introspection of their own behavior.

Results and Discussion

The content of social competence and the role of information influence the formation of social competence of students of higher education.

Social competence is one of the key competencies that students of higher education and working professionals should possess. Today, we can state the fact that young people systematically use various online resources to form social competence and spend a significant amount of time in the virtual space of higher education seekers. Therefore, the role of informational influence on the formation of social competence is important, and the topic is relevant.

The most effective for those seeking higher education are various means and directions for the formation of social competence, which include the integration of topics, thematic seminars, training, participation in various educational and scientific events, the introduction of special courses related to social competence into the educational process, the updating of existing disciplines, which is especially relevant now (Sharov & Sharova, 2022).

Most often, social competence is interpreted as the presence of social authority, the possession of powers, and social knowledge, which allows an individual to act and exist in society.

The social competence of the future specialist is conditioned by:

- The ability to determine the features of the environment and one's own behavioral features;
- The ability to navigate in social situations;
- The ability to choose adequate methods of interaction and communication (Kurlishchuk & Shvyrka, 2021).

Characteristics and components of social competence.

Among the characteristics of social competence, we note the following:

- Interaction with other people to effectively solve personal and professional issues;
- Orientation to the nature of the (changing) social environment;
- The situational nature of the manifestation of social competence.

Scientists offer various means and contexts for the formation of social competence of pupils and student youth.

Let's note the expediency of using: means of project activity; means of information and communication technologies; means of game technologies; means of theatrical art; and means of non-formal education (Zhukova, 2019).

Let's define the components of social competence: the adoption of social values; development of cultural competence; acquisition of interpersonal interaction skills; development of personal identity; decision-making; the ability to regulate personal behavior (Marrero-Sánchez & Vergara-Romero, 2023).

We consider social competence in the context of personality socialization, that is, a person's self-change, constant personality change throughout life under the influence of relatively directed, spontaneous, purposeful factors (Vizniuk et al., 2023).

The essence and structural components of the content of sociocultural competence.

Recently, the concept of "sociocultural competence" has become widespread in the scientific literature and society, which is mostly used in the context of different cultural groups and their social relationships, it involves acquiring new knowledge to fulfill a desire when faced with an unfamiliar environment, new life situations; implies the formation of a system of skills and knowledge related to cultural, social, and historical processes (Association of Rectors of Pedagogical Universities in Europe, 2016).

Within the framework of the educational process, the concept of "socio-cultural competence" acquires innovative meanings associated with the formation of the principles of the European community, which include the development of international relations, internationalization, democratization, tolerant attitude towards representatives of different cultures, ethnic groups, religions, harmonization social relations, etc. (Salmona et al., 2015).

Let's consider each of the components of the studied phenomenon in detail. Sociocultural mobility, which combines the psychological, intellectual, and motivational readiness of an individual for professional activity in a multicultural environment, is considered a "qualitative characteristic of an individual" (Koval et al., 2023).

Several requirements are proposed for the formation of socio-cultural mobility:

- Based on the recognition of the spiritual values of a person – the ability to navigate in the polygamous culture of various representatives of the cultures of various peoples of the world;
- In the spiritual world of ethnic groups and nations – do not deny cultural differences;
- Willingness to study and understand another culture conclude oneself;

- Show flexibility when solving intercultural disputes Empathy is a component of sociocultural competence, which is interpreted as a "situational-cognitive-affective" state. Based on the principles of treating the student group as a single whole and creating socially fair content, the content of this component is developed, which is aimed at directly opposing xenophobia, racist stereotypes, and other manifestations of inequality through the analysis of cultural, social, economic realities, and the lives of students.

Leadership is another component of sociocultural competence. The ability to organize an environment that is multicultural and based on social justice is its main requirement for formation. Compliance with this requirement is related to the practice of working with interdisciplinary material and its content, prejudices regarding the ethnocultural specificity of others, which reflects the peculiarities of solving social problems and complex global concepts, as well as encouraging others to make socially just decisions and become responsible citizens.

Awareness in the sphere of culture is considered a system of ideas, knowledge, the experience of perception of other cultures, and one's own culture, which proves the ability of the individual to gain new cultural experience. This component of socio-cultural competence in different cultural contexts should reflect the peculiarities of decision-making, i.e., the future specialist should optimally adapt his thoughts, approaches, and decisions to ensure the achievement of positive results in the conditions of intercultural interaction. In this context, it is appropriate to mention tolerance, tolerance, endurance, and stability, i.e., tolerance to a way of life, a different worldview, customs, and behavior. Within the framework of the educational process, based on the concept of multicultural education, tolerance is formed among students, which is aimed at their further professional activities in a diverse environment, taking into account the specifics of religious, social, and ethnic contexts (Hughes & Marcus, 2017).

The influence of ICT tools on the formation of social competence of students of higher education.

If we are talking about the role of information influence on the formation of social competence, then ICT tools for the development of social competence are of great importance here.

With the help of remote technologies (social network, Moodle system, programs for instant messaging), a student of higher education can build a dialogue with the teacher to clarify educational issues. Such a transition to a dialogic from a monologic approach will allow the acquirer to better master the resources or use the information they contain. Between students of higher education during virtual communication, negative consequences can be observed less often than between teachers (negative comments in chats, indirect and direct insults, disrespect to the teacher during a video lecture in the form of ignoring the completion of an additional task, etc.) (Sharov & Sharova, 2022).

At the current stage, the expansion of the information and communication space is becoming a catalyst for the technologization of the educational process, which is understood as a set of connections between societies, individuals, continents, and states. The importance and necessity of the formation of social competence of higher education seekers is connected with the high technology and globalization of media, which actualize the methods and means of their representation, the need to display various information processes that can be implemented at the modern stage by involving high-tech communications. The development of satellite systems, computers, the Internet, and cable television over the previous decades, which supplemented the classical means of information transmission, makes it possible to exchange information at the level of communication between the subjects of the educational process, as well as to implement interactive education, within which the individual is an active participant in the educational process. This is primarily related to the wide implementation of information technologies in the educational process of higher education institutions (Shuliak et al., 2022).

Social media technologies belong to information technologies that contribute to the formation of social competence and ensure the interaction of students and teachers. They are presented by the network communication systems that are available – Facebook, X, LinkedIn, as well as Flickr, MSN, Wiki, etc. resources (Sichkar & Denysiuk, 2023).

Facebook, which contains the following applications, is of great importance and educational opportunities for informational influence on the formation of social competence:

- SlideShare, which is used to send slideshows to students for creating presentations;
- WeRead books, which allows you to write comments, learn the opinions of other readers, and share thoughts about what you have read;
- Study Groups, functioning for the presentation and execution of a group project;
- DoResearch 4ME, designed for information gathering;
- Zoho Online Office provides the ability to save documents online, designed to send and create Microsoft Office documents on Facebook and share them with colleagues and students Docs (Shetelya et al., 2023).

Therefore, since the acquisition of skills and abilities characteristic of a modern innovative specialist is impossible without his successful interaction with society and because the professional competence of the future specialist is closely related to his social competence and the high level of social competence of a person will provide an opportunity to be successfully realized in professional activities, we define the social competence of the future specialist as an integrated ability of the individual, which allows him to define and fulfill various social roles; solve problems in various life situations; interact with other people effectively; to form personal, social, civic values, communication skills; allows her to be a mobile person in the process of professional training; move to competence from motivation, and later to professionalism, constant professional growth and self-improvement, self-development

Limitations of the study.

The implementation of the pedagogical experiment was carried out in three stages during 2022-2024: preparatory, main, and final.

At the preparatory stage, 2022, the goal and objectives of the study were determined, an experimental plan was developed, methods for measuring and processing the results were determined, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, 2023, the experiment was conducted.

At the final stage, 2024, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

Research relies heavily on the accuracy and reliability of data. The following digital data collection tools were useful in the study: MS Excel and SPSS (Statistical Package for Social Science) programs.

The total sample size in the article is 120 respondents. The sample of respondents was formed by random selection using the technical procedure for calculating the selection step.

During the experimental study, diagnostic data on the levels of social competence of higher education applicants were determined through information influence and were divided into a control group (59 students) and an experimental group (61 students).

The study was implemented by applying methods and various forms: multimedia technologies (projector, multimedia board, video, and audio equipment), software that combines animation, graphic, text, video, and sound data and information, and their simultaneous use in the information space; mobile devices, personal computers, web-based resources that are freely available and free of charge (YouTube, author's website, specialized sites, social networks, cloud technologies, social network technologies), etc.

The limitations of this study allowed it to have the following impact on the results: improving the qualitative characteristics of the material, optimally specifying goals and objectives, and increasing the effectiveness of the results.

The experimental research.

We conducted an experimental study to evaluate the optimality of the process of information influence on

the formation of social competence, the result of which is the integrative quality of individual-social competence.

The criteria were determined during the research.

Cognitive-cognitive criterion with indicators: student youth's perception of the world, the ability to arbitrarily regulate one's own cognitive activity, the ability to express one's thoughts, analyze what one hears and sees, the ability to navigate the Internet, master the main flow of information from the mass media.

Socio-emotional criterion with indicators: the ability to evaluate one's activity, oneself, attitude towards others, transfer information received from mass media and the Internet into one's own life activities; the ability to identify virtues, one's own traits (positive and negative); the ability to navigate in the names of feelings, emotions, the specifics of their manifestation.

Activity-behavioral criterion with indicators: the ability to prevent the occurrence of conflicting situations to resolve promptly; higher education students' awareness of rules and generally accepted norms of behavior in various social situations; the ability to find adequate forms of interaction and cooperation in mass media, to use them in joint activities with others.

During the research, based on the specified criteria and indicators, the levels of formation of social competence of higher education seekers through informational influence were characterized as high, medium, and low.

The high level of formation of social competence of higher education students through informational influence is characterized by a formed view of the world. Students can arbitrarily regulate their own cognitive activity, consciously orient themselves in the flow of information offered by a large number of information sources, work with the means of multimedia, cloud technologies, and social media technologies, correctly name manifestations of emotions and feelings, understand the specifics of their manifestation; objectively determine their own negative traits and positive ones; adhere to the rules of behavior and generally accepted norms in various social situations.

The average level of formation of social competence through information influence was characterized by a partially formed view of the world. They do not have sufficient means of multimedia, cloud technologies, social media technologies, or the ability to arbitrarily regulate their own cognitive activity, but they consciously orient themselves in the flow of information coming from the Internet mass media, however selectively orient themselves in the names of emotions and feelings, the specifics of their manifestation by television and computer characters, guided by personal sympathies and mood; cannot always identify negative and positive personal traits, virtues and compare them; do not always follow norms, generally accepted rules of behavior in various social situations.

The low level of formation of social competence of higher education students through informational influence was characterized by an unformed view of the world. The respondents are practically not oriented in multimedia, cloud technologies, social media technologies, in the flow of information coming from the Internet and mass media, are not able to regulate their own cognitive activity arbitrarily, cannot correctly name manifestations of feelings and emotions and their specificity; respondents are dominated by selfish traits, they are unable to identify their own virtues, negative and positive traits, and compare them; they do not understand the need to observe the rules of behavior and generally accepted norms in different social situations, they do not know how to compare them.

Experimental work with respondents included the use of methods: conversation, survey, observation method, individual classes, identifying their ability to establish relationships with peers and adults using multimedia technologies, and informational influence to form the social competence of higher education students.

So, after considering the content characteristics of the levels of formation of social competence through informational influence, a general characteristic of the levels of formation of social competence among students was developed according to the specified criteria. In particular, three levels of formation of social competence were determined through informational influence based on comprehensive assessment.

Generalized data on the levels of social competence formation are presented in Table 1 and Figure 1.

Table 1.

Distribution of students of higher education according to the levels of formation of social competence through informational influence

Levels	EG	CG
High	15 %	18 %
Average	45 %	40 %
Low	40 %	42 %

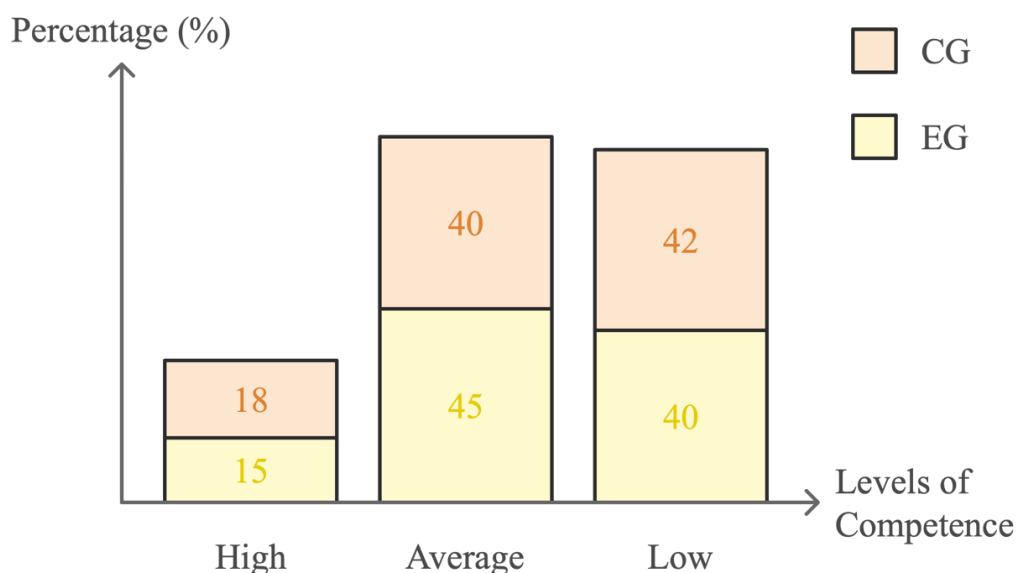


Figure 1. Distribution of Students of Higher Education by Levels of Social Competence.

Therefore, 15% (EG) and 18% (CG) of respondents are assigned to a high level of formation of social competence of higher education seekers through informational influence. Respondents with a high level of social competence formation: conscious orientation in the flow of information, a formed view of the world, the ability to arbitrarily regulate one's own cognitive activity, correctly name manifestations of feelings and emotions, the specificity of their manifestation; objective determination of one's own positive and negative traits, virtues; compliance with norms and generally accepted rules of behavior in various social situations. 45% (EG) and 40% (CG) are attributed to the average level of formation of social competence of higher education students through informational influence. For respondents of an average level of formation of social competence through informational influence, the following is characteristic: conscious orientation in the flow of information, a partially formed view of the world; selective orientation in the names of feelings and emotions, the specifics of their manifestation; lack of ability; arbitrariness of regulation of one's own cognitive activity, management of personal mood and sympathies. They cannot always identify virtues and negative and positive personal traits and compare them; they do not always follow norms and generally accepted rules of behavior in different social situations and adequately compare them.

40% of respondents (EG) and 42% of respondents (CG) are classified as having a low level of formation of social competence through informational influence. Respondents with a low level of formation of social competence of higher education seekers through informational influence are characterized by an unformed view of the world, impossibility of orientation in the flow of information offered by a large number of sources, not the ability to regulate one's own cognitive activity, to correctly name the manifestations of feelings and emotions and the specificity of their manifestation. Respondents with a low level of formation of social competence students of higher education through informational influence are dominated by selfish traits, which affects the inability to identify virtues, negative and positive own traits, and compare them. Therefore, they do not understand the need to follow generally accepted rules and norms of behavior; they do not know how to compare them in different social situations.

Thus, the research procedure included conducting a study using the selected methods, processing the results obtained using mathematical statistics methods, and drawing conclusions. During the experiment, the ascertaining section revealed approximately the same professional level of both groups; we did not observe any significant differences between the groups, which was proven by the input control.

Conducting an ascertaining experiment and the obtained results made it possible to show the shortcomings of the formation of social competence through informational influence, which is a significant and integral element of ensuring the educational process, purposeful and conscious socialization of the young generation using mass information, multimedia, cloud technologies, social media technologies, etc. The social formation of the personality remains outside the attention of teachers in conditions of increased informational influence.

We see that various social factors in forming a socially competent personality occupy one of the main places in the improvement of the education system in the world space.

The process of forming the social competence of an individual through informational influence is carried out throughout a person's life and is continuous.

As a result of the research, we were interested in the organization of the process of forming social competence through informational influence; we developed a method of using information technologies in the formation of social competence. Let's describe its main components.

The method of using information technologies in the formation of social competence involves:

- Participation of students in training classes to practice social skills and abilities necessary for socialization and formation of social competence; finding out the motivation of each student and their values; development of communication skills; acquiring skills to resolve and prevent conflicts with adults and peers; formation of tolerance, the moral culture of the individual; the ability to use information technologies for communication in society; development of self-organization skills, self-control of emotions, harmonization of emotional state; development of reflective skills and abilities, etc.;
- Viewing a fragment of the film and discussing its impact on society or the individual, followed by a discussion of the behavior of the characters, a problematic socially significant situation;
- Examination of tasks using information technologies, multimedia tools, cloud technologies, and social media technologies in the formation of students' social competence for mini-groups (group work), performing which students will be forced to work together to achieve the goal, form communication skills, interaction, etc.;
- Tasks that should help in acquiring practical skills and abilities; to be focused on the formation of social competence of higher education seekers through informational influence, to encourage the analysis of the social environment of reflection and the role in society; adequate social behavior; to contribute to the successful socialization of a person;
- Specially organized classes are aimed at the practical application of knowledge, activation of knowledge, and consolidation of knowledge, as students must learn to conduct introspection of their own behavior.

The methodology was implemented by applying methods and various forms.

Ensuring the implementation of the forms and methods of the educational process is impossible without certain means: multimedia technologies (projector, multimedia board, video, and audio equipment), software tools that integrate animated, graphic, text, video and sound data and information in their simultaneous use into the information space; mobile devices, personal computer, web-oriented resources that are freely available and free of charge (YouTube, author's site, specialized sites, social networks, cloud technologies, social media technologies), etc.

Compared to traditional means of education, the advantage of using information technologies in the formation of students' social competence is that students can freely communicate with the teacher and peers in the process of completing tasks and projects without limiting this communication to classes at the institution.

Thus, the above-described range of tools for the implementation of the developed method of using information technologies in the formation of students' social competence gives reason to talk about the pedagogical expediency and the possibility of its application in higher education.

A formative experiment was conducted to check the effectiveness of the developed method of using information technologies in the formation of students' social competence.

One hundred twenty students of higher education were involved in the formative stage of the pedagogical experiment.

Tasks of the formative stage of the pedagogical experiment:

- 1) Experimentally verify the effectiveness of the proposed method of using information technologies in the formation of students' social competence;
- 2) To monitor the dynamics of growth in the levels of social competence formation.

The research-experimental work of the formative stage of the pedagogical experiment was preceded by a preparatory stage, during which diagnostic data on the levels of formation of social competence of students of higher education were determined through informational influence, and the distribution was carried out into a control group (CG) and an experimental group (EG): EG 61 students; CG 59 students.

Declarative section – determination of the levels of formation of social competence of higher education seekers through informational influence was carried out according to the indicators and components described above.

Implementation of the methodology aimed at forming the social competence of higher education students through informational influence was the next stage of the experiment.

Differences between groups. Work on the formation of social competence through informational influence in EG was carried out according to the methodology using information technologies, and work with CG respondents took place without the use of information resources.

Having analyzed the distribution of respondents using a three-level evaluation system, we note that the results of the formative cut of the levels of formation after the implementation of the methodology were as follows: in CG, there was a slight decrease in the number of respondents with a "low" level of social competence formation – from 42% to 30% and a simultaneous slight increase in the number students with "average" and "high" levels of competence: "average" – from 40% to 48%; "high" – from 18% to 22% (Fig. 2).

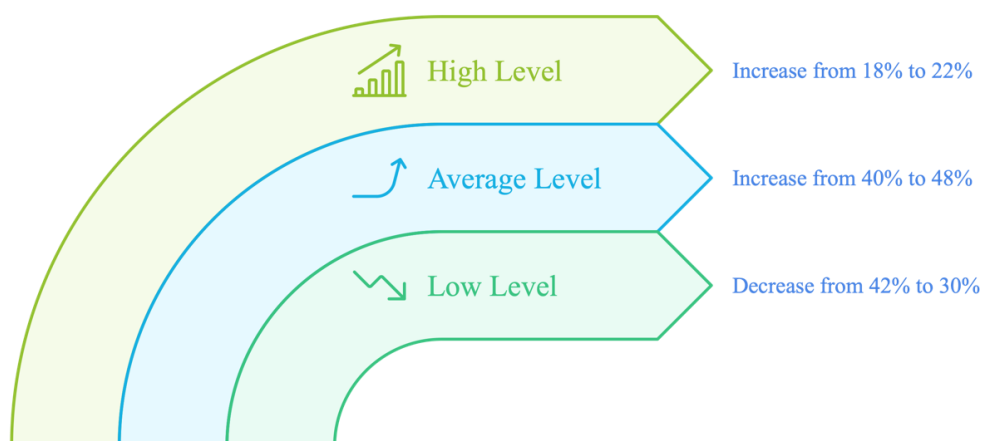


Figure 2. Social Competence Formation Levels.

The cross-section of the levels of formation of the social competence of the respondents after the completion of the formative experiment showed significantly greater positive changes in the formation of the social competence of the students of higher education through informational influence in the EG.

In EG, the number of respondents with a "low" level decreased from 40% (declarative cut) to 25% (formative cut), there was also an increase in the number of students with an "average" level – from 45% (declarative cut) to 48% (formative cut). Significant positive changes are observed at the "high" level of social competence – from 15% to 30%.

We note that the distribution of students according to the three-level system at the end of the pedagogical experiment in the CG group did not change significantly compared to the changes in the EG, as can be seen from the study.

The cross-section of the levels of formation of the social competence of the respondents after the completion of the formative experiment showed significantly greater positive changes in the formation of the social competence of the students of higher education through informational influence in the EG.

The results of the experimental test showed differences between the groups of students CG and EG and proved that the students of the experimental group demonstrated a higher level of formation of social competence of students of higher education through information influence and professional skills than the students of the control group. This indicates the effectiveness of the proposed method of using information technologies in the formation of students' social competence since the dynamics of the growth of the levels of formation of students' social competence is observed.

The reason for the obtained research results was the introduction into the experimental groups of the developed methodology for using information technologies in the formation of students' social competence. This methodology provided for: students' participation in training sessions to practice social skills and abilities necessary for socialization and the formation of social competence; the ability to use information technologies for communication in society; viewing a fragment of a film and discussing its impact on society or personality with further discussion of the behavior of the characters, a problematic socially significant situation; checking tasks using information technologies, multimedia tools, cloud technologies, social media technologies in the formation of students' social competence for mini-groups (group work); tasks for the formation of social competence of higher education applicants through information influence, which should help in the acquisition of practical skills and abilities; specially organized information technology classes aimed at the practical application of knowledge from the information component, since students must learn to conduct self-analysis of their own behavior.

Conclusions

The content of social competence and the role of information influence on the formation of social competence are disclosed. Characteristics, components, and functions of social competence are presented. The essence and structural components of the content of sociocultural competence have been clarified. The influence of ICT tools on the formation of social competence is shown. The most important information technologies that contribute to the effective formation of social competence of higher education seekers (multimedia technologies, cloud technologies, social media technologies) are considered.

An experimental study was conducted to assess the optimality of the process of informational influence on the formation of social competence, the result of which is the integrative quality of individual-social competence.

During the study, criteria were determined (cognitive-cognitive criterion with indicators, social-emotional criterion with indicators, activity-behavioral criterion with indicators).

Based on the specified criteria and indicators, the levels of formation of social competence through informational influence using multimedia technologies are characterized as high, medium, and low. Conducting an ascertaining experiment and the obtained results made it possible to show the shortcomings of the formation of social competence through informational influence, which is a significant and integral element of ensuring the educational process, purposeful and conscious socialization of the young generation using mass information, multimedia, cloud technologies, social media technologies, etc. The social formation of the personality remains outside the attention of teachers in conditions of increased informational influence.

The described range of tools for the implementation of the developed method of using information technologies in the formation of students' social competence gives reason to talk about the pedagogical expediency and the possibility of its application in higher education.

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Tasks of the formative stage of the pedagogical experiment:

- 1) Experimentally verify the effectiveness of the proposed method of using information technologies in the formation of students' social competence;
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We note that the distribution of students according to the three-level system at the end of the pedagogical experiment in the CG group did not change significantly compared to the changes in the EG, as can be seen from the study.

The cross-section of the levels of formation of the social competence of the respondents after the completion of the formative experiment showed significantly greater positive changes in the formation of the social competence of the students of higher education through informational influence in the EG.

As a result of the analysis of scientific sources, we claim that the researchers devoted their work to the theoretical substantiation of the development of social competence in future specialists, the problem of forming socio-cultural competence in future primary school teachers using information and communication technologies, the potential possibilities of a systematic approach to the formation of social responsibility in future specialists in the process of their professional training; the features of the formation of social competence in future social workers during their internship; analysis of factors that most influence the process of socialization of language students in the communication space of higher education institutions; emphasis is placed on the main influential factors in the process of socialization in the aspect of socio-cultural and intercultural communication. However, insufficient attention has been paid to the informational impact on the formation of social competence in higher education students in the research of scientists, which is why this prompted us to write the article.

The materials of the article can be used in the process of activities of student self-government bodies in institutions of higher education, professional pre-higher education, in the process of self-educational activities of student youth, in the development of educational and methodological support for the professional training of future pedagogical and scientific-pedagogical workers, social educators and social workers.

Future lines of research are needed: formation of a new high-quality information system for professional training of specialists; consideration of the crucial importance of the interrelationship of culture and communication between speakers of different social groups and different cultures; analysis of factors that have the greatest influence in the communication space of higher education institutions on the process of socialization of students of higher education.

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Fostering transparency in european integration: collaborative frameworks between government, business and civil society

Євроінтеграція та забезпечення прозорості: механізми співпраці між урядом, бізнесом і громадянським суспільством

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Abstract


This article examines the key elements and criteria for European integration, focusing on the specifics of establishing new connections between Ukraine and EU member states. The study analyses the dynamics and structure of Ukraine's trade turnover from 2013 to 2023, highlighting a significant increase in trade volumes with EU countries following Russia's invasion in 2022. It explores the importance of regulating migration processes and enhancing economic security as part of Ukraine's path towards European integration. The research emphasises the need for greater transparency and cooperation between the state, businesses, and civil society to accelerate Ukraine's integration process. The analysis underscores the pivotal role of legislative initiatives in fostering a favourable business environment and promoting harmonious socio-economic relations among stakeholders. The findings of the study hold practical significance in the context of developing harmonious socio-economic relations among participants in global production processes.

This article examines the key elements and criteria of European integration, focusing on the establishment of new ties between Ukraine and EU member states. The study analyses the dynamics and structure of Ukraine's trade turnover from 2013 to 2023, highlighting a significant increase in trade volumes with EU countries following Russia's invasion in 2022. It

Анотація

У цій статті розглядаються ключові елементи та критерії європейської інтеграції, зосереджуючись на особливостях встановлення нових зв'язків між Україною та державами-членами ЄС. У дослідженні аналізується динаміка та структура товарообігу України з 2013 по 2023 роки, підкреслюється значне зростання обсягів торгівлі з країнами ЄС після вторгнення Росії у 2022 році. Досліджується важливість регулювання міграційних процесів та посилення економічної безпеки як частини шляху України до євроінтеграції. Дослідження наголошує на необхідності більшої прозорості та співпраці між державою, бізнесом та громадянським суспільством для прискорення процесу інтеграції України. Аналіз підкреслює ключову роль законодавчих ініціатив у створенні сприятливого бізнес-середовища та сприянні гармонійним соціально-економічним відносинам між зацікавленими сторонами. Результати дослідження мають практичне значення в контексті розвитку гармонійних соціально-економічних відносин між учасниками глобальних виробничих процесів. У статті розглядаються ключові елементи та критерії європейської інтеграції, зосереджуючись на налагодженні нових зв'язків між Україною та державами-членами ЄС. У дослідженні аналізується динаміка та структура товарообігу України з 2013 по 2023 роки, підкреслюється значне зростання обсягів

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explores the importance of regulating migration processes and enhancing economic security as integral parts of Ukraine's path toward European integration. The research emphasises the need for greater transparency and collaboration between the state, businesses, and civil society to accelerate Ukraine's integration process. The analysis underscores the pivotal role of legislative initiatives in creating a favourable business environment and fostering harmonious socio-economic relations among stakeholders. The study's findings have practical relevance in the context of developing harmonious socio-economic relations among participants in global production processes.

Keywords: European integration, European Union, international trade turnover, international relations, business climate.

Introduction

Complex global trends in the restructuring of international relations in Europe and the world undoubtedly influence Ukraine's integration into the European economic and political space. The political and security imbalance caused by the escalation of military actions has exacerbated contradictions among EU member states on issues of energy security and food policy.

Among the main threats to EU unity, particularly regarding the Ukrainian issue, are the deterioration of the socio-economic situation, migration pressure, the intensification of disintegration tendencies within the EU, Russian informational influence, and difficulties in overcoming differences when making joint decisions. The consolidation of efforts by Ukrainian society, authorities, and businesses in creating a favourable image of Ukraine and enhancing the transparency of socio-economic processes will contribute to accelerating the country's accession to the EU.

Transparency is positioned as the foundation of effective public governance, which forms the basis of European integration processes. By transparency, we mean ensuring the right and actual ability to access information when authorities, understanding the importance of disclosing information and involving the public, take a proactive stance in this process. Transparency is also a factor that facilitates more effective governance during crises. The principle of transparency, along with the principles of openness, accountability, efficiency, equality, and fairness, forms the foundation for legislative support for the principles of "open" governance within the integration processes of the European community.

The article provides an extended review of contemporary literary sources, describes the research methodology, offers a detailed presentation of the obtained results, and includes a discussion section featuring academic discourse on the issues examined in the article. Finally, appropriate conclusions are presented.

Literature Review

Defining the essence of international economic integration in the modern context

The positioning of social and economic strategies significantly influences population migration and the dynamics of quantitative and qualitative human capital indicators. According to EU standards, the principles and priorities of constructing these strategies must be complementary and balance the interests of employers and personnel (Tyukhtenko, 2017; Berzini, 2023).

торгівлі з країнами ЄС після вторгнення Росії у 2022 році. Досліджується важливість регулювання міграційних процесів та посилення економічної безпеки як невід'ємних частин шляху України до євроінтеграції. Дослідження наголошує на необхідності більшої прозорості та співпраці між державою, бізнесом та громадянським суспільством для прискорення процесу інтеграції України. Аналіз підкреслює ключову роль законодавчих ініціатив у створенні сприятливого бізнес-середовища та розвитку гармонійних соціально-економічних відносин між зацікавленими сторонами. Результати дослідження мають практичне значення в контексті розвитку гармонійних соціально-економічних відносин між учасниками глобальних виробничих процесів.

Ключові слова: Європейська інтеграція, Європейський Союз, міжнародний товарообіг, міжнародні відносини, бізнес-клімат.

The main directions for enhancing the country's economic security within the framework of European integration processes have been researched by Oliinyk et al. (2022), who highlight financial, legal, intellectual, technological, environmental, informational, and military directions. Including economic security factors in mapping Ukraine's integration into the EU will create a highly efficient socio-economic system and build communicative ties with EU member states.

Current challenges of European integration processes and ways to overcome them

In the European environment, which is differentiated by the concepts of *Euro-optimists and Eurosceptics*, there are active discussions about the current state and future development of the European community. The ways to improve critical socio-economic, political, legal, and security indicators crucial for accelerating European integration processes, particularly for Ukraine, are widely studied in the modern scientific field (Bahaterenko et al., 2013; Prikhodko, 2019). Combating corruption and countering fraud in the financial sector is one of the most pressing issues for the state's modern economic environment. Kussainov et al. (2023), in their research, highlight the current state of the fight against corruption in Ukraine, systematise the main approaches to anti-corruption management according to EU standards, and examine the effectiveness of the approaches used in EU member states for modern-day Ukraine.

European integration processes and Ukraine

The military actions, destabilisation of the socio-economic environment, and a significant reduction in security levels in Ukraine have led to large-scale migration both within the country and to the EU. The stimulating and deterrent factors of this process are explored in the works of Levytska et al. (2020), where they also analyse migration index dynamics and identify general patterns of migration processes. The consequences of the military actions on Ukraine's territory for EU countries, along with the related population migration, are studied by Kovtunyk et al. (2023), focusing on social trends such as reducing dependence on Russian energy, re-evaluating critical elements of European values, challenges in the labour market due to the increased Ukrainian workforce, and the revision of principles in the agricultural sector. All these factors push EU countries to reconsider the process of Ukraine's European integration (Dir, 2022; Hryshko & Kyrychuk, 2022; Blyzniak & Rykov, 2023; Didych & Shevchenko, 2023).

Transparency of European integration processes

Traditional European founding countries maintain a certain level of scepticism towards innovative projects in the context of further integration, while simultaneously demonstrating a value-based attitude toward the evident successful achievements of European integration processes. This is supported by a number of contemporary scholars. In particular, Genschel (2022) argues that the imbalance between the strong regulatory power of the EU and the weak capacity of primary state authorities reflects its peaceful origins. The author emphasises that while the centralisation of primary state powers is not observed, there is a strengthening of national powers supported by EU institutions, which fosters transparency in integration processes.

In contrast, Sapir (2022) asserts that joining the EU requires not only that candidate countries fulfil a certain number of conditions but also that EU member states feel prepared to accept new members, which demands a high level of transparency in governance processes.

Anghel and Jones (2022) position the EU as a multi-level, multifaceted entity that can adapt its form in response to events. In this context, integration processes act as indicators of the transparency of governance strategies and the implementation process.

This research aims to establish the key elements and criteria by which the country's integration process with the EU occurs, the specifics of building new connections between Ukraine and EU member states, problems related to political, socio-economic, legal, and security conditions, and ways to increase transparency in the socio-economic and financial sectors and improve cooperation between business and government.

Research methods

The primary methods used to establish cause-and-effect relationships included analytical approaches such as analysis, synthesis, generalisation, comparison, and abstraction. Induction was also applied—a scientific research method aimed at identifying cause-and-effect relationships between phenomena and generalising empirical data based on logical assumptions, moving from the specific to the general, and from the known to the unknown. Additionally, the methodology incorporated a systematic review approach with elements of meta-analysis, where appropriate.

To examine approaches to the studied process, scientific works and industry publications were analysed. To identify specific parameters of the studied process, a comprehensive analysis of scientific articles published in various academic sources was conducted. To ensure the reliability and validity of the conclusions, literature from influential databases was selected. The criteria for literature selection included factors such as journal quality, relevance to core industry topics, and the presence of peer-reviewed content.

Statistical methods, in the context of achieving the research objectives, allowed for the systematisation and summarisation of all information about the studied objects and phenomena, including their positive aspects and drawbacks. These methods also facilitated drawing parallels between the nature and purpose of the studied object or phenomenon and the results of its functioning.

The limitations of the research include the difficulty of experimentally verifying theoretical conclusions and the lack of access to complete and up-to-date official data.

The scientific and methodological basis of the research is built on the fundamental principles of modern economic theory. The analytical part of the research is based on comparative, structural, horizontal, and vertical data analysis methods.

Research results

The main directions by which the country's economic and political integration into the designated community are finance and economy, politics and law, human capital, technology, information, ecology, and power (military factor).

When considering the financial and economic component of international integration, it is essential to highlight three main approaches to its definition in modern research. The first approach is based on the assertion that economic integration is the process of rapprochement, mutual penetration, and merging national economies within united groups (Mochernyi, 2002; Matiushenko et al., 2015). The second considers economic integration as creating a single multinational economy with a standard division of labour, enhanced trade exchange, and capital turnover (Kravchenko, 2001). The third approach views economic integration as an economic phenomenon and process that significantly impacts the activities and functioning of countries, their relations, and economic essence (Anderson & Coughlan, 1987; Mochernyi, 2002). However, all approaches share standard features that distinguish economic integration from all other types of interaction between countries, namely: mutual penetration of national production processes; a wide range of cooperation in production, science, and technology; convergence of national legal norms and standards; and targeted regulation of the integration process within the framework of a coordinated strategy in economics and politics.

In studying the definition of the essence of international integration, Nenko et al. (2021) define integration as a universal phenomenon in terms of national and regional characteristics, with the expansion and deepening of production-technological links, joint use of resources, capital mergers, and the creation of favourable conditions for economic activity. Integration can be viewed both as a process and as a result. In terms of the process, integration is the unification of entities to achieve a common goal. The authors defined integration as forming a complex structure of interconnected and interacting economic entities with new qualities and connections (Nenko et al., 2021).

The main reasons for Ukraine's movement towards European integration are the growing influence of economic ties on economic life, globalisation of the economy and global competition, increased openness of the economy, scientific and technical development, and geopolitical interests. Therefore, Ukraine's

accession to the EU involves creating a single market with European countries, unifying legislation, and coordinating state policies in socio-economic and environmental development.

Starting in 2014, Ukraine's economic integration into the EU has taken place in the context of Russian aggression and hostilities on the country's territory. This negatively affects the European integration process but creates advantages in economic security in strategic sectors. Thus, between 2013 and 2022, Ukraine's trade volume with EU countries increased from 32.3 % to 53.6 % (Table 1).

Table 1.
Ukraine's Trade Turnover with the EU Countries in 2013–2022

Year	Trade turnover %	Exports %	Imports %	Trade turnover (USD million)	Export	Import	Balance
2013	32,3	26,9	37,2	51128,6	20159,0	30969,6	-10810,6
2014	35,8	31,8	40,0	44297,4	20302,1	23995,3	-3693,2
2015	37,3	32,8	42,2	33243,0	15287,0	17956,0	-2669
2016	39,4	35,2	43,7	35252,9	15781,8	19471,1	-3689,3
2017	40,4	38,3	42,4	43346,1	20049,0	23297,1	-3248,1
2018	41,1	40,3	41,8	49317,1	23032,0	25285,1	-2253,1
2019	40,1	33,7	46,5	52614,2	24007,9	28607,2	-4599,3
2020	40,7	33,9	47,5	48103,8	21925,8	26356,4	-4430,6
2021	39,0	36,7	41,3	62500,0	30315,7	32212,1	-1896,4
2022	53,6	57,2	50,0	59356,7	30640,2	28700,3	1939,9

Source: compiled by the author based on State Statistics Service (2024)

It should be noted that the data presented do not reflect the values for 2023, which the State Statistics Service has not yet published in terms of trade-in services. Therefore, Table 1 shows that during 2013–2022, EU countries remained Ukraine's main trading partners. The highest share of Ukraine's foreign trade with EU countries was reached in 2022 following the full-scale invasion of Ukraine. This led to the restructuring of Ukraine's export structure towards increased trade operations with the EU. The dynamics of changes in Ukraine's trade balance are shown in Figure 1.

Analysing Figure 1, it can be observed that throughout most of the study period, Ukraine's trade turnover with EU countries fluctuated around 40 %, indicating a high degree of integration of Ukraine's economy into the EU economy (Razumkov Centre, 2020, 2022). However, it is essential to note that up until 2021, Ukraine's trade balance with EU countries was negative, meaning that Ukrainian imports from EU countries exceeded exports to European countries. However, starting in 2022, the share of trade with EU countries increased to 53.6 %, and Ukrainian exports to the EU accounted for 57.2 % of Ukraine's total exports in 2022. Additionally, in 2022, the share of imports from EU countries increased from 41.3 % in 2021 to 50 %. Significant changes in Ukraine's trade balance structure occurred due to reduced trade volumes in the Asian market and the expansion of corresponding volumes in the EU market.

Ukraine's main trading partners among EU countries during the study period were Germany, Poland, Italy, Hungary, the Netherlands, France, and the United Kingdom (which has not been an EU member since 2020) (Figure 2).

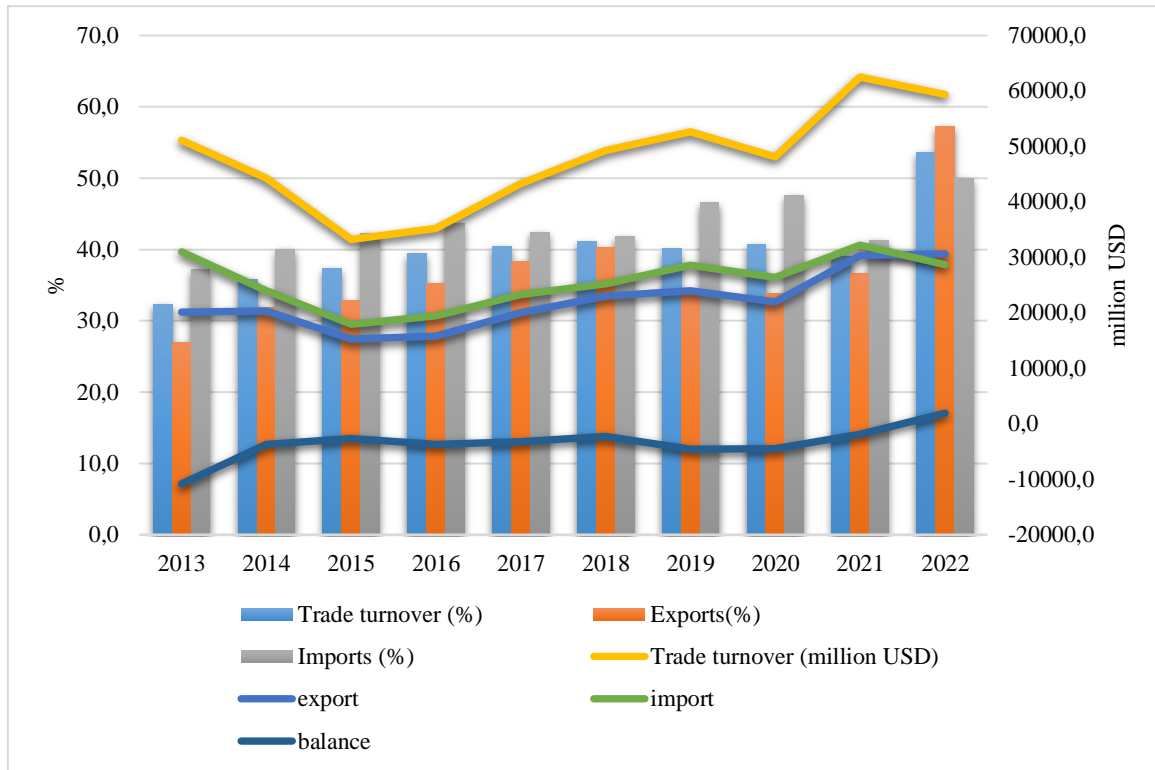


Figure 1. Dynamics of Volumes and Structure of Ukraine's Trade with the EU in 2013–2022.
Source: compiled by the author based on State Statistics Service (2024)

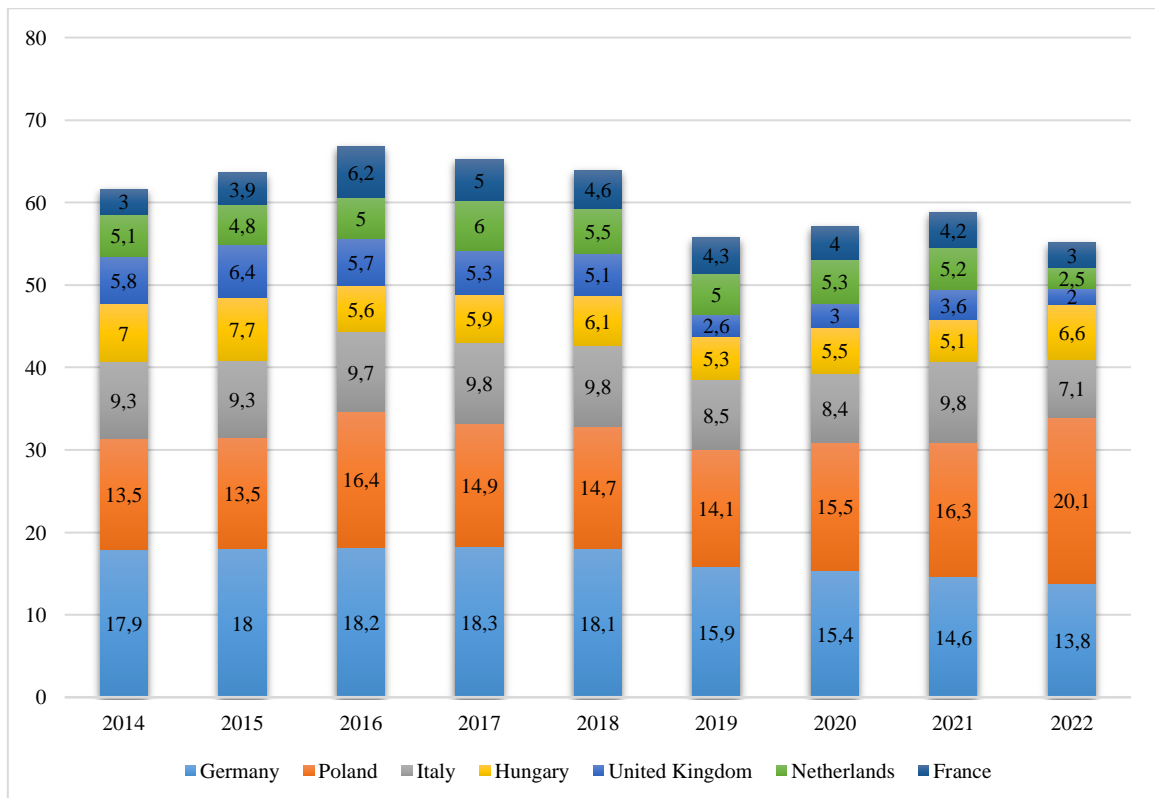


Figure 2. Ukraine's Main Trade Partners among the EU Countries in 2014–2022.
Source: compiled by the author based on the Ministry of Economy of Ukraine (2024a)

The total share of Ukraine's trade turnover with the countries above among all EU countries fluctuated between 50 % and 70 %. The highest trade balance share with these countries occurred in 2016. In 2022,

the increase in trade turnover with EU countries reached a record high of 53.6 % (Table 1) due to the increase in trade volumes with Romania, Slovakia, Austria, Cyprus, and other EU countries.

When analysing Ukraine's trade turnover with EU countries from 2013 to 2023, it is essential to examine its structure regarding goods and services (Figure 3).

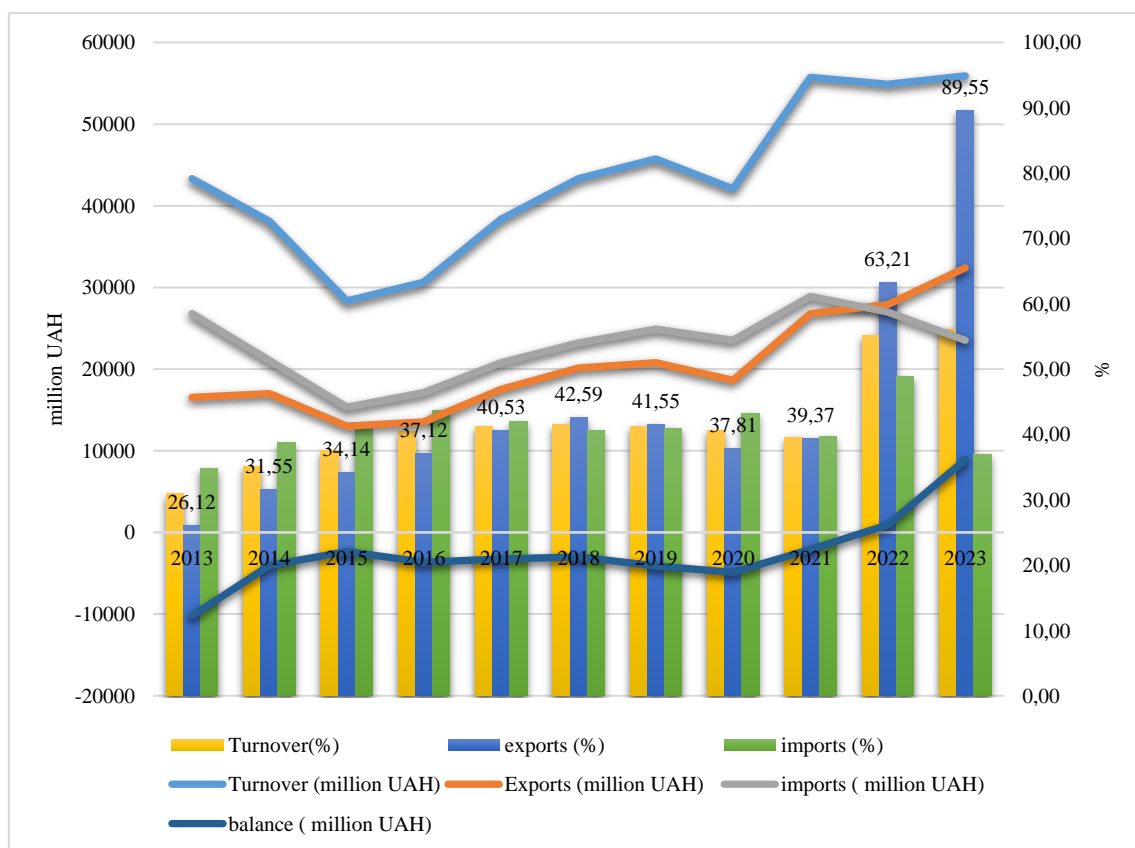


Figure 3. Dynamics of Ukraine's Trade with the EU in 2013–2023

Source: compiled by the author based on the Ministry of Economy of Ukraine (2024a)

From 2013 to 2021 (Figure 3), there was a slight excess of imports to Ukraine from EU countries over exports to them. However, due to the decrease in the purchasing power of Ukrainian businesses and the population, as well as the increase in the volume of humanitarian aid coming to Ukraine starting in 2022, Ukrainian exports to the EU significantly exceeded imports, with exports accounting for 85.55 % of Ukraine's total exports as of 2023. The share of imports from EU countries in the total imports to Ukraine in 2023 amounted to 36.97 %. This substantial increase in the export share in 2022–2023 occurred due to the growth in the absolute value of export trade operations, rising from USD 26.8 billion in 2021 to USD 32.4 billion in 2023.

The increase in the absolute value of Ukraine's export trade operations with EU countries was mainly due to the growth in grain transportation volumes through Poland and Germany. As of 2023, the share of grain exports to EU countries increased to 19.6 % of all exports to the EU, compared to 7.2 % in 2021 (Figure 4). When analysing the dynamics of the absolute values of grain export volumes to EU countries (Table 2), it can be concluded that this figure more than doubled, from USD 2.08 billion in 2021 to USD 4.92 billion in 2023.

Table 2.
Dynamics of Exports of Main Commodities from Ukraine to the EU Countries in 2013–2023 (USD million)

Exports	2013	2014	2015	2016	2017	2018	2019	2020
Ferrous metals	4061,0	3891,4	2623,4	2683,3	3191,4	3715,3	3146,9	2514,3
Cereals	1719,3	1805,4	1625,9	1279,5	1709,7	2223,1	2627,7	1786,8
Electrical machinery and equipment	1492,2	1649,7	1434,1	1612,7	2043,2	2371,5	2309,8	2215,1
Ores, slag and ash	1714,9	1582,1	962,5	963,3	1544,9	1818,2	1772,7	1451,9
Energy materials	1047,3	1030,4	301,0	342,7	531,4	655,6	696,9	650,8
Seeds and fruits of oilseeds	1247,6	919,0	645,3	607,1	1095,3	1163,5	1539,3	1254,5
Wood and wood products	820,0	744,8	712,7	784,2	834,2	1042,9	1003,3	990,2
Fats and oils of animal or vegetable origin	640,2	793,0	678,3	1204,4	1475,7	1143,8	1544,1	1845,2
Exports	2013	2014	2015	2016	2017	2018	2019	2020
Ferrous metals	4061,0	3891,4	2623,4	2683,3	3191,4	3715,3	3146,9	2514,3
Cereals	1719,3	1805,4	1625,9	1279,5	1709,7	2223,1	2627,7	1786,8

Source: compiled by the author based on the Ministry of Economy of Ukraine (2024a)

The significant increase in the volume of Ukrainian grain exports transported via rail and road through EU countries in 2022–2023 was caused by the Russian fleet’s blockade of maritime routes for cargo ships, which made it impossible to transport grain by sea to European and African consumers. Additionally, the volume of Ukraine’s exports of seeds and fruits of oilseed crops to EU countries grew significantly, from USD 1.6 billion in 2021 to USD 3.1 billion in 2022.

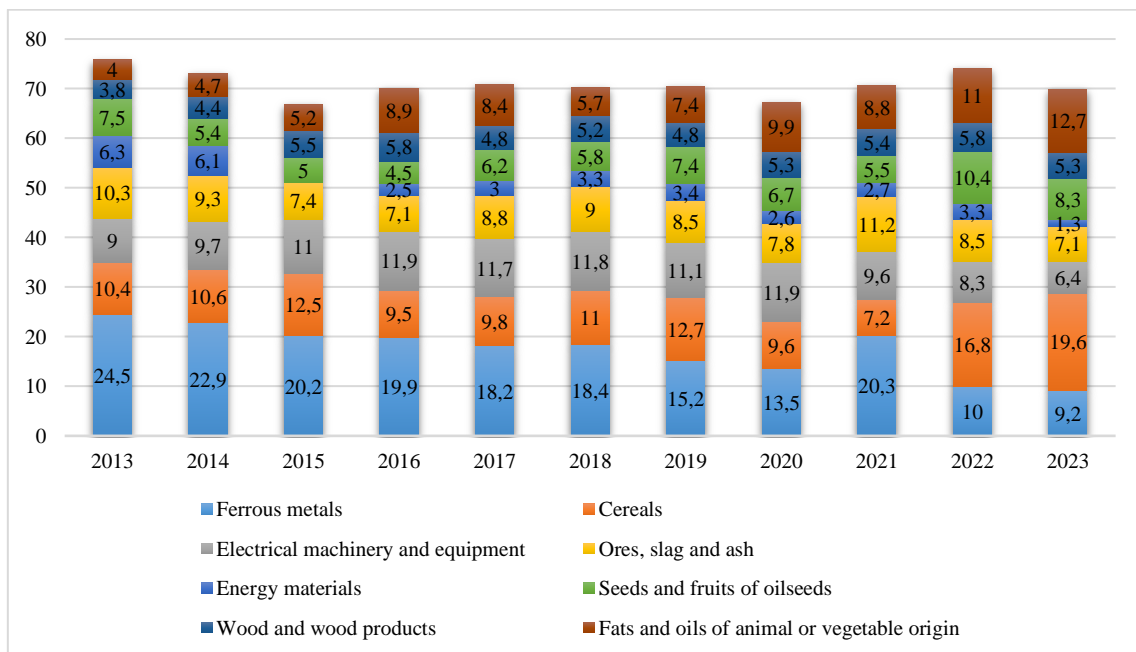


Figure 4. Dynamics of Ukraine’s Exports of Goods to the EU in 2013–2023.

Source: compiled by the author

Looking at Figure 4, it is evident that since 2013, there has been a gradual reduction in the share of Ukraine’s exports of ferrous metals to EU countries. Between 2013 and 2017, this reduction was primarily due to the beginning of Russian military aggression in the territory of the Autonomous Republic of Crimea and the Donetsk and Luhansk regions. Given that many metallurgical enterprises were concentrated in the occupied areas of Donetsk and Luhansk regions, their actual expropriation led to a gradual decrease in Ukraine’s export share of ferrous metals to EU countries, from 24.5 % in 2013 to 13.5 % in 2020. A significant increase in ferrous metal exports occurred in 2021, driven by the recovery of production volumes, particularly from the modernised Azovstal Metallurgical Plant in Mariupol. However, the occupation of Mariupol by Russian forces in 2022, followed by the destruction of Azovstal, significantly impacted Ukraine’s metal export potential, reducing their share in the structure of goods exported to EU countries to 9.2 % in 2023. It is worth noting that the overall reduction in heavy industry export volumes occurred due

to a general decline in production in Ukraine, caused by a shortage of electricity in the grid and Russian bombings of industrial regions of Ukraine throughout 2022–2023.

At the same time, the share of exports of goods that require less electricity and specialised equipment for production, namely agricultural and forestry products, continues to grow.

The deep level of economic integration between Ukraine and EU countries is also confirmed by the large volumes of European goods imported during the study period (Table 3). Throughout the study period, the primary goods that Ukraine imported from EU countries remained energy materials, especially fuel, machinery, mechanical devices, and electrical equipment. The sharp decline in the volume of imported goods from EU countries in 2015 can be explained by the rapid devaluation of the national currency that followed the beginning of Russian military aggression in 2014.

Table 3.

Dynamics of Imports of Main Goods from the EU Countries to Ukraine in 2013–2023 (million USD)

Imports	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Energy materials	3012,5	3790,1	3416,6	2539,5	3042,9	3175,8	2693,1	1605,1	2540,8	2634,8	2698,1
Machinery and mechanical devices	3350,7	2277,4	1570,9	2409,6	2962,0	3225,2	3334,9	3121,4	4001,7	2000,8	2763,2
Electrical equipment	1766,4	1403,2	1093,2	1214,7	1572,9	1909,3	2100,2	2009,9	2086,3	1556,4	1707,3
Polymeric materials	1777,2	1468,1	1086,1	1120,0	1275,0	1387,1	1339,9	1341,3	1824,1	1382,7	1597,0
Pharmaceutical products	2315,5	1826,2	988,9	1136,5	1291,7	1418,7	1435,7	1654,0	1945,1	1246,8	1496,1
Land vehicles	2754,2	1198,8	833,5	1457,0	2170,9	2226,9	3253,5	2710,2	3477,1	3112,0	3896,3
Chemical products	800,3	639,9	628,7	729,0	832,5	858,8	847,6	781,5	860,5	686,6	892,6
Paper and cardboard	1138,3	743,9	521,5	547,9	558,5	633,0	611,5	586,4	706,6	565,3	452,2

Source: compiled by the author based on the Ministry of Economy of Ukraine (2024a)

The strengthening of the hryvnia at the end of 2020 increased the purchasing power of Ukrainian businesses and the population, leading to a significant rise in import volumes in 2021. This increase was particularly evident in the imports of energy materials, machinery and mechanical devices, polymeric materials and plastics, and land transport vehicles. The full-scale Russian invasion in 2022 and the resulting energy crisis necessitated a substantial increase in the import of energy materials.

Analysing the dynamics of the import structure from EU countries to Ukraine during 2013–2023 (Figure 5), we can conclude that throughout almost the entire study period, the structure remained essentially unchanged. This indicates the systematic needs of Ukrainian society and businesses and stable, established economic relations between EU countries and Ukraine. Between 2016 and 2021, there was an increase in the share of machinery and mechanical device imports, explained by the need to rebuild the country's infrastructure after the start of Russian aggression in 2014. Additionally, the demand for a large amount of road equipment related to the “Great Construction” Programme and increased grain production required more high-quality agricultural machinery. However, with the onset of hostilities in 2022, the share of machinery and equipment imports fell from 13.4 % to 6.7 %, while the share of energy material imports simultaneously increased from 11 % to 24 %.

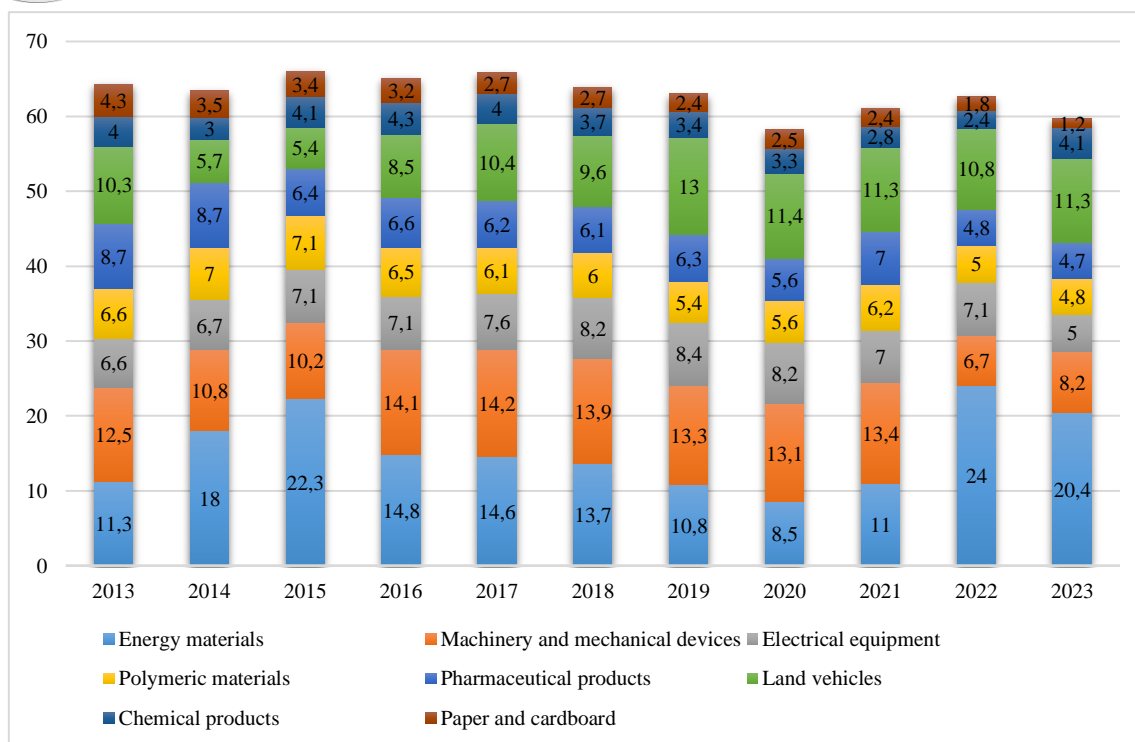


Figure 5. Dynamics of EU Imports of Goods to Ukraine in 2013–2023

Source: compiled by the author based on the Ministry of Economy of Ukraine (2024a)

When examining the degree of integration of Ukraine’s economy into the EU economy, it is necessary to analyse the dynamics of the export-import structure of services (Figure 6). It should be noted that the data on the volume of services provided is presented in Fig. 6 without including data for 2023 due to the security policy of the State Statistics Service, considering martial law conditions. The non-disclosure of statistical information is also related to the fact that the largest share of the service turnover consists of the export of telecommunications services (32.4 % in 2022), transport services (24.5 % in 2022), and the import of transport services (25.4 % in 2022), travel-related services (15.6 % in 2022), and telecommunications services (12.3 % in 2022), which are sectors that support national security (Government Portal, 2024).

A distinctive feature of the dynamics of Ukraine’s services trade turnover with EU countries is the positive trade balance throughout the entire period of the study (Fig. 6). It is also worth noting that during the period from 2013 to 2021, Ukraine’s share of service exports to EU countries from total service exports fluctuated between 25 % and 35 %. This indicates that Ukraine’s service exports were oriented towards countries outside the EU, while the share of services imported from EU countries during this period fluctuated between 40 % and 56 %. This suggests that Ukrainian consumers preferred to receive foreign services from EU countries. However, the absolute value of service exports to the EU exceeded the equivalent indicators for importing services to Ukraine. Starting in 2022, the structure of service export and import distribution with EU countries began to equalise, and by early 2023, Ukraine’s service export share to EU countries reached 37.5 %, while the share of imports from EU countries stood at 41.2 % of the total imports to Ukraine.

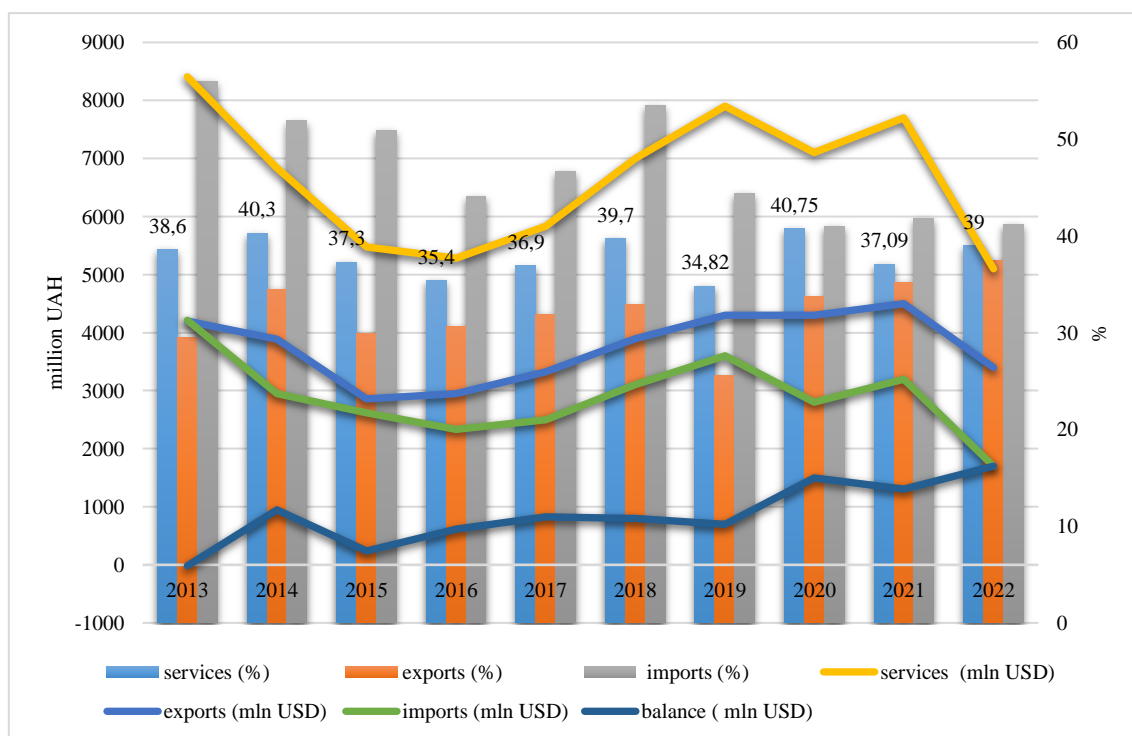


Figure 6. Dynamics of Trade in Services between Ukraine and the EU in 2013–2023

Source: compiled by the author based on the Ministry of Economy of Ukraine (2024a)

In the current context, the global community is evolving under the influence of regional development disparities among participating countries, fragmentation, financial and economic instability, and significant challenges to further integration. These factors render integration processes more vulnerable. The lack of transparency in these processes is positioned as a factor undermining trust in the global integrated environment.

At the same time, the history of the development of the European community is filled with moments of overcoming crises, from which the formation emerged better adapted to new realities. Upgrading the principles of regulatory adaptation based on transparency and openness will enable the formulation of integration strategies in unstable and crisis-driven socio-political and socio-economic conditions.

The research is limited by the lack of access to extensive, reliable practical data and the difficulty of implementing experimental validation of theoretical conclusions.

Discussion

Over the last ten years, Ukraine has consistently followed a course of rapprochement with European countries and strives for close integration with the EU. Ukraine's economic integration has been accelerating yearly, increasing trade volumes and reorienting the Ukrainian economy towards the European market. Even though Ukraine is mainly an exporter of raw materials and agricultural products, it is essential to note the significant dominance of Ukrainian service exports to EU countries over imports. For further development of trade and socio-economic relations between Ukraine and the EU countries, it is necessary to improve the existing legislative framework and align it with the standards and requirements of the European Union (Kvasha & Syniakova, 2019).

The conditions of wartime necessitate the development and implementation of new legislative initiatives aimed at increasing the efficiency of economic entities, reducing corruption, increasing state budget revenues, and creating a safe and favourable environment for business activities. One such initiative is signing a social contract between businesses and the Government of Ukraine. The statement "On Deepening Cooperation Between the State and Entrepreneurs to Improve the Business Climate in Ukraine" dated February 26, 2024 (from now on referred to as the Social Contract) was signed by representatives of business, including the Federation of Employers of Ukraine, the Union of Ukrainian Entrepreneurs, the

American Chamber of Commerce in Ukraine, the Chamber of Commerce and Industry of Ukraine, the Ukrainian Union of Industrialists and Entrepreneurs, the Association of Entrepreneurs Veterans of the ATO, Club Ukraine, the IT Ukraine Association, and the Ukrainian Food Retail Alliance (USAID, 2023). The Social Contract maximally encompasses the representatives of Ukrainian entrepreneurship. It includes provisions regarding the state's obligations, business representatives' obligations, and priority areas for developing cooperation between the state and entrepreneurs. According to the terms and standards of EU legislation, under the provisions of the Social Contract, the obligations of the state are as follows:

- Creation of conditions to eliminate unjustified pressure on businesses from law enforcement agencies;
- Reduction of administrative burdens and increased transparency in the taxation system;
- Increasing the transparency of customs operations;
- Creation of a favourable business climate;
- Continuing the deregulation of economic relations where possible and appropriate;
- Implementation of a program to develop Ukrainian manufacturers, including through access to public procurement and stimulating demand for Ukrainian goods;
- Encouragement of investments through access to cheap financial resources, development of industrial infrastructure, simplification of network connections, access to raw materials, and investment insurance;
- Opening foreign markets for Ukrainian goods and supporting non-raw material exports from Ukraine (Khevturiani, 2020).

Previous studies emphasise that economic globalisation requires prioritising regulatory policies focused on transparency and sustainable development. The results of the current study substantiated the potential for cooperation and transparency within the context of European integration processes.

It is worth noting the previous publications by Ansell & Torfing (2022) and Ahmed et al. (2022), which analyse the challenges of balancing common economic interests and individualised benefits—a topic that is particularly relevant in the context of European integration. Lacy-Nichols & Williams (2021) explore the potential of digital platforms to ensure transparency in global interactions, as well as monitoring processes aimed at identifying correlations and enabling more effective regulatory responses.

The obligations of business representatives are as follows:

- Payment of taxes by the volume specified by law;
- Official employment of workers with the official payment of total wages;
- Refusal to cooperate with Russian contractors and representatives;
- Investment in production and business development in Ukraine;
- Providing conditions for the reintegration of veterans into the workforce.

The priority areas for improving transparency and relations between the state and business are as follows:

- Developing practical solutions to reduce pressure on entrepreneurs from law enforcement agencies, including the development of relevant amendments to the Criminal Procedure Code;
- Rebooting the Bureau of Economic Security;
- Defining criteria for recognising a business as transparent and determining the list of benefits for such businesses;
- Creating a platform for obtaining feedback from entrepreneurs;
- Developing initiatives to support the development of Ukrainian manufacturers;
- Developing solutions to improve and digitise the reservation and business trip systems. (Ministry of Economy of Ukraine, 2024b).

Conclusions

Ukraine's economy has been undergoing a long-term process of strengthening integration with the EU countries. Over the last ten years, economic trade relations have been strengthened with Germany, Poland, and Italy. Ukraine's trade turnover with EU countries has increased from 32 % to 56 % of Ukraine's total international trade turnover. Ukraine remains a reliable partner for EU member states. Despite the challenging conditions of ongoing military actions on its territory, it continues to supply Europe with black metals, grain crops, electrical machinery, and equipment. Given the structure of Ukraine's exports of goods

and services, special attention should be paid to improving the legislative framework in the heavy industry and agro-industrial sectors, particularly in terms of tax optimisation, reducing pressure on businesses, combating corruption, increasing efficiency, and ensuring transparency of financial flows among all participants in socio-economic processes.

According to the research findings, the key principles of the current European integration strategy should include transparency, openness, adaptability, as well as differentiation and a personalised approach. The transfer of innovative methods for achieving sustainable development goals, based on the synergy of political, social, and economic efforts, will strengthen the sphere of strategic communications, once again founded on the basis of transparency.

Transparency is positioned as the foundation of effective public governance, which underpins the processes of European integration and contributes to more efficient management during crises. The principle of transparency, along with the principles of openness, accountability, efficiency, equality, and fairness, forms the basis for legislative support of the principles of "open" governance within the framework of integration processes in the European community.

Ukraine's progress on the path to European integration, along with the alignment of its legal, financial, economic, and socio-economic systems with the standards and requirements of the EU member states, brings the country closer to the moment of its accession to the European Union.

Prospects for further development of the research topic are in the expanded analysis of digital potential for modelling strategies to ensure transparency of integration processes within the European community.

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The role of innovation parks in shaping modern urban landscapes: a socio-economic and environmental perspective

Роль інноваційних парків у формуванні сучасних міських ландшафтів: соціально-економічна та екологічна перспектива

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Abstract

Policies and the creation of innovation parks have become a major global phenomenon significantly influencing the economic, societal, and ecological environments of urban centers. However, problems of housing accessibility or social equity in innovation park development are still underdeveloped in the literature. To pursue this research objective, this article integrates systematic, comparative, and critical analyses concerning the socio-economic and environmental effects of innovation parks on urban infrastructure. Studies show that innovation parks can decrease CO₂ emissions by 25 % in Europe and 15 % in Ukraine by introducing new approaches to using renewable energy and utilizing the green zones of innovation parks. In the economic perspective, they promote growth by bringing investments that are almost €10 billion across Europe and contributing to creating more than 5,000 startups. On the social level, innovation parks enhance the policy of social inclusion and help create favorable conditions for the growth of small and medium-sized enterprises; however, such positive trends as an increase in housing costs (for instance, in Europe, housing costs have increased by 15% per five years) require a differentiated and effective policy. Implication for practice in integrating innovation parks with social equality and housing affordability is presented in the study. Future research should approve research on effective strategies for implementing social programs targeting different population types and understand the significant global environmental impacts of innovation parks.

Анотація

Політика та створення інноваційних парків стали великим глобальним явищем, яке значно впливає на економічне, соціальне та екологічне середовище міських центрів. Проте проблеми доступності житла чи соціальної справедливості у розвитку інноваційних парків у літературі ще недостатньо розроблені. Для досягнення цієї мети дослідження ця стаття об'єднує систематичний, порівняльний та критичний аналіз соціально-економічних та екологічних наслідків інноваційних парків для міської інфраструктури. Дослідження показують, що інноваційні парки можуть зменшити викиди CO₂ на 25% в Європі та на 15% в Україні шляхом впровадження нових підходів до використання відновлюваної енергії та використання зелених зон інноваційних парків. З економічної точки зору вони сприяють зростанню, залучаючи інвестиції в розмірі майже 10 мільярдів євро по всій Європі та сприяючи створенню понад 5000 стартапів. На соціальному рівні інноваційні парки посилюють політику соціальної інтеграції та сприяють створенню сприятливих умов для розвитку малого та середнього бізнесу; однак такі позитивні тенденції, як зростання вартості житла (наприклад, у Європі вартість житла зросла на 15% за п'ять років) потребують диференційованої та ефективної політики. У дослідженні представлено наслідки для практики інтеграції інноваційних парків із соціальною рівністю та доступністю житла. Майбутні дослідження повинні схвалити дослідження щодо ефективних стратегій реалізації соціальних програм, орієнтованих на різні категорії населення, і зрозуміти значний

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Keywords: Innovative entrepreneurship, innovation parks, digital transformation, urbanism, international business, competitiveness, digitalization.

глобальний вплив інноваційних парків на навколишнє середовище.

Ключові слова: Інноваційне підприємництво, інноваційні парки, цифрова трансформація, урбанізм, міжнародний бізнес, конкурентоспроможність, цифровізація.

Introduction

Recent work in modern urbanism is being pushed forward by the increasing integration of innovation driven solutions in cityscapes. Economic growth, social inclusion and environmental sustainability are increasingly difficult challenges that urban centres face as they expand and evolve. In response to these challenges, many innovative strategies have recently been adopted, including innovation parks. As hubs of technological development, these parks enable entrepreneurship and lead to solutions for urban problems through an integration of advanced infrastructure and sustainable practices.

However the establishment and expansion of innovation parks are not without drawbacks. In many cases, they are accompanied by economic disparities, rising costs of housing and social segregation. But alongside that there are concerns about environmental impact – managing the use of resources and carbon emissions in an even keel manner. In order to address these multidimensional issues, these socio-economic and environmental roles of urban innovation parks in the process of reshaping urban landscapes need to be understood in a comprehensive manner.

This study seeks to evaluate the socio-economic and environmental impacts of innovation parks in influencing their capability to foster economic competitiveness, bridge the social equity gap, and support the development in sustainable ways. To shed light on these dynamics and help contribute to an understanding of how innovation parks can be better integrated into planning for cities to minimize their risks while maximizing their potential, the paper explores.

Literature Review

Innovation parks are complex entities that affect urban landscapes in economic, social and environmental ways. For a clearer understanding of these impacts, this section reviews the key studies grouped into subtopics.

Economic Impact

Innovation parks serve as an essential element of economic development, enhancing business process as well as digital transformation. These parks can provide such financial sustainability as they drive investments and help startups grow, Desyatnyuk et al. (2024a) and Karp et al. (2024) note. In fact, advanced technologies and digital platforms are integrated by Bissell (2020) and Caprotti et al. (2022), which contribute to a higher level of regional competitiveness. In addition to this, Barnes (2019) and del Cerro Santamaría (2022) study platformurbanism from an economic perspective and connect it to innovation ecosystems.

Social Impact

Innovation parks are supposed to generate social contributions such as promoting social cohesion, increasing public participation, as well as supporting local businesses. Mitlin (2021) argues that innovation parks facilitate the collaboration between government entities and community to create inclusive urban spaces. As shown by Caprotti and Liu (2019), digital platforms play an important role in the processes of social inclusion and economic growth; Whiting et al. (2022) and Gilmore (2023) demonstrate that parks add to the processes of cultural enrichment and community engagement through recreational and cultural facilities.

Environmental Sustainability

Environmentally sustainable practices are greatly advanced by the innovation parks. So says studies by Caprotti and Liu (2020) and Mohamed (2023) on how parks help reduce carbon emissions, as well as optimizing management of resources, via green technologies and renewable energy solutions. They argue that we can mitigate climate change by integrating natural elements within urban spaces (Van Ameijde et al. 2022). Moreover, Gilmore (2023) looks at efforts to sustain green space and the preservation of biodiversity, as well as contribute to sustainable development.

Urbanism and Spatial Planning

The literature has well documented the spatial design and land-use optimization of innovation parks. The role of innovation parks for the improvement of urban landscapes is studied by Balsas (2023) in relation to the integration of multifunctional and adaptive spaces. Whiting et al. (2022) and Söderström and Mermet (2020) argue for balanced development and natural area preservation along with equitable access to urban infrastructure. Like the innovation parks Van Ameijde et al. (2022) describe, many innovation parks take advantage of abandoned industrial spaces that were previously not used as well as they could have been on account of their efficacy.

Technology and Creative Contribution.

Also, innovation parks act as technological advancement hubs, as well as creative industries hubs. In the Guanyin case, Caprotti and Liu (2020) integrated big data and smart technologies in urban governance and Whiting et al. (2022) and Abellán & Ondoño (2024) stressed out the role of parks in promoting cultural initiatives and strengthening creative economy. These contributions highlight the parks capacity to integrate technological innovation with cultural development and contribute to the enhancement of urban life.

Unresolved Challenges

While they hold great promise, innovation parks have hurdles to clear, most notably in respect to housing affordability and social equality. According to Whiting et al. (2022) and Söderström & Mermet (2020), these risks of rising housing costs, as well as social segregation, frequently follow from rising demand near parks. The need to address these challenges through policies that support equitable access as well as sustainable urban planning is also considered by Katmada et al. (2023) and Arefi et al (2019).

Research methods

To assess the socio- economic and impact of innovation parks on infrastructure, this research uses a multifaceted research approach. All the methods were chosen to fit certain objectives and allowed for a comprehensive analysis of the topic.

Literature Review. Having analyzed existing scientific articles, the further evolution of innovation parks as well as their impact on the processes that occur in urban environments, spatial planning activities and socio-economic processes, was studied. The literature review was focused on presenting different kinds of approaches, recognizing major spheres of research, and defining the gaps in the existing literature. To filter the sources, only articles from peer reviewed sources were used, the case studies were from the recent years and the reports used were from recognized bodies. This method gave a basic picture of the subject and helped in the other analyses to be pursued.

Systemic Analysis. A systematic perspective was adopted to consider the innovation parks as black boxes connected with economic, social, and environmental systems in cities. It allowed to incorporate various types of data generated in urban planning guidelines, statistical overviews, and scientific works. Through exploring these relations, the study evaluated the multiple perspective effects of innovation parks on cities. For example, the discussion examined interaction between innovation parks and economic competitiveness, social integration, and environmental concerns at the same time.

Comparative Analysis. Accordingly, the results obtained in this study were compared, using the method of comparative analysis to the results of other studies. While benchmarking measures were possible investment volumes, numbers of jobs generated, CO₂ emissions, and affordability of housing. This method

let to compare and analyze the differences of development of innovation parks in different regions – European and Ukrainian – to include the context perspective.

Critical Analysis. Evaluation of negative impacts of innovation parks were made using critique analysis whereby factors including; social equity and accommodation costs were considered. This method analyzed threats like increasing costs of tenements, segregation, and unequal provision of access to parks’ structures. When selecting location and evaluating the suitability of a site, socio-economic characteristics, urban policies and residents’ accessibility were considered. Applying critical analysis, a more specific view on the limitations and possible challenges was developed, to make it the ground for specific proposals on how these points might be avoided or at least minimized.

The use of these methodologies provides a comprehensive and diversified examination of the effects of innovation parks both the advantages and disadvantage. It also helps in finding of workable measures towards enhanced living standards based on safe, secure, inclusive, accessible and sustainable urban environment in the context of developing countries.

Research results

Innovation parks are actively contributing to the digital transformation of urban spaces and infrastructure modernisation by implementing advanced digital solutions. For example, urban platforms and extensive data analytics systems used in these parks allow for optimised management of urban facilities, increasing the efficiency of service delivery (Caprotti & Liu, 2019; Barnes, 2019; Batsurovska & Kurylen, 2024). "Smart infrastructures developed in innovation parks provide quick access to the information needed to make informed management decisions. In addition, innovation parks promote the use of multifunctional design: as Van Ameijde et al. (2022) noted, the analysis of user behaviour allows for more efficient use of public spaces.

Digital modelling of urban infrastructure, implemented through innovation parks, provides practical solutions for creating sustainable urban spaces, as confirmed by Mohamed (2023) and Balsas (2022). This makes the city more attractive to investors and contributes to the region's socio-economic development. Thus, innovation parks act as a catalyst for digital transformation and modernisation of urban spaces, creating conditions for developing a comfortable, environmentally sustainable and economically viable urban environment.

Table 1 shows the impact of innovation parks on spatial planning and urban land use optimisation.

Table 1.
The impact of innovation parks on spatial planning and optimisation of land use in cities

Impact aspect	Description	Examples and sources
Optimising the spatial arrangement	Innovation parks are often strategically located with access to transport hubs and infrastructure. This reduces the need for additional transport networks and promotes the rational use of territories (Balsas, 2023).	Example: Cambridge Science Park in the UK, which uses areas near significant transport networks to connect to the city and reduce traffic effectively.
Preservation of natural areas	In the planning process, innovation parks consider the need to preserve natural resources and green areas. This allows them to combine innovative infrastructure with an environmentally friendly environment that supports sustainable development (Van Ameijde et al., 2022).	An example is the Zhongguancun Ecopark in Beijing, where significant areas of green space have been preserved for recreation and leisure.
Modernisation of abandoned areas	Innovation parks are often created on the site of old industrial or abandoned facilities, which helps to renew urban infrastructure without the need to develop new areas. This reduces the pressure on green spaces and prevents urban sprawl (Whiting et al., 2022).	An example is the innovation park in the Neukölln district of Berlin, located on former industrial land, which avoids building on green space.
Multifunctional use of space	Innovation parks are designed as multifunctional spaces that allow commercial, residential, and social integration. This saves space and reduces the need for additional land for development (Caprotti & Liu, 2022).	An example is Songdo International Business District in South Korea, where office, commercial, and residential developments are implemented simultaneously.
Creating inclusive spaces	Innovative parks promote social inclusion by providing recreational areas, cultural facilities, and public spaces,	Example: Campus Diagonal-Besòs in Barcelona, where various recreational

	contributing to social cohesion and a better quality of life (Mitlin, 2021).	and interactive spaces have been created for students and the community.
Reducing the burden on transport	The well-thought-out location of innovation parks close to residential centres and reduced transport distances reduces the burden on public transport and pollution (Caprotti et al., 2022).	An example is the One-North Innovation Park in Singapore, which provides easy access to key transport routes, reducing the need for private transport.
Support for mixed land use	Innovation parks promote mixed land use, allowing residential, commercial and educational areas to be combined in one space, which contributes to the efficient use of resources and reduces infrastructure costs (Söderström & Mermet, 2020).	Example: Hudson Yards in New York City, which includes residential complexes, offices, retail areas and entertainment spaces in a limited area.
Supporting local businesses	Innovation parks create a favourable environment for small and medium-sized businesses located in them, providing them with opportunities for development without the need for additional land leases (Gilmore, 2023).	Example: Silicon Docks in Dublin, where numerous startups are located alongside large technology companies, creating opportunities for collaboration and support for local businesses.

Source: developed by the author based on Balsas (2023), Van Ameijde et al. (2022), Whiting et al. (2022), Caprotti & Liu (2022), Mitlin (2021), Caprotti, Chang, & Joss (2022), Söderström and Mermet (2020), Gilmore (2023), Wagner, (2021), Desyatnyuk et al. (2024 b), Cardullo & Kitchin (2018).

Innovation parks significantly impact the socio-economic development of urban environments by stimulating economic growth, supporting local businesses and engaging the community. They contribute to the regional economy by creating new jobs and supporting entrepreneurship. Studies by Gilmore (2023) and Whiting et al. (2022) show that innovation parks provide SMEs with opportunities for growth through proximity to large corporations, facilitating the exchange of knowledge and resources and promoting joint projects. Socially, innovation parks integrate the community by creating public spaces, recreational areas and cultural facilities, which increases accessibility and social cohesion. This contributes to forming new social ties and cultural enrichment, as highlighted in Mitlin's (2021) study, where innovation parks promote social inclusion and citizen engagement in urban initiatives.

Innovation parks play a key role in shaping modern urban spaces, promoting the development of high-tech sectors, and creating environmentally sustainable solutions. Their functioning ensures economic growth, support for local businesses, and integration of the latest technologies into urban infrastructure, which increases cities' competitiveness in the international arena. Let's look at examples of innovation parks in Europe and Ukraine and their contribution to urban development (Table 2).

Table 2.
Examples of innovation parks in Europe and Ukraine and their contribution to urban development

Innovation Park	Country	Main areas of activity	Features and achievements
Cambridge Science Park	United Kingdom	High technology, scientific research	One of the oldest innovation parks in Europe, it develops high-tech startups and supports scientific research
Sophia Antipolis	France	Information technology, biotechnology, environmental research	An innovation centre in the south of France that supports science and technology companies and sustainable development projects
Technopolis	Belgium	Digitalisation of business, development of technology startups	Creates an innovative ecosystem for startups focused on digital solutions and technologies
UNIT.City	Ukraine (Kyiv)	Technology, creative industries, educational programmes	Ukraine's largest innovation park; integrates startups, international companies and educational initiatives
LvivTech.City	Ukraine (Lviv)	Information technology, support for the IT sector	Promotes IT business by providing an environment for the development of technology companies
Ecopolis HTZ	Ukraine (Kharkiv)	Environmental technologies, industrial innovations	Focus on environmental technologies and industrial innovation; combines business, science and education

Source: compiled by the authors.

Innovation parks also contribute to developing highly skilled personnel due to their location near universities and research centres. This creates opportunities for cooperation between education, science, and business, which helps to improve the skills of local professionals and stimulates investment in the region. Caprotti and Liu's (2019) study shows that innovation parks are a platform for human capital development. Thus, they not only promote economic growth and support business but also ensure social inclusion by engaging the community in the development of urban space (Figure 1).

Innovation parks actively implement environmentally sustainable solutions that help reduce negative environmental impact and support sustainable development. Here are the leading practices and their impact:

1. **Preservation and development of green areas.** Innovation parks often integrate large green spaces that improve air quality, promote biodiversity, and provide natural recreation areas. This allows them to combine industrial development with environmental sustainability. For example, the Zhongguancun Park in Beijing has preserved large green spaces, improving the urban ecosystem and reducing the city's heat island effect.
2. **Energy efficiency and use of renewable energy sources.** Many innovation parks use renewable energy sources, such as solar and wind power plants, to reduce carbon dioxide emissions. Energy-efficient lighting and heating systems are also used to optimise resource consumption. These practices significantly reduce the parks' environmental footprint and support energy independence (Razi & Ziminski, 2022).
3. **Water resource management.** Innovation parks actively use rainwater collection and treatment systems and water reuse in technical processes. This helps reduce the cost of water supply and the negative impact on natural water resources. Some parks have even created water-saving landscapes, contributing to the rational use of water.
4. **Recycling and waste reduction.** Implementing recycling and waste minimisation practices can reduce the amount of waste going to landfills and promote material recycling. Parks often have particular areas for waste sorting and enterprises that recycle industrial waste.
5. **Use of environmentally friendly building materials.** Many innovation parks use recyclable materials with a lower environmental impact, including energy-efficient glass, wood from controlled sources and environmentally friendly paints. This reduces the impact on the ecosystem and creates a greener environment for employees and visitors (Sadeghi et al., 2022).
6. **Promoting sustainable transport.** Innovative parks encourage public transport, bicycle paths and electric vehicles, which helps reduce greenhouse gas emissions and noise levels. This is done by creating convenient bicycle parking, electric vehicle charging stations and pedestrian areas.

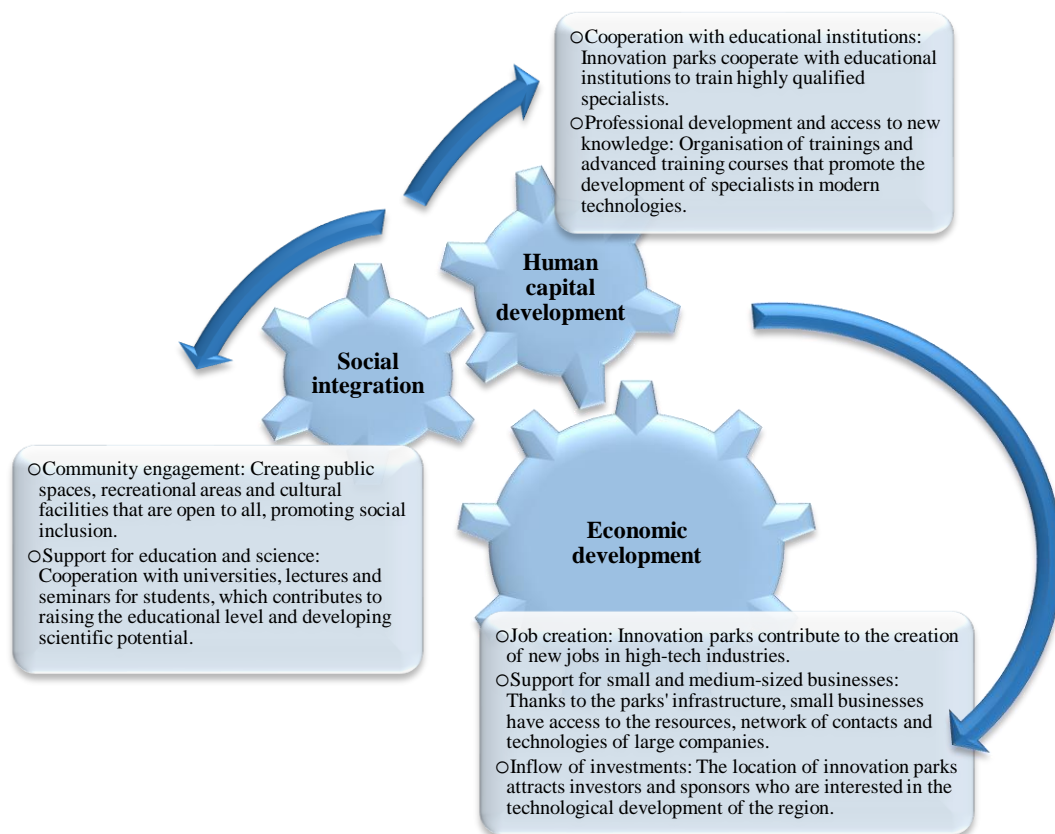


Figure 1. Socio-economic aspects of innovation parks functioning.

Source: compiled by the authors

By implementing these environmentally sustainable practices, innovation parks significantly reduce greenhouse gas emissions, water and air pollution, biodiversity and the sustainable use of natural resources. These measures improve the environmental situation in the cities where the parks are located, create favourable conditions for sustainable business development, and promote an environmental culture among local residents and employees (Krysovaty et al., 2024; Cowley & Caprotti, 2018).

Innovation parks in Europe and Ukraine play an essential role in developing the economic, environmental and social environment, influencing employment, the investment climate and residents' quality of life. Table 3 shows the number of innovation parks and jobs created in these regions, highlighting their importance for economic growth. Table 4 presents the amount of investment and the number of startups fostered by innovation parks, highlighting their role in supporting entrepreneurship. Table 5 shows the impact of these parks on environmental sustainability and the housing market, indicating a growing demand for sustainable solutions and housing near innovation centres. This data demonstrates the significant contribution of innovation parks to the development of urban processes and support for a sustainable urban environment.

Table 3.

Number of innovation parks and jobs created in Europe and Ukraine (as of 2024)

Region	Number of innovation parks	Jobs created
Europe	1,500	400,000
Ukraine	77	3,850

Source: compiled by the authors based on Ministry of Economy of Ukraine (2024).

Europe is demonstrating an active development of innovation parks, which create around 400,000 jobs. This is due to a developed infrastructure, stable investments and support from government programmes to stimulate innovation. In Ukraine, the number of innovation parks and jobs is much smaller but is also growing due to the implementation of business and investor support programmes. Ukraine's innovation parks have the potential for further development, especially in the IT and engineering sectors, which will help to increase employment in these areas.

Table 4.
Investment in innovation parks and the number of startups in Europe and Ukraine (2024)

Region	Investments (billion euros)	Number of startups
Europe	10	5,000
Ukraine	0.5	150

Sources: *Startup Genome (2024)*

Europe is actively attracting investment in innovation parks, with a total of around €10 billion, which has helped to create around 5,000 new startups. This growth is due to a stable economic situation and support for innovative sectors through grants and financial instruments. In Ukraine, investments amounted to €0.5 billion, which enabled the launch of around 150 startups. Although the volume of investment is minor, Ukraine is showing growth thanks to support for IT clusters and initiatives to develop the startup ecosystem.

Comparisons of the effects of innovation parks on environment sustainability involving Europe and Ukraine reveal differences in the extent of CO₂ emission reduction due to technology application and policy adaption. The paper attributed Europe's realization of the 25 percent cut on its CO₂ emissions reduction through greater tendency towards utilization of renewable energy sources, funded and encouraged by investment and incentive programs. In addition, EU Waste Framework Directive legal requirements, as well as initiatives for sustainable cities, have continued to be effective in encouraging energy efficiency and low carbon outcomes.

On the other hand, Ukraine has successfully reduced its CO₂ emission by 15%, which may, again, be due to a slow shift to green technologies coupled with lower capital for green projects. Initiatives have been directed toward making existing industrial systems more efficient, and changing from coal to natural gas. But a minute flow of investments in renewable energy generation, limited availability of high technologies, and less strict observance of environmental standards have compromised the process of attaining sustainable development objectives.

These differences prove that there is a need to up the policies provided by the government together with the need to get more support from the international community in order to increase the use of unique environmental interventions in Ukraine.

Table 5.
Impact of innovation parks on environmental sustainability and housing costs

Indicator	Europe (%)	Ukraine (%)
Reducing CO ₂ emissions	25	15
Housing price growth over 5 years	15	10

Source: compiled by the authors based on European Investment Bank (2023); International Monetary Fund (2022).

Innovation parks in Europe can reduce CO₂ emissions by 25%, achieved through environmental technologies and energy-efficient solutions. In Ukraine, the emission reduction rate is 15% due to the gradual transition to renewable energy sources and the implementation of environmental initiatives. At the same time, the development of innovation parks leads to increased housing costs: in Europe - by 15% over 5 years, and in Ukraine - by 10%. This is due to increased demand for housing near parks, which are attractive to employees and businesses.

Table 6.

Unresolved issues related to social equality and housing affordability in the context of innovation park development

Problem	Description	Consequences	Possible solutions
Increase in housing costs	Innovation parks are often located in attractive urban areas, which leads to higher housing prices due to demand from employees and businesses.	The cost of renting and purchasing housing is becoming unaffordable for low—and middle-income local residents, leading to their displacement from the area.	Developing affordable housing within the innovation park or providing financial benefits and subsidies for residents.
Social segregation	The emergence of innovation parks can lead to the creation of closed communities with higher socio-economic standards, making it difficult for other groups to integrate.	The emergence of social inequality between employees of innovation parks and residents of nearby areas can lead to increased social tension and a sense of exclusion among residents.	Creating open public spaces, cultural centres and areas for interaction between different social groups.
Limited access to infrastructure	Innovation parks often concentrate on high-quality infrastructure, but residents may not have access to these facilities due to high prices or restrictions.	Residents who do not work in the park have limited access to medical, educational, and cultural services, which creates barriers to using innovation parks' infrastructure.	Creating conditions for residents to access the park's infrastructure, such as reduced tariffs or open access during certain hours.
Inequality in economic opportunities	The benefits and opportunities provided by innovation parks can only be accessed by qualified professionals, which creates barriers for people with low qualifications or insufficient education.	Social inequality arises as low-skilled workers do not have access to the career opportunities and financial benefits available to professionals, widening the economic gap.	Developing retraining and professional development programmes for residents, providing internship and work opportunities for students and employees from the local community.
Transport problems	Due to the large influx of workers to innovation parks, surrounding roads and public transport can become congested, making it difficult for residents to get around.	Congestion, air pollution, and increased noise levels can negatively impact the quality of life in the area, especially for people who do not work in the park but live nearby.	Investing in developing public transport, bicycle paths, and pedestrian areas will provide transport benefits for residents, facilitating movement and reducing the burden on infrastructure.
Lack of affordable housing	Most of the residential properties located near innovation parks are targeted at highly paid employees, which limits the opportunity for less affluent residents to live close to their place of work.	This limits access to work for low-paid workers forced to seek housing in more remote areas, making their daily commute more difficult and reducing their quality of life.	We support the construction of affordable housing near innovation parks and establish mandatory quotas for the construction of housing for different socio-economic groups.

Source: compiled by the authors.

Thus, developing innovation parks significantly benefits the economy, technological progress, and challenges related to social inequality and housing affordability. It is essential that the planning and implementation of such parks consider the interests of local communities and contribute to creating accessible opportunities for all residents (Hordieieva et al., 2024). To overcome these challenges, it is advisable to develop policies that ensure the integration of different social groups, improve access to infrastructure, and support the construction of affordable housing.

Discussion

An analysis of the socio-economic aspects of innovation parks shows that they have a significant potential to influence the development of the urban environment. However, different opinions exist on how these parks can address inequality and accessibility issues, particularly in housing and social inclusion. According

to Mitlin (2021), innovation parks provide a platform for engaging local communities in planning processes, promoting social inclusion and access to infrastructure. However, other researchers, such as Gilmore (2023), point out that despite these opportunities, parks often create elite spaces inaccessible to the general population, which can reinforce social inequalities. Caprotti and Liu (2020) highlighted the role of digital platforms in creating interactive spaces in innovation parks, which could facilitate access to services and promote infrastructure development. However, due to economic factors, other authors (Whiting et al., 2022; Arefi et al., 2019; Katmada et al., 2023) note that such initiatives primarily focus on highly skilled professionals, leaving the needs of less well-off citizens unaddressed.

Much of the literature also points to the potential adverse effects of rising housing costs around innovation parks. For example, a study by Whiting et al. (2022) shows that developing innovation parks can increase the cost of rent and housing in the surrounding areas, making it unaffordable for middle- and low-income residents. This tendency contributes to social segregation when high-income park employees can afford to live nearby while residents are forced to move to distant areas. In this context, social initiatives to provide affordable housing near innovation parks could contribute to the sustainable development and maintenance of a diverse social composition in these areas.

In addition, it is worth noting the impact of innovation parks on the transport infrastructure and the city's ecology. Some researchers, such as Söderström and Mermet (2020), emphasise that the increased flow of employees to innovation parks can cause traffic congestion and increase environmental pollution. However, other authors, including Caprotti et al. (2022), note the potential of such parks to develop alternative transport solutions, such as pedestrian areas, bicycle paths, and electric vehicle charging stations, which could reduce the burden on transport infrastructure. Coordinating these approaches in urban planning can contribute to more harmonious and sustainable development. However, additional research and careful regulation by local authorities are required to ensure an even distribution of transport resources and reduce environmental impact.

Our findings confirm the importance of innovation parks in the context of increasing the competitiveness of cities and attracting investment, which is in line with the studies of Balsas (2023) and Mohamed (2023), who point to the possibility of reducing environmental burden and developing infrastructure through sustainable practices. However, insufficient attention to housing affordability and the integration of different social groups may negatively affect the overall success of such initiatives. Therefore, further research is needed to develop policies that ensure social equity and support the availability of infrastructure for all region residents.

Conclusions

This paper supports the proposition that innovation parks are essential components of urban development that may boost city competitiveness by nurturing new generation technologies and sustainable business models. The outcomes prove that innovation parks impact positively to economic development and conform to the research goals set at the beginning of the study. Yet, this research extends the existing debate regarding the impacts of innovation parks on the social domain, focusing on problems of social justice and housing accessibility in this context. The study's practical implications are specific suggestions for city administrations and developers on how to incorporate innovation parks into cities most suitably. These recommendations focus on the establishment of programmes that promote the construction of cheap and accessible housing, playgrounds, and electric or bicycle means of transport which have been found to be suitable for transformation to other city settings.

Limitations: Nevertheless, this research argues some limitations to include the following. One common drawback is that studies that investigate the effects of innovation parks are often not able to draw from a large data set that includes comparable data from many years after the setting up of the innovation park, thus limiting the possibility of measuring the sustainable impacts of the setting up of such zones. Furthermore, the following limitations can be noted: potential endogenous biases stem from the use of secondary data sources and use of regional case studies may not reflect impacts heterogeneity. It is for these reasons that more empirical work is required in order to understand the various ways that innovation parks exert an impact, especially in the longer term.

Implications for Urban Planning and Public Policy: These results stress the need regarding the inclusion of relevant innovation parks into wider spatial policies to generate desired sustainable development

patterns. It follows that for urban planning, the choice of policies lies in providing for growth while attending to the needs of society; examples of policy goals thus are policies meant to encourage mixed income housing, or the availability of park infrastructure to the population. Specifically for public policy, the research suggests the introduction of specific subsidies for innovation parks and development of green technologies, the formation of public-private partnerships for sustainable transport systems and development of frameworks for risks management, particularly emerging social segregation or housing affordability problems.

Future Research Directions: Based on these results, it is crucial for further research to target the design and testing of concrete social programmes relevant to different population groups in the area of innovation parks, thus investigating the efficiency of decreasing social segregation. Furthermore, the research methods to analysis the environmental changes within and by the Innovation Parks should be established to assess more precisely the firms' and overall contribution towards sustainable urban systems. Further analysis of the relationships between social and economic components of innovation parks and how emerging technologies support sustainable development of cities will add to the richness of research on the topic.

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Acts of sports law: concept, classification and application

Акти спортивного права: поняття, класифікація та застосування

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
Abstract


In this study, the concept of acts of sports law is analyzed and their types are determined in connection with the concept of information, as well as the specifics of their application, in particular, in the justice system. The methodological basis of the research is the dialectical theory of law, in the context of which the law is defined as a normative means of social management of society. Legal acts of sports law are management decisions in the field of sports, which are accepted and implemented by the subjects of sports relations. Acts of normative and legal regulation, which contain legal information, and acts of normative and technical regulation, which contain non-legal (technical) information, are distinguished. It is claimed that the branch of sports law is formed by norms that contain a certain composition of legal information and make up the system of normative-legal regulation of sports relations. It was concluded that the


Анотація


У цьому дослідженні аналізується поняття актів спортивного права та визначаються їх види у зв'язку з поняттям інформації, а також особливості їх застосування, зокрема, в системі юстиції. Методологічною основою дослідження є діалектична теорія права, в контексті якої право визначається як нормативний засіб соціального управління суспільством. Правові акти спортивного права є управлінськими рішеннями у сфері спорту, які приймають і реалізують суб'єкти спортивних відносин. Проводиться відмінність між актами нормативно-правового регулювання, в яких міститься правова інформація, та актами нормативно-технічного регулювання, в яких міститься неправова (технічна) інформація. Стверджується, що галузь спортивного права утворюється нормами, які містять певний склад правової інформації та складають систему нормативно-правового регулювання

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normative base of sports in Ukraine does not have proper accounting and systematicity, which creates problems both for the formation of the branch of sports law in the national legal system, and for the practice of solving court cases of a sports-legal nature. One of the reasons for this is the combination of activities of state authorities and non-governmental (public) organizations, primarily national and international sports federations, in sports management.

Keywords: application of the legal act, legal information, sports law act, sports management, sports federation.

Introduction

The legal acts from which sports law is formed as a specific legal branch are studied in this article. In particular, Davis (2012) poses the question as follows: is sports law recognized as an independent substantive area of the law such as torts, contracts or employment law? The formation of this branch in the national legal system requires a clear understanding of the acts of sports law, their difference from other normative acts, as well as the proper accounting and systematization of such acts, and therefore the organization of relevant legal information on this basis. Without this, it is difficult to ensure the correct application of such acts not only by the subjects of sports relations, but also by courts and other law enforcement bodies. The specificity of the branch of sports law is that it most closely combines state management with self-governing principles of sports management, and therefore, different legal acts interact and apply.

The article consists of five parts. The first part is the general theoretical basis of the research, it defines the general concept of a legal act. In the second part, the acts of normative regulation of the field of sports are considered, as well as the difference between acts of normative-legal regulation containing legal information and acts of normative-technical regulation containing non-legal (technical) information. The third part highlights the issue of self-regulation of the sports field and, in particular, the types of normative legal acts of sports federations in the context of the formation of the branch of sports law of Ukraine. The fourth part examines the system of all sources of national sports law, which form the branch of sports law, and their classification. The fifth part analyzes the issues of participation of justice bodies in the formation of the normative framework of sports law, as well as in the application of acts of sports law in judicial practice. The study is summarized with the main conclusions.

Sport is a special phenomenon that needs two-level legal regulation: national and international. International sports federations (for example, FIFA, IOC, WADA) set rules and standards for their sports. National sports federations ensure normative regulation of a certain type of sport in Ukraine. At the same time, the normative framework of sports consists of two components that are different in nature: sports legislation and corporate regulation. An analysis of the practice of judicial dispute resolution in the field of sports indicates that, in addition to legislative normative acts, the rights and obligations of sports entities, their responsibilities are also regulated by normative acts of sports organizations. Therefore, the lawful practice of implementing sports law acts when resolving specific cases depends on a clear, scientifically based definition of the nature of sports law acts, their types, and their relationship with each other. In the field of sports jurisdiction, the correct determination of the nature of the legal act that should be applied when resolving specific cases to the relevant legal relations depends on the degree of guarantee of the rights of the subjects of sports relations. Similarly, the quality of an automated system of legal information on the rights and obligations of sports entities and their guarantees cannot be ensured without a clear theoretical definition of the concept of legal information in the field of sports and its relationship with sports law acts.

спортивних відносин. Зроблено висновок, що нормативна база спорту в Україні не має належного обліку й системності, що створює проблеми як для формування галузі спортивного права в національній правовій системі, так і для практики вирішення судових справ спортивно-правового характеру. Однією з причин цього є поєднання в управлінні спортом діяльності органів державної влади і неурядових (громадських) організацій, насамперед, національних та міжнародних спортивних федерацій.

Ключові слова: акт спортивного права, застосування правового акта, правова інформація, спортивна федерація, управління спортом.

Literature Review

The research is based on the dialectical theory of law (is a theory of sociological understanding of law), developed by the famous Ukrainian scientist Yushchik (2013). In the context of dialectical theory, law is defined as a normative means of social management of society, and legal acts are management decisions that are adopted and implemented by subjects of legal relations and contain legal information. Therefore, Van der Kaaij (2019) presents a new theoretical concept of the juridical act, which is not limited to the national laws of any specific country. The theoretical framework of this article is a special scientific study of the issue of the formation of the branch of sports law in the national legal system of Ukraine by one of the authors of this article. It is claimed that the activities of state authorities and non-governmental organizations, in particular international sports organizations, are combined in the management of sports. Therefore, the legal norms that regulate social relations in the field of sports should include the norms of all relevant law-making subjects, and not only the norms established by the state. On the other hand, scientists overextend the concept of sources of sports law, including acts that have a non-legal (technical) content. The circle of sources of sports law is also expanded due to the inclusion of those acts that regulate other relations (labor, tax, criminal, etc.), that contradicts the objective criterion of the formation of the branch of law according to the subject of regulation, which is determined by the nature of social relations in the sports field (Yushchik, 2023). In addition, the information and analytical base of the research consists of scientific publications related to the research problem and legal acts that are the sources of sports law of Ukraine.

Cui (2015) writes that due to the differences in the legal concepts, the legal cultures and the practice of the sports laws, there is a big difference in the understanding of the domestic and the foreign scholars on the sports laws, and there is no clear concept so far what the sports law is. In this author's opinion, the "sports laws" are the standards and systems of building the sports orders. The sports orders include two levels of the social orders and the industrial orders of sports. The standard systems include the national sports laws and the sports autonomous specifications. The national sports laws are divided into two levels of the domestic sports laws and the international sports laws, while the sports autonomous specifications are divided into the two categories of the domestic sports autonomous specifications and the global or super-country sports autonomous specifications.

Foster (2012) distinguishes between "international sports law" and "global sports law". International sports law can be applied by national courts. Global sports law by contrast implies a claim of immunity from national law. Siekmann (2012) considers that the "hard core" of sports law is chiefly "judge-made law": of the European Court of Justice (now: Court of Justice of the EU) as the public judge—at least from a European (EU) perspective, or court (regional), and of the Court of Arbitration for Sport as the private court (global). In particular, Senyk, Churpita, Borovska, Kucher & Petrovskyi (2022) examine the legal nature of a court decision, which is one of the types of sports law acts. Mitten & Opie (2012) observe that legal regulation of national and international sports competition has become extremely complex and has entered a new era, which provides fertile ground for the creation and evolution of broader legal jurisprudence with potentially widespread influence and application. Specifically, the evolving law of sports is having a significant influence on the development of international and national laws, is establishing a body of substantive legal doctrine ripe for analysis from a comparative law perspective, and has important implications for global dispute resolution. In addition, judicial resolution of sports-related cases may develop jurisprudence with new applications and influence.

Methodology

This is a qualitative research based on conceptual analysis. The methodological basis of the research is a complex of philosophical-worldview, general scientific and legal methods.

The main one is the dialectical method, which implies the need to study such a concept as "acts of sports law" in its comprehensive relationships and development. Concepts of acts in the field of sports are studied in their relationship with such concepts as "legal acts", "normative acts", "normative legal acts", "individual legal acts". In particular, the dialectical connection of the general, the particular and the individual is provided by deduction and induction. Deduction is the movement of thought from the general to the individual, and induction is from the individual to the general. With the help of deduction, moving from the general concept of a document through the particular concept of a legal act, an idea of a individual act of sports law was formed. Induction was used in the case when the analysis of the practice of solving

somewhat cases in the field of sports law made it possible to draw a conclusion about the need to improve the norms of sports justice, which limit appeals to national courts. The dialectic categories "content" and "form" as universal logical forms of thinking were used to establish the relationship between legal information and sports law acts.

The formal-legal method is applied to the analysis of such concepts as acts of normative-legal regulation, which contain legal information, and acts of normative-technical regulation, which contain non-legal (technical) information in the field of sports law. For example, two laws of Ukraine were analyzed, the direct subject of which is rule-making activity, namely normative-legal regulation and normative-technical regulation: Law of Ukraine "On Law-Making Activity" (Law of Ukraine No. 3354-IX, 2023) and the Law of Ukraine "On Technical Regulations and Compliance Assessment" (Law of Ukraine No. 124-VIII, 2015).

This made it possible to compare normative-legal regulation and normative-technical regulation, and to find out the difference between normative-legal and normative-technical acts in the sphere of sports.

Using the system-structural method, the system of sources of sports law has been determined. This method made it possible to consider the object (sports law) as a whole set of elements (sports law acts) and their interrelationships. In particular, it was concluded that today the normative base of sports does not have proper systematicity and a clear structure. Legislation on physical culture and sports is dispersed in various normative acts, in which material and procedural norms, norms of national law and international law, norms of state regulation and norms of non-state self-regulation interact.

The logical method, based on the laws of formal logic, was used to study the classification of acts of sports law on types. In particular, the division of a concept is a logical operation that reveals the scope of a generic concept through a list of its types. The normative sphere of sports includes sports-technical, sports-regulatory and organizational-sports acts. The last two of the named categories form a system of normative-legal regulation of sports relations, the specifics of which depend on the nature of the activity that functions as "sports activity". The first category, that is, the acts that establish requirements for sports facilities, special equipment and inventory, as well as establishing the qualification categories of judges, are not legal, but belong to technical ones, since they do not regulate social relations between legal entities.

The functional method made it possible to determine the peculiarities of rule-making activities related to the adoption of acts of sports law and the problematic issues of their practical implementation. This method involves not only the study of sports law acts and their classification, but also requires the study of the processes of adoption and application of sports law acts. In particular, the functional method made it possible to investigate the role of the justice system, first of all, the Ministry of Justice of Ukraine, in improving the normative base in the sphere of sports, that is, sports law acts. Also, the functional method made it possible to identify the problems of the practice of applying acts of sports law, which have both a technical and a conceptual nature.

Results and Discussion

Traditionally, in the theory of law, legal acts are understood as the result of rule-making activity, in which the norms of law are expressed (formulated), as well as acts of implementation of these norms. The first are called normative legal acts, and the second are called individual legal acts. Rabinovych (2001) defines the concept of "juridical act" as an expression of the will of the state (its bodies, officials), which is formally obligatory for execution. There are other forms of expressing the will of the state (statements, appeals, notes, etc.), but they, as a rule, do not contain mandatory prescriptions. According to the method of external expression - oral (verbal), written (documentary), active (implied-in-fact). According to the entities that adopt legal acts - legislative, presidential, executive, judicial, etc. According to the juridical form - to laws, decrees, resolutions, judgments, decisions, resolutions, orders, instructions, etc. It should be noted that scientists consider the definition of the concept of a legal act not only as a document, but as lawful actions carried out to achieve certain legal consequences in the form of the emergence, change and termination of legal relations. At the same time, the term "lawful actions" means actions that comply with the norms of law (in contrast to illegal actions), and legal acts and legal actions are called lawful actions (Sydorenko, 2020). Or, a legal act is understood as the result of an action, for example, legal acts in the form of special signs and symbols (Sydorenko, 2021).

Having analyzed the situation that has developed in legal science, with the idea of a legal act, the following conclusions can be made. First, the given interpretation of the concept of "juridical act" is based on positivist legal understanding. In the case of sociological or natural legal understanding, this concept will be explained differently. Secondly, the concepts of "juridical act" and "legal act" are not distinguished, although, from our viewpoint, juridical acts are only one type of legal acts, along with customs, etc. Thirdly, quite often the concepts of legal and normative acts are equated, although individual, informational and other acts are not included in the normative acts. Documentation is conditioned by the need to record and certify facts, events and states, i.e. record information necessary for management and other types of activities according to the established form. A document, as a written form of fixation and certification of certain information, is its most common medium. These are laws, resolutions, instructions, appeals, letters, certificates, agreements, attestations, certificates, licenses, etc. Legal acts occupy a special place among them. A legal act as a type of document is primarily characterized by the official recording of information in a clearly defined form. We cannot agree with such a narrow understanding of the concept of legal acts, which contracts, receipts and other written acts (documents) of entities that do not belong to powerful entities are excluded from this concept.

In fact, we are not talking about legal acts as such, but only about public-legal acts, as authoritative decisions, which are expressed in different document forms. At the same time, not all public-legal acts have a normative nature, but only those aimed at establishing, changing or terminating of legal norms, addressed to a wide range of persons and are long-term acts. In contrast to normative acts, non-normative acts are addressed to a specific subject and are intended for one-time use. However, a "non-normative" decree, for example, on the appointment of a minister, can be valid much longer than some laws (for example, the law on the state budget). In addition, if the act is legal, it is always addressed to many subjects, first of all, state bodies and officials, who must take it into consideration. In essence, legal acts are normative and non-normative management decisions that must be implemented, like any management decision in general (Yushchuk, 2013).

It is necessary to mention one more aspect that points to the insufficient definition of the concept of legal acts in the theory of law. If the normative legal act is the result of rule-making activity, then it is necessary to have a clearer idea of the specified activity. In the field of sports, as in other fields, normative-legal regulation is carried out in an organic connection with normative-technical regulation. Therefore, legal norms and norms of a technical nature can be contained in the same normative acts. For example, in the Law of Ukraine "On Physical Culture and Sports" (Law of Ukraine No. 3808-XII, 1993), some articles include the provisions of technical norms. For example, Article 40 of the Law establishes that "Sports competition rules in kinds of sport that are recognised in Ukraine, include requirements to the participants of the competition, to relevant sports facilities, special equipment and gear, conditions and procedure of defining results and competition winners. Rules are developed by all-Ukrainian sports federation in relevant kind of sport while considering sports competition rules from relevant international sports federation". And Article 41 of this Law about sports judging defines the qualification categories of sports judges: "sports judge of National category", "sports judge of first category", "sports judge of second category", "young sports judge". From our viewpoint, the norms that set the requirements for sports facilities, special equipment and gear, as well as the establishment of qualification categories of judges, are not legal, but belong to technical norms, as they do not regulate social relations between subjects of law.

Legislative practice is a confirmation of the fact that the concept of rule-making activity is currently not certain. Let's pay attention to two laws of Ukraine, the direct subject of which is rule-making activity, namely normative-legal regulation and normative-technical regulation. These are the Law of Ukraine "On Law-Making Activity" (Law of Ukraine No. 3354-IX, 2023) and the Law of Ukraine "On Technical Regulations and Compliance Assessment" (Law of Ukraine No. 124-VIII, 2015). Due to the effect of the provisions of the first of these laws, normative regulation of the adoption of normative legal acts, i.e. law-making activity, is carried out. However, the law does not contain a definition of what "normative regulation" means as one of the types of legal regulation. In contrast, Article 1 of the Law of Ukraine "On Technical Regulations and Conformity Assessment" (Law of Ukraine No. 124-VIII, 2015) provides a definition of the term "technical regulation", according to which "technical regulation - legal regulation of relations in the field of definition and implementation of mandatory requirements for product characteristics or related processes and production methods, as well as verification of their compliance through conformity assessment and/or state market supervision and control of non-food products or other types state supervision (control)". Therefore, by this definition of "technical regulation", normative-legal and normative-technical

regulation are reduced to legal regulation of relations. However, the term "legal regulation" has not been defined in the current legislation of Ukraine.

In our opinion, the legislator mistakenly equates normative and legal regulation, since normative regulation is a broader concept that includes both normative-legal and normative-technical, and normative-religious and other normative regulation. The difference between normative-technical and normative-legal regulation stems from the difference between technical and legal norms, which, in turn, is due to the different subject of these norms. If the subject of a legal norm is a disposition ("right-obligation" relationship), then the subject of a technical norm is a one-sided relationship of the subject, with a normative definition of only the subject's obligation regarding certain aspects of the object of his activity (requirements for labeling, transportation, and other manipulations of the object) (Yushchuk, 2013).

As you know, researchers divide the normative regulation of sports into two complexes: sports law and "lex sportiva" - a complex of normative corporate regulation. Specifically, de Oliveira (2017) notes that contracts involving sports matters, such as the participation of an athlete in an international sports competition, would normally have a clause submitting disputes to arbitration under the rules of the Court of Arbitration for Sports. As a result, in international sports disputes, the subject matter of disputes has been predominantly decided by a private tribunal. In making such decisions, the Court of Arbitration of Sports has been interpreting and applying the rules established by sports governing bodies. Consequently, in its 30 years of existence, the Court of Arbitration for Sports has produced a rich jurisprudence regarding sports disputes. Such body of case law, combined with the rules of the sports governing bodies, has created what today is called a *lex sportiva*.

Therefore, there is a need to clarify which acts belong to the "lex sportiva" and whether to include them in the composition of sports legislation and the branch of sports law. From our viewpoint, without understanding the clear relationship between normative-legal and normative-technical regulation in the field of sports, this issue is difficult to solve, since the branch of law is formed from a set of specific norms, which are formulated as provisions of the text of the normative act. This means that the branch of law forms a certain composition of legal information contained in branch norms, which differs from the composition of legal information of other branches of law. In this connection, the question arises: can documentary acts of normative-technical regulation contain legal information, and acts of normative-legal regulation - non-legal information (in this case, technical). That is, it is necessary to determine the scope of those normative acts that are included in the branch of "sports law", and to find out how to systematize the acts of this branch as sources of normative information. Determining the composition of legal acts of sports law and the practical legislative activity of the formation of this branch in Ukraine depends on the understanding of the relationship between two types of normative regulation - normative-legal and normative-technical - in the aspect of legal information.

At the same time, when determining those legal acts that form the branch of sports law, it is necessary to take into account that the legislation on physical culture and sports is contained in various normative acts, in which material and procedural norms, norms of national law and international law, norms of state regulation interact and norms of non-state self-regulation interact. The normative field of sports includes sports-technical norms, sports-regulatory norms and organizational-sports norms. The last two of the mentioned categories form a system of normative and legal regulation of sports relations, the specifics of which depend on the nature of the activity that functions as a "sports activity" (Yushchuk, 2023).

According to the basic law in the field of sports Law of Ukraine "On Physical Culture and Sports" (Law of Ukraine No. 3808-XII, 1993), the key entity that implements the function of the development of sports in Ukraine is a sports federation for a certain type of sport. Having the legal status of a public organization, sports federations, together with the central body of the state executive power, which ensures the formation of state policy in the field of physical culture and sports, implement sports policy in the state. Sports federations function on the basis of the statute, which is subject to state registration. The content of the statute must comply with the requirements of the current legislation of Ukraine, international norms, including the rules of international federations. A mandatory condition for the creation of a federation is the definition of the type of sport, the development of which is promoted by this federation; and when creating sports federations of persons with disabilities, health defects must be indicated. The statute is a kind of "constitution" for the sports federation, which in its activity is governed, in addition to the statute, by various normative acts in the field of sports.

The sources of national law that regulate the activities of sports federations include: the Constitution of Ukraine; codes containing provisions regulating activities in the field of sports (Budgetary, Tax, Land, Air, Merchant Shipping Code, Criminal Code, Code on Administrative Offenses); laws of Ukraine directly devoted to the regulation of physical culture and sports, as well as other laws that contain provisions related to sports; decrees of the President of Ukraine; resolutions of the Cabinet of Ministers of Ukraine; orders of the Ministry of Youth and Sports of Ukraine; normative acts of international and national sports organizations and bodies (International Olympic Committee, National Olympic Committee, National Committee of Disabled Sports of Ukraine, Sports Committee of Ukraine, international sports federations in various sports, etc.).

In general, the organizational-management activities of sports federations in Ukraine are carried out in the normative array, which includes almost 4,000 normative acts. Therefore, a clear classification of these acts becomes important both for the formation of the sports-legal branch in the legal system of Ukraine, and especially for the practice of sports management. In particular, the governing bodies of the sports federation (president, vice-president, members of the executive committee, heads of separate subdivisions) must have a certain level of legal culture and awareness in the field of normative regulation of sports for the adoption and implementation of management decisions. Awareness of the existence of certain normative legal acts, the involvement of professional lawyers specializing in sports law will undoubtedly increase the effectiveness of sports management in Ukraine. In connection with this, there is a problem of training managers, specialists, in particular, lawyers at the appropriate level for work in the field of sports. For the successful implementation of this task, an appropriate scientific and educational-methodical platform is needed. At the same time, the current legislation of Ukraine and, in particular, the normative base of sports today do not have proper accounting and systematicity, and the rule-making activity needs significant improvement, a new level of quality of normative regulation.

A significant role in the improvement of the regulatory framework in the field of sports belongs to the justice system, first of all, to the Ministry of Justice of Ukraine. The powers of the Ministry, which directly relate to the field of sports law, include: development of draft laws and other normative legal acts; carrying out legal examination of draft laws, other acts of legislation submitted for consideration by the Government of Ukraine by other subjects of the right of legislative initiative; preparation of comments and proposals to the laws adopted by the Verkhovna Rada of Ukraine, sent to the President of Ukraine for signature; carrying out an examination of draft laws, other legislative acts submitted for consideration by the Cabinet of Ministers of Ukraine, and draft laws submitted for consideration by the Parliament by other subjects of the right of legislative initiative, and comments and suggestions to such regulatory and legal acts subject to state registration for compliance the provisions of the Convention on the Protection of Human Rights and Fundamental Freedoms and the practice of the European Court of Human Rights; implementation of state registration of normative legal acts of those bodies whose acts are subject to state registration in accordance with legislation, cancellation of the decision on registration of a normative legal act; generalization of the practice of application of the legislation and provision of methodological recommendations on issues assigned to the Ministry of Justice of Ukraine. Regarding the state registration of regulatory acts of subjects in the field of sports, the Ministry of Justice of Ukraine registers the orders of the Ministry of Youth and Sports of Ukraine (in particular, orders have been registered: On the organization of educational and training work of children's and youth sports schools; On the approval of the Rules of sports competitions for various types of sports; On the procedure for the recognition of sports in Ukraine; Provisions on the Unified sports classification of Ukraine; The procedure for the recognition of sports, their inclusion to the Register of Recognized Sports in Ukraine, its procedure, etc.).

The Ministry of Justice also carries out the registration of public organizations of physical culture and sports orientation, the activities of which are based on the statute (Article 9 of the Law of Ukraine "On Physical Culture and Sports" (Law of Ukraine No. 3808-XII, 1993), Article 8 of the Law of Ukraine "On Public Associations" (Law of Ukraine No. 4572-VI, 2012). The main place in the sports system is occupied by federations from certain types of sports. National sports federations establish the basic principles of the organization of sports activities on the territory of Ukraine in their respective sports, adopt their own rules and regulations, including disciplinary rules containing both material and procedural norms, regulating the activities of quasi-arbitration bodies. As a rule, these are separate provisions in the form of rules or a code, although sometimes such rules are included in a separate section of the statute. Such rules (apart from the statute) are not subject to registration in the judicial authorities, but are mandatory for the relevant subjects of sports activity.

The statutes of most national sports federations oblige their members, the participants of the competitions organized by them, to recognize the binding nature and fulfill the decisions of their judicial bodies. Such an obligation reflects the principle of the independence of sports, in some places it even prohibits the appeal of decisions of sports justice bodies in courts of general jurisdiction. As a rule, disputes in this field should be considered in disciplinary committees of sports organizations or arbitration commissions (for example, the Disciplinary Committee of the Ukrainian Football Association, Chamber for resolution of disputes of the Football Federation of Ukraine, Sports Arbitration Court of the National Olympic Committee of Ukraine, Basketball Arbitration Tribunal established by the World Basketball Organization), or in the Court of Arbitration for Sport (CAS), which is completely independent and operates on the basis of the Code of International Sports Arbitration as the highest quasi-judicial authority specializing in the resolution of cases in the field of sports. Decisions of the Special Division and the appellate arbitration oblige both the parties and the CAS panel to refer to previous decisions concerning the same or similar issues. However, Flaminio da Silva & Mirante (2020) note that nowadays, CAS' is an important actor and its relevance cannot be denied. Nevertheless, there are still multiple lessons to be taken in what concerns the best configuration of an arbitral option for the resolution of sports conflicts. The criticism that surrounds CAS' is proof of the need to evolve.

Part 9 of Article 45 of the Law of Ukraine "On Physical Culture and Sports" (Law of Ukraine No. 3808-XII, 1993) provides that the resolution of disputes that arise between subjects in the field of physical culture and sports is carried out in accordance with the law by a permanent sports arbitration court. The legal regulation of such protection is provided by the Law of Ukraine "On Arbitration Courts" (Law of Ukraine No. 1701-IV, 2004), which, however, does not contain reservations regarding the subordination of cases in the field of sports or related to sports, as well as the Law of Ukraine "On International Commercial Arbitration" (Law of Ukraine No. 4002-XII, 1994), the Law of Ukraine "On International Private Law" (Law of Ukraine No. 2709-IV, 2005) etc. An obligatory prerequisite for the possibility of resolving disputes by an arbitration court is an arbitration agreement - this is an agreement of the parties to refer to the arbitration court all or certain disputes that have arisen or may arise between them in connection with any specific legal relationship, regardless of whether they have whether they are contractual in nature or not. An arbitration agreement can be concluded in the form of an arbitration clause in a contract, a contract with relevant entities in the field of physical culture and sports on participation in competitions among professional athletes, on cooperation or on joining a club (names may be different), or in the form of a separate written agreement. A clause on referral to an arbitration court may also be contained in the statute of a sports organization to which a participant joins.

Therefore, the resolution of disputes can take place in the manner prescribed by the statutory and regulatory documents of the relevant entities in the field of physical culture and sports. This applies to any dispute that arises from civil or economic legal relations, except for the cases provided for by law. At the same time, more than 500 different arbitration courts are registered in the Unified Register of Public Organizations of the Ministry of Justice of Ukraine, of which sports arbitration courts – units (in particular, the Permanent arbitration court at the "Sports Industry of Ukraine" association, the Sports Arbitration Court of the National Olympic Committee). Decisions of arbitration courts are outside the competence of the State Executive Service of the Ministry of Justice, and enforcement of decisions of such courts is carried out by submitting relevant applications to courts of general jurisdiction.

The lack of a clear concept of legal acts and their verified classification results in the fact that the rule-making activity is carried out inconsistently, often chaotically and inconsistently, with gaps and other technical-legal defects. And this affects the formation of a single normative framework for regulation in all spheres of social relations, including in the field of sports, and leads to the destruction of the system of accounting for normative acts. All this has an extremely negative impact on the practice of applying normative acts in general, including acts of sports law, and leads to the violation of the rights of the subjects of legal relations. The practice of solving court cases in the field of sports law is faced with problems of not just a technical, but a conceptual nature, which require their theoretical understanding and the development of relevant scientific-practical recommendations. This especially applies to the combination of the activities of state authorities and non-governmental organizations, both national and supranational, in the management of sports, in connection with which questions arise about their relationship, problems of jurisdiction to resolve conflict situations, etc.

Legislation in the field of physical culture and sports provides for such sanctions as disqualification of an athlete, restriction of participation in sports events, exclusion of a sports team (club) from the membership

of industry associations, from tournaments, competitions or restriction of such participation, imposition of a fine. However, the law does not define the concept of a sports dispute, despite the fact that each sport has its own disciplinary rules. Therefore, the court of general jurisdiction, when accepting the relevant application, must decide whether the dispute belongs to the special competence of sports bodies. In Ukraine, there is currently no clear structure of out-of-court institutes for consideration of sports disputes. Most of the sports federations have neither their own such structures (quasi-arbitration bodies) nor specialists in the consideration of sports disputes. An exception is the football federation (Ukrainian Football Association - UFA), in which the Committee for Certification of Football Clubs, control-disciplinary committee of the UFA (CDC), the appeal committee of the UFA and the Dispute Resolution Chamber of the UFA (DRC) functions.

At the same time, the DRC of the UFA had to be registered in the prescribed manner precisely as an arbitration court. However, Article 6 of the Law of Ukraine "On Arbitration Courts" (Law of Ukraine No. 1701-IV, 2004) excludes labor disputes from the jurisdiction of arbitration courts. The latter are a significant category of cases of the DRC. Because of this, the latter was not registered as an arbitration court, and therefore the decisions of the DRC are not subject to enforcement according to the executive legislation of Ukraine. Such a situation creates a legal conflict, since any of the parties to the dispute can apply simultaneously to the court of general jurisdiction and to the DRC of the UFA. Such a situation took place, in particular, in the case of ex-football player of Lviv "Karpat" V. Gudyma against the club regarding the payment of salary arrears. The DRC satisfied the demand and obliged the club to pay 73,800 dollars. The club refused to fulfill this decision. The CDC imposed sanctions on the club in the form of a ban on transfers. The club appealed to the Frankivskiy District Court of Lviv with a demand to cancel the decision of the DRC and CDC. The court fully satisfied the lawsuit and removed the debt and sanctions from the club. The club appealed to the DRC, but the Chamber refused to review the case based on the newly discovered circumstances. The full stop was put by the CAS in case No. 145/05/2014 (Tribunal Arbitral du Sport, 2017), recognizing the refusal of PVA is legitimate. And the club was forced to pay the debt to the athlete, and the dispute was resolved in this way.

In this regard, it is necessary to pay attention to such norms of sports justice, which limit appeals to national courts. This limits access to justice and violates Article 55 of the Constitution of Ukraine. In our opinion, the application of the rules of sports law cannot compete with the right to access to justice. Sports law should apply only to sports, sports competitions and certain cases of legal relations based on sports relations, on participation in sports competitions, on the organization of their holding, on rules that exist exclusively in the sports field. And the right to work is a constitutional right guaranteed by the Constitution of Ukraine.

hus, the problem of the concept of acts of sports law, their classification and application is supplemented by new additional provisions compared to the views on this subject existing in the legal theory. First of all, this concerns the methodological aspect of defining the concept of legal acts, as well as their classification. The following provision is fundamental: all legal acts are acts related in one way or another to legal norms, and therefore are normative. This leads to the following important question regarding the connection between legal acts, normative information and legal information, which is almost not studied by scientists. The specified general points regarding the legal system as a whole should find their specification in the branch aspect, in particular, and in the formation of the sports law branch. This applies to legal acts of public authorities in the field of sports, as well as acts of national and international sports organizations, first of all legal acts of sports federations.

Also, solving an extremely important problem in the information society, which is the development of automated legal information systems in the field of sports law based on the latest information technologies, including the use of so-called "artificial intelligence", depends on a scientifically based classification of sports law acts. For example, Prokhazka & Melnyk (2023) study the issue of the implementation of artificial intelligence in legal norms at both the international and national levels, in particular, the use of its opportunities in justice for the purpose of more effective consideration of cases, and at the same time reducing the burden on judicial systems.

Conclusions

The following conclusions can be formulated as a result of this research:

- 1) The development of the field of sports in Ukraine requires appropriate management of this field, especially its legal support through the formation of sports law as an independent legal branch.
- 2) The creation of the sports-legal branch in the national legal system necessitates the integration of sports-legal acts into a separate subsystem, which indicates the need for a scientific definition of the concept of legal acts and their classification on the appropriate basis.
- 3) The definition of the scientific concept of legal acts is ensured by a dialectical approach to the interpretation of law, according to which law is a component of social management. At the same time, legal acts represent specific management decisions and are carriers of legal information. In this way, they differ from non-legal (technical) management decisions and, accordingly, normative-technical acts.
- 4) The sports law branch consists of legal acts (management decisions) of both state bodies and, to a large extent, acts of sports organizations, in particular, national and international sports federations.
- 5) An important role in the accounting of sports legal acts belongs to justice bodies, which provide conditions for rational rule-making, as well as the application of sports law acts by subjects of sports legal relations and bodies of justice, including sports justice bodies.
- 6) The specificity of the sports-legal branch and the state of legal support for sports management in Ukraine actualize the need for additional scientific research, in particular, the concept of legal acts, their classification and systematization, the formation of the legal branch, etc.

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Adapting accounting to the digital age: The urgent need for new regulatory standards

Adaptar la contabilidad a la era digital: la urgente necesidad de nuevas normas reguladoras

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
Abstract


This paper discusses the regulatory challenges that account practices face in dealing with the rapid changing digital economy in the context of the need for new standards to reflect the complexity of modern financial transactions. This research reviews the recent academic and professional literature (2019–2023) to identify key challenges: the integration of emerging technologies such as AI and blockchain, data security and privacy, transparent AI generated financial data, adapting reporting for continuous accounting, and regulating big data analytics. The thesis of the study calls for policymakers to focus on the creation of new accounting standards and regulatory approaches to increase transparency, audit and efficiency in the digital economy. In addition, it implies that there needs to be transparency about data handling, auditing digital financial procedures and incorporating


Resumen


Este documento analiza los desafíos normativos a los que se enfrentan las prácticas contables para hacer frente a la rápida evolución de la economía digital en el contexto de la necesidad de nuevas normas que reflejen la complejidad de las transacciones financieras modernas. Esta investigación revisa la literatura académica y profesional reciente (2019-2023) para identificar los desafíos clave: la integración de tecnologías emergentes como la IA y blockchain, la seguridad y privacidad de los datos, los datos financieros transparentes generados por IA, la adaptación de la presentación de informes para la contabilidad continua y la regulación de la analítica de big data. La tesis del estudio pide a los responsables políticos que se centren en la creación de nuevas normas contables y enfoques reguladores para aumentar la transparencia, la auditoría y la eficiencia en la economía digital. Además, implica que debe haber

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standardized reporting systems in the global accounting effectiveness in the digital age. Future research may investigate strategies to assist developing countries and reduce vulnerabilities in data manipulation of digital accounting.

Keywords: digital economy, regulatory requirements, standardization, technological innovations, data security, financial report, big data analytics.

transparencia sobre el manejo de datos, auditar los procedimientos financieros digitales e incorporar sistemas de información estandarizados en la eficacia contable global en la era digital. En futuras investigaciones se podrán estudiar estrategias para ayudar a los países en desarrollo y reducir las vulnerabilidades en la manipulación de datos de la contabilidad digital.

Palabras clave: economía digital, requisitos normativos, normalización, innovaciones tecnológicas, seguridad de los datos, informe financiero, análisis de big data.

Introduction

Constant technological advancement has had serious influence on each economy (Buriak & Petchenko, 2021). Digital economy, based on information and communication technologies (ICTs), has brought profound changes in the companies and industries by eliminating geographical boundaries and by giving highest authority to data in a dynamic environment (Kipkemei & Mose 2024). From blockchain start-ups in their infancy to large e-commerce platforms, digital businesses earn revenue by introducing new ways of doing things, rather than saving money in conventional ways (Rajkumar, 2023). This environment has revolutionized the way news agencies, in the banking industry as well as in other business arena are operating and brought the development of newer company models and how their customers behave. On the other hand, physical stores are confronted with intense competition from online marketplaces, and traditional financial institutions struggle to compete with FinTech businesses that rapidly extend their business quickly (Mujiono, 2021). Today the customer anticipates information with the immediacy made possible by mobile devices and instant access. Customer expectations of accessibility, personalization and usability are higher.

These advancements aside, the accounting industry continues to face the challenges accompanying the ongoing digitized process. The complicated nature of the digital economy is not fully addressed by traditional accounting standards that emphatically rely on tangible assets and traditional ways (Çetin & Bozdoğan, 2023). The digital economy is characterized by immateriality of digital assets, by speed and ease of online transactions, and the creation of new organizational forms. These issues identify important deficiencies in current accounting procedures including provision of transparency, precision and reliability of financial reporting.

In this context, authentication and validation for fast digital transactions, as well as the valuation of intangible such as intellectual property and customer generated media, are critical (Damayanti, 2019). With increasing wealth of digital technologies, the systems need accounting processes to adapt (Odonkor et al., 2024). However, there is a challenge also in a lack of updates standards, which challenges to capture economic realities and provide solid financial reporting in a quickly digitalizing economy (Hacker, 2024). These concerns can be addressed only if we find out how the existing legal and economic systems operate in the regime of data processing. Digital financial systems are also prone to considerable user security threats, as well as environmental impact. Current obstacles to accounting rules are demanding immediate action to craft all-encompassing regulations that focus on profound audits, a straightforward paper system, and open transparency specifically when it comes to crypto businesses (Marshall et al., 2021). Therefore, with the correction of these deficiencies, the accounting system becomes more robust and live able so as to trust and transparency in the digital economy (Hu & Kee, 2022).

This study aims to determine the regulatory deficiencies constraining the accounting sector support to the digital economy growth. But this paper contends that the present account paradigm is too simplistic to tackle on the complex social relationships and contexts of present society. The paper attempts to highlight the significant drawbacks in the current accounting standards and introduces better alternatives to realize better financial transparency and financial accountability in the digital age. Better accounting standards enhance decision making, cut risks, and make resource allocation optimal, all of which help to maintain long term digital economy stability (Chen et al., 2021). Moreover, this study also emphasizes the need for accounting practice to follow the modern digital technology so that they are on par with their modernist.

While past work has focused on particular challenges, e.g. accounting for digital assets such as bitcoin, this work assumes a view from first principles in order to address the broader difficulties caused by the structural breakdown in the digital economy. The focus is on automated transaction implementation, intangible asset valuation and accountability for data manipulation in accounting. This research identifies legislative gaps to ensure a complete and transparent financial reporting in the digital times.

This study is underpinned by three unique variables. To start, it is fundamental to know the exact regulatory barriers for digital accounting (Albuquerque Filho et al., 2022). Second, to achieve this objective it is necessary to conduct a thorough assessment of authoritative releases, company data and academic research. Lastly, potential solution is discussed, including the adoption of revised or new developed accounting standards. The aim of this approach is to improve financial reporting dependability, efficiency, and openness in the digital economy. By doing so, the research emphasizes that more trust and confidence are required, to help develop a technologically advanced digital environment leading to prosperity (Dobrovolska et al., 2023). For the improvement of the organizational and methodological provisions of functioning of the accounting system it is necessary to estimate the essence and problems, related to the integration of digitalization mechanisms (Nazarova et al., 2022, p. 243). Generational outlooks, geopolitical situations and active military operations in Ukraine affecting the transformation of modern economic systems and transformation of accounting and financial mechanisms of business interaction (Calinescu et al., 2023, p. 39). Basically, the primary purpose of this research revolved around demonstrating the importance of strengthening accounting rules in light of the quick change in the digital economy. This study identifies current legislative limitations and proposes alternative approaches, to create a more resilient accounting system. The need is critical because it adapts the legal framework to the digital technology complexities in order to guarantee the sustainability and transparency of reporting in the financial world. While enhanced accounting standards will enable greater innovation—thereby stimulating economic growth—these measures will also be in step with increased stakeholder expectations such as from financial institutions, governments, investors, and customers.

Literature Review

Recently, the remaking of accounting in the digital age is a key area of interest. Existing literature on the role of digital technologies, including artificial intelligence (AI), blockchain, big data, to transform accounting practices, regulations and professional skill requirements are enlarging. This literature review synthesizes prior studies to advance our understanding on major themes, controversies, and knowledge gaps in this area.

Feasibility and Challenges of Adopting Digital Accounting Standards

According to Ugochukwu et al. (2024), there is a need for digital technology to adopt accounting standards that resonate with distinctive characteristics of digital technologies. Among the solutions considered by the study are efficient digital transaction systems for accounts monitoring and resolution of fraud arising from cryptocurrencies. The results highlighted the need for broad uniformity in the regulations which are being established in the different sectors to fill the gaps that do exist in existing digital transformation scenarios. Also, like EU (European Commission, 2020) points on the requirement of ongoing legal frameworks to spur on digital adoption and suggest approaches, such as regulatory sandboxes and innovation centers. Their application could decrease the likelihood of fraud and supplement the added value of digital accounting processes. But in regions like Ireland, where there are no laws specifically aimed at this method, a joint effort from academia, business, and regulatory bodies is said to be needed, the report suggested.

Impact of Advanced Digitalization on Accounting Practices

Pargmann et al. (2023) showed how advanced digitalization transformed accounting, and found gaps in accounting training, including data analytics, cybersecurity and AI. It revealed inequalities in the access to digital tools and emphasizes policy intervention to offer an equal chance of development of skills. Fornio & Manera (2022) similarly focused on the extent of AI and its impact on financial statement valuations and strategic guidance, with the accountants' technological proficiency stressed as essential in ensuring professionalism is maintained. Digitalization led to the development of roles from manual tasks to analytical functions for accountants and Berikol & Killi (2021) suggested that accountants need enhanced logical and inferential skills training in the process.

Blockchain Technology and Accounting

Blockchain has become a game change in accounting. Because of its transparency and immutability, blockchain is believed to reduce fraud and ambiguity in finance (Hooper & Holtbrügge 2020). Nevertheless, the authors also stressed that widespread adoption would require major reform of legal and financial frameworks. The OECD (2019) discussed blockchain's implication on auditability, transparency and electronic security and also recommended stronger policies and collaboration between the public and private sector to handle the information security and privacy related challenges.

Regulatory and Educational Implications of Digital Accounting

Education is the recurring theme on how the digital divide is bridged in accounting in the literature. According to Pargmann et al. (2023), data analytics and AI are needed within accounting curricula. Mălăescu & Avram (2018) also provide further elaboration on the difficulties presented by growing complexity in financial data and the requirement for ongoing skill improvement. According to Al-Htaybat & von Alberti-Alhtaybat (2017), integrating accounting education with big data analytics would augment analytical capabilities and enrich understanding and approach to financial decision making. Dell et al. (2024) stated that in 2018, AICPA and CIMA were promoting the need to build a culture of innovation in the accounting profession. The study recommends that technologies, such as cloud computing and data analysis, be phased to improve efficiency and competitiveness. Furthermore, Chanyuan et al. (2020) pointed out that updated accounting standards and digital transformation are global and regulatory departments should encourage collaboration of firms to achieve equitable financial system.

Digital Transformation & Professional Development

Fornino & Manera (2022) emphasized the necessity of enhancing the upskilling of accountants in order to be able to cope with all the technological advances while staying relevant and offer strategic guidance as well as ethical responsibility. Accountants' roles have shifted, Berikol & Killi (2021) reasoned, and therefore training should emphasize analytical and inferential skills.

Knowledge Gaps and Future Directions

Existing studies offer useful insight but there are many gaps. As an example Ugochukwu et al. (2024) and EU (European Commission, 2020) framed the need for homogeneous regulations but failed to focus on the impediments of global implementation across varying legal and economic environments. Further, like Hooper & Holtbrügge (2020) and OECD (2019), they also knew that blockchain could potentially provide value; however, they did not discuss how blockchain could be integrated to the existing accounting systems. Furthermore, according to Pargmann et al. (2023) and Mălăescu & Avram (2018), the disparities in access to digital tools and training still need to be studied to develop inclusive policies.

It also shows how digital technology changes the rules for accounting practice and education and what the rules will be when they crystallize in the future. Some key themes are the requirement for uniform regulations, the contribution of advanced digital tools towards greater transparency and efficiency and education and training of people to close the digital divide. The identified knowledge gap is thus proposed to be addressed by future research in global regulatory frameworks, integration of emerging technologies, and equitable access to digital tools and training.

Research Methodology

In this study, organized and comprehensive method was applied in exploring the regulatory challenges of accounting in the digital economy.

Data Sources

Research was organized from searches of numerous key academic databases, namely ProQuest, Web of Science and EBSCO Host and other relevant sources. These were because of their broad and varied arrangement of high caliber scholarly assets including research articles, diaries, and gathering activities (Thomas & Thomas, 2021). The study also included data from reputable accounting and auditing firms and trade associations whose publications contain practical insights into the challenges that occur when

transitioning to digital accounting systems. Specifically, a complete review of online presence of these organizations was done to find recent advancements, present and passing trends and results of the conversion that they are amping towards (Chawla & Goyal, 2022).

These data sources were justified through their reputation, reliability, and relevance to these assess information. These databases enabled up to date scholarly work to be accessible, while the inclusion of trade and industry publications ensured research was not limited to only the theoretical aspects of the regulatory challenges in accounting.

Search Strategy

The search strategy concentrated on key terms and phrases related to digital accounting in order to adequately search for relevant information. This included:

Accounting digitization terms: Digital accounting, FinTech, accounting automation, cloud accounting (Attard, 2023).

Emerging technology terminology: "big data", "cloud computing," "chain reaction," and "artificial intelligence (AI)," (Roy, 2019).

Regulatory environment terms: The titles of this thesis are: "accounting standards," "regulatory challenges" and "financial reporting in the digital age" (Ugochukwu et al., 2024).

Due to targeted approach, the search results reflected on the interdisciplinary nature of digital transformation in accounting, focused on the technological, as well as regulatory aspects of digital transformation.

Eligibility Criteria

The study materials were required to meet the following criteria to ensure quality and consistency:

Language: To maintain uniformity and make the analysis easier, all materials should be published in English (Lindsay, 2020).

Source credibility: In addition, peer reviewed academic publications and professional materials from nationally recognized universities and respected accounting organizations were given priority. The selection of these sources was done to respect academic and industrial standard of rigor and trustworthiness (Yigitbasioğlu et al., 2023).

Relevance: Only studies targeted to the regulatory challenges of digital accounting or related technological transitions were included.

Publication date: For the most recent trends and findings, recent studies were selected.

But studies in languages other than English or that did not focus on digital accounting specifically were excluded. At the same time, this systemic approach made sure that high-quality, relevant and reliable data were included.

Data Analysis Techniques

To analyze the collected data, the study employed a combination of qualitative and theoretical research methods, as detailed below:

Thematic Analysis: They conducted a thematic analysis to identify how the themes are recurring and trends across the selected studies. To do this, findings connected to key regulatory challenges in digital accounting as data security, transparency, and compliance with the accounting standards were categorized. To evaluate these patterns, theoretical frameworks from information systems and accounting research were used (Kroon et al., 2021). For example, blockchain applications in accounting was studied to understand how they solve transparency issues and create new compliance issues.

Generalization: Data analysis led to broaching broad conclusions to deepen insights on the possible impacts of digital transformation on the frameworks of accounting regulations. For instance, findings related to the role of AI in automating the financial reporting processes were generalized to propose new ways to update regulations (Li et al., 2020).

Abstraction: By abstraction, the study identified fundamental concepts and principles embodied in regulatory challenges. Using this method led to formulation of research questions and potential solution. For example, analysis of studies on ‘cloud accounting’ revealed the emergence of a need for regulatory frameworks regulating data ownership and cross border data sharing (Rashidov et al. 2023).

Comparative Analysis: The study synthesized results from different sources to look at the interplay between the regulatory framework of the accounting industry and digitization. It also compared different regulatory environments, analyzing how different countries establish real case studies on developing regulatory models related to blockchain accounting (e.g., European Union versus United States)—and how these can be contrasted and compared to determine global challenges and best practices (Rashidov et al., 2023).

These methods were systematically combined and used in a robust and comprehensive synthesis of the findings. In addition to illustrating the importance of the regulatory challenges of digital accounting, the results provide insights into potential approaches for dealing with them.

Results and Discussion

Accounting practices and Its Impact on accounting practices due to digitalization

Since the very day that digital technology has been brought to the accounting industry, it has changed dramatically. These modifications have two types of outcomes, positive and negative, which are very important for understanding the way accounting is transforming itself in the digitized world. In this work, we apply the research methods and insights developed from and learned in previous studies on these changes in the regulatory landscape.

Regulating Accounting as a Challenge of Digitization

The paper’s findings show many consequential and ethical/legal problems due to the rise of digital accounting. Some of the literature points out what may significantly influence future regulatory regimes.

A whole new set of regulations and laws are necessary. New technologies such as blockchain, artificial intelligence (AI) and big data have made financial laws much complex. According to Hassani et al. (2018) however, these challenges posed by these advancements could only be addressed through devising new methodologies. As far as governments are concerned, it is essential they keep up to date financial and accounting record but they likewise need to investigate ingenious ideas. The International Federation of Accountants speaks about the need for a consortium between international governing organizations to revise accounting rules, which have to be in line with the interests of every country. They ensure multinational companies work in a fair setting, thereby fostering trust by investors on global financial markets.

This requires the pace of the adaptation of the existing regulatory frameworks with the rapid technological progress. Regulatory sandboxes and innovation centres can be useful, the European Commission says, as they allow evaluation of new technologies in risk free pilot projects.

Critical Analysis and Examples: With the advent of tech such as blockchain and AI financial laws become complicated, for example blockchain consists of decentralised transactions which are usually very complex and difficult to control. For example, transactions recorded on the blockchain are not reconciled using uniform standards, therefore creating inconsistencies in financial reporting. Regions like the European Union have successfully used regulatory sandboxes to test blockchain solutions with minimal risk and can, thus, serve as a concrete roadmap for others worldwide in implementing similar methodologies.

Data Security and Privacy Concern

The years have seen an increased emphasis on privacy and data security issues arising from the transmission and storage of ever-increasing volumes of data in a digital form. In order to guarantee an adequate protection and security of sensitive financial documents there is an urgent need for robust legal systems. Among many things, executing data governance solutions is a complex process that requires thorough planning and, sometimes, intricate handling of information. Data governance systems are developed to ensure data accuracy and reliability are established, and data errors are reduced in their maintenance to facilitate better decision making.

Critical Analysis and Examples: The 2020 SolarWinds hack is just the latest of a string of data breaches, all of which highlighted the critical need for robust cyber security within accounting. Jauhainen & Lehner (2022), however, regulations that force data encryption and periodic security audits can be a defense against these vulnerabilities. For instance, data protection capabilities of accounting firms became significantly higher since the European countries became compliant with GDPR, this is a benchmark for other countries.

Transparency and Auditability of algorithms for AI-generated Data.

When it comes to accounting, the introduction of AI concerns how traceable or reliable the financial data is. AI driven financial activity has to be auditable which regulatory authorities could establish standards for. Though the legal/ethical requirements of ensuring proper compliance are common, AI development and use must adhere to standard protocols for failing to comply itself. Eziefule et al. (2022) argue for the need of "explainable AI", a term used for techniques that enable human auditors to understand AI based financial decisions.

Critical Analysis and Examples: One example is how firms, like Deloitte, have developed frameworks to help develop AI audited frameworks to assure transparency in the financial data analysis. These approaches are in line with the call for explainable AI models made by Bose et al. (2023), as they help auditors detect errors and follow regulatory compliance.

The project works to integrate Blockchain technology.

The blockchain technology is secure to data and fast to perform business transactions. However, the challenge with its decentralization is that transaction verification and compliance isn't as dependent, and fraud is more of a possibility. The European Commission (2020) calls to put in place regulatory guidelines for the handling of blockchain transactions.

Critical Analysis and Examples: For example, blockchain can be used for real-time tax reporting in Estonia. However, the use of this approach has increased transparency and decreased errors but has also required the government to create comprehensive guidelines for using blockchain in accounting.

Continuous Accounting and Reporting

With the move to continuous accounting, fueled by real time data collection technologies, existing reporting legislation will need to be updated. According to Al-Htaybat & von Alberti-Alhtaybat (2017) and Chanyuan et al. (2020), the concerns about accuracy and timeliness of financial information have emerged. Automated reporting tools may be employed as strategies by the authorities to effectively ease reporting obligations without the cost of inaccuracy.

Critical Analysis and Examples: Take for instance, it has allowed companies working with the SAP's real time accounting software to keep up with changing reporting standards with efficiency. But for smaller firms, adopting such technologies causes high costs, thus, they require financial assistance programs to help them fill the gap.

Big Data Analytics and its Regulation

Increased reliance on big data has highlighted the need for legal frameworks relating to the ethical use of this kind of data in accounting. The data privacy regulations such as GDPR limit independent accountant

key performance indicators (KPIs), which need to be aligned to retain the integrity of the financial reports. According to OECD (2019), quality data management improves representativeness of financial analysis.

Critical Analysis and Examples: By firms like PwC, the use of big data analytics in auditing proves the possibility of identifying financial discrepancies quickly. But there needs to be oversight through regulation to prevent misuse and to make sure it does not and in fact comply with the ethical standards.

Enhanced Enforcement Power

Big data analytics technologies, like those used by regulatory agencies to examine financial fraud, will help organizations identify potential illegal activities, then detect and investigate them. This capability helps improve regulatory framework and gains market trust.

Critical Analysis and Examples: As an example, big data for uncovering the Wire card scandal in Germany shows how analytics may transform the enforcement power. Putting these tools in the hands of regulatory bodies strengthens them, and helps detect financial insanities sooner.

Regulatory Reporting Standardization

In that case, digital technology can help develop global standards for regulatory reporting. Accountability and simplification in compliance for multinational corporations arise from harmonizing standards across jurisdictions.

Critical Analysis and Examples: An example of the benefits of standardised reporting formats is the adoption of Extensible Business Reporting Language (XBRL) by the Securities and Exchange Commission (SEC) in the United States. It has slashed regulatory compliance and increased transparency of financial disclosures.

Implication for accounting practice and policy formulation

Accounting itself has been radically revolutionized by digitalization, but for this revolution to be a success, there now needs to be proactive cooperation from policymakers and regulators together with accounting professionals. The accounting profession can, by addressing data security, AI transparency and blockchain regulation, pave a way to more transparency and trustworthy finance system. Institutions of education have to redesign the curricula in accounting to provide professionals with the skills for the digital era. To ensure inclusivity, policymakers should hence support adoption of digital technologies by smaller enterprises and emerging economies. Digitalization can make our financial system much better in the future. But this will need to overcome existing challenges and leverage new opportunities over the longer term.

Digital accounting is a fundamental shift for society and for business. It is something that presents regulatory complexity and data security challenges, but also can be leveraged to create greater transparency, efficiency, and trust. Through collaboration and innovation, the accounting profession is able to handle the obstacles it confronts and keep thriving in this quickly changing landscape.

Conclusions

This research essentially investigated the laws and regulations that are appropriate for application to the online marketplace in regard to accounting. The emergence of artificial intelligence (AI), blockchain and big data are revolutionizing large corporations' operational practices. A novel digital ecosystem was developed with recent technical advancements. Reporting of financial information in this ecosystem has been standardized according to its own standards. But the ancient accounting rules were designed for a paper economy and are ill suited to today's digital assets or the speed with which those things go around in today's online world. The framework currently lacks consideration of existing frameworks thus creating discrepancy between the current economic situation and the set targets.

This paper is important in the sense that it can deal with this divide. The study identifies deficiencies in the existing legislation and proposes enhancements fit for digital integration, thus the main contribution of the study. This research bridges the gap between outdated regulations and needs of a modern economy by presenting practical alternatives which entail adopting digital accounting tools and digital technologies.

This will make the system more efficient and adaptive, leading into a more intelligible, highly efficient and resistor digital economy towards changing threats.

This research focused primarily on identifying and understanding the barriers that result from the move to a digital accounting system. The study evaluates literature, professional articles and regulatory alerts for both opportunities and challenges therein. Its emphasis on updating legal frameworks to effectively manage the increasing complexity supplied by technological advancements is a huge original contribution. The study highlights the importance of having regulatory systems that go hand in hand with real time data processing, analytics, while being transparent, verifiable by using technologies such as blockchain.

Since the number of individuals accessing data has expanded, there are important issues concerning security and privacy. Safeguarding data integrity while being transparent with data at the same time is still an ongoing challenge. However, the proposed research aims to make use of blockchain technology for bookkeeping and auditing; also capable of real time, data supported, continuous accounting. In addition, the study supports the optimal use of big data analytics to transform the accounting discipline into a more dynamic and predictive field. This is quite a shift from the more reactive perspective when tackling risks and inefficiencies in the digital accounting framework.

Policy Implications

This study's findings provide some actionable solutions to the question of accounting in today's digital economy. New accounting guidelines are desperately needed to wrap our heads around the complexities of digital assets and economic operations. These reforms must be accorded the highest priority by policymakers since there are gaps in the existing frameworks. Implement robust data governance systems and cybersecurity measures to safeguard data and ensure accurate financial reporting. As is mentioned, women's participation in data governance initiatives should be considered as it influences economic development and empowerment because they participate in international practices and transparency efforts (Rezvorovich, 2023). Governance frameworks must be strengthened, and cybersecurity laws have to be brought out to manage the risks of the digital economy.

Public trust and engagement can only be enhanced through open and transparent financial and operations reporting. It guarantees the participation of the public and facilitates auditors to bank on the perks of a uniformed digitalized economy. Besides, there should be consistent effort to bridge the skill gap between the accounting professionals with the fast-growing field of accounting. Achieving this objective, however, will require the establishment of collaborative programs between private sectors and regulatory bodies.

Setting globalization on its back, global collaboration and development of the norm to practice money in the same way is needed. However, adhering international monetary standards and mutual legislative support between and among nations can improve the competitiveness of corporations at international levels. And that will also put more confidence in investors, which is necessary for the stability and growth of the market.

Future Research and Limitations

There are several limitations in this study. Initially the conversation centered on legislation in more developed countries, therefore leaving it to be utilized to its best potential in developing economies with limited access to digital technologies. This should be extended further by looking into the general implications for developing countries (with an emphasis on context specific digital offerings for accounting). Second, the technical constraints associated with implementing new accounting standards were incompletely addressed in the study. Future research could include mitigation strategies to risks with data changes with digital accounting systems. Additionally, there is great promise in developing methods for evaluating digital assets and incorporating real time analytics into accounting practice in a standardized way.

With such an attempt to fill these gaps, this research will not only contribute to the ongoing discussion on digital accounting but also lay the foundation for a more inclusive and adaptive global accounting ecosystem. However, a broader perspective frames a well-regulated accounting framework that is innovative for the digital economy as potentially transformative.

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The role of psychological flexibility in post-traumatic adaptation

Роль психологічної гнучкості у посттравматичній адаптації

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
Abstract


According to the World Health Organization, 70% of the population reports experiencing traumatic incidents. Psychological flexibility, which consists of acceptance, cognitive defusing, mindfulness, value orientation, and behavioral flexibility, is important for adaptation after traumatic situations. Therefore, the purpose of the study is to determine the role of psychological flexibility in the process of recovery from traumatic events. This paper uses the methods of literature analysis and observation. In particular, the PRISMA approach was used to collect relevant scientific materials. To include the literature, 5 criteria were developed that related to the content, methodology, and time of writing (from 2014–2024). A total of 40 items were included. The results showed that psychological flexibility is characterized by such factors as perception, cognitive defusing, mindfulness, value orientation, and behavioral flexibility. The study found that individuals with a high level of


Анотація


За даними Всесвітньої організації охорони здоров'я 70% населення повідомляють про переживання травматичних подій. Психологічна гнучкість, яка складається з прийняття, когнітивного дефузювання, майндфулнесу, орієнтації на цінності та поведінкової гнучкості, є важливою для адаптації після травматичних ситуацій. Отже, метою дослідження є визначення ролі психологічної гнучкості у процесі відновлення після травматичних подій. У роботі використані методи аналізу літератури та спостереження. Зокрема, для збору релевантних наукових матеріалів використовувалися рекомендації PRISMA. Для включення літератури було розроблено 5 критеріїв, які стосувалися змісту, методології та часу написання (з 2014 до 2024 року). Загалом до вибірки потрапило 40 джерел. Результати показали, що психологічна гнучкість характеризується такими факторами, як сприйняття, когнітивне дефузювання,

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psychological flexibility cope better with traumatic events, have fewer PTSD symptoms, and recover faster. The conclusions note that well-developed psychological flexibility contributes to effective emotional management, adaptation to change, and finding constructive solutions in stressful situations. Thus, it is proved that developed psychological flexibility promotes recovery from trauma and reduces the negative impact of stress on health.

Keywords: PTSD, Psychological Flexibility, Assistance, Recovery.

майндфулнес, орієнтація на цінності та поведінкова гнучкість. Дослідження виявило, що особи з високим рівнем психологічної гнучкості краще справляються з травматичними подіями, мають менше симптомів ПТСР і швидше відновлюються. У висновках зазначено, що добре розвинута психологічна гнучкість сприяє ефективному управлінню емоціями, адаптації до змін і знаходженню конструктивних рішень у стресових ситуаціях. Таким чином, доведено, що розвинена психологічна гнучкість сприяє відновленню після травм і знижує негативний вплив стресу на здоров'я.

Ключові слова: ПТСР, психологічна гнучкість, допомога, відновлення після травми, психологічна адаптація.

Introduction

Background

The post-traumatic period is a time when a person is faced with the consequences of complex life events that may have left a deep emotional imprint on a person's mentality. At such a time, it is important to maintain internal balance and the ability to adapt even in a difficult period. One of the important factors that influence the process of recovery and order is psychological flexibility, which means the ability of an individual to remain stable and balanced even under conditions of stress or uncertainty. In some modern works, it is determined that it helps to avoid fixation on negative experiences and enables a better perception of reality and to find constructive ways of solving difficult situations.

Thus, the relevance of the topic of psychological flexibility in the post-traumatic period is becoming more and more noticeable in the environment of modern scientific discourse. This relevance can also be determined by the fact that in the modern world the number of stressful and traumatic events is increasing: military conflicts, natural disasters, pandemics or complex personal losses leave a deep impact on the psyche. Modern studies emphasize that in such conditions, the search for effective methods of mental health support becomes a necessity.

Problem Statement

Some facets of the concerns mentioned were partially taken into consideration by the scientists. First and foremost, it discusses the significance of psychological adaptability for mental health, the connection between social roles and different facets of contemporary interaction, and the investigation of many psychological and social elements in conjunction with the effects of the global environment on personality. The research environment is actively discussing the problem of creating universal questionnaires to measure psychological flexibility, which will also enable the establishment of links between psychological flexibility, individual temperament, and the measured level of stress.

The main problem of the study is that modern scientists have only partially paid attention to all components of the formation of adaptive flexibility in the process of overcoming PTSD processes. Therefore, this study will be aimed at analyzing a comprehensive consideration of the role of instruments for the formation of adaptive flexibility and determining their effectiveness against the background of comparing data obtained through observation and literature analysis. Thus, the research challenge is to determine the role of psychological flexibility as an important factor that contributes to adaptation in the post-traumatic period. At the same time, it is worth recognizing that psychological flexibility helps people better cope with the consequences of traumatic events and adapt to new living conditions.

Research Objectives

Therefore, the purpose of the study is to characterize the role of psychological flexibility in the process of recovery after traumatic events. The range of research questions is as follows:

1. What are the theoretical foundations of psychological flexibility and what are its components?
2. Is there a connection between the level of psychological flexibility and adaptation after traumatic situations?
3. How can developed psychological flexibility affect the recovery process after traumatic events?

By implementing this research, it will have potential not only in terms of scientific novelty, but also in terms of practical value. Therefore, this study can serve as a valuable basis for the formation of effective strategies for supporting people who have experienced traumatic events.

Literature review

Psychological Flexibility and Mental Well-being

The scientists partially considered certain aspects of the indicated problems. First of all, it is about the importance of psychological flexibility for mental health, the relationship between social roles and various aspects of modern interaction, the study of various psychological and social factors in combination with global environmental influences on individuality. In particular, the issue of developing universal questionnaires for measuring the level of psychological flexibility is being actively discussed in the research environment, which will also make it possible to establish connections between psychological flexibility, individual temperament and the obtained level of stress (Benoy et al., 2019; Cyniak-Cieciura, 2021; Fedoryshyn et al., 2024). In the future, such developments can be an important tool for understanding the phenomenon of psychological flexibility as a whole (Benoy et al., 2019). At the same time, other scientists are quite skeptical about the possibility of measuring psychological flexibility. Pointing out the difficulties of such a process, generally considering it an individual characteristic of each person (Doorley et al., 2020).

The importance of psychological flexibility as an element of recovery of the psychological state was immediately noted by several scientific teams: to increase the effectiveness of this indicator, a series of special trainings are offered that can improve this component, make it more effective during the recovery of certain social games, in particular, military personnel (Evans et al., 2023).

Psychological flexibility in coping with PTSD symptoms

Instead, other researchers also draw attention to the use of psychological flexibility in counteracting the symptoms of PTSD, investigating the specifics of the influence of this aspect on the consequences of receiving bodily injuries (mild brain injuries) (Faulkner et al., 2022), depression caused by postpartum depression (psychological flexibility in general is able to overcome this negative phenomenon) (Hu et al., 2024). It is important to note the social dimensions of the functioning of psychological flexibility as a tool for overcoming crisis phenomena of personality development.

First of all, attention is drawn to vulnerable categories of the population and the need to protect their health (Bhandari, 2024). Separately, it is worth pointing out the relationship between depressive syndromes and alcohol addiction, one of the mechanisms for counteracting which is psychological flexibility: the mechanism of its action is believed to be similar to overcoming the symptoms of PTSD (Napryeyenko et al., 2020). The social significance of this phenomenon is also noted in studies (Iastremska et al., 2023). An important aspect of this is the relationship between parents and adolescents, in which psychological flexibility enables both parties to better cope with conflicts and stressful situations (Moyer & Sandoz, 2015). The outlined research trends point to the importance of psychological flexibility as a factor influencing various aspects of mental health and social interaction.

Therefore, modern scientists have characterized various aspects of psychological flexibility for mental health, the relationship between social roles and various aspects of modern interaction. However, the establishment of a clear role for overcoming post-traumatic syndrome is poorly studied. This study will solve this problem and demonstrate important areas of development of psychological flexibility for mental health of people who have experienced PTSD.

Methodology

Research Design: Methods of observation and literature analysis will be used to realize the goal of researching the peculiarities of the formation of psychological flexibility as a factor of orderliness in the post-traumatic period. Thus, this study will belong to the mixed type.

Data collection: The PRISMA approach was chosen to search for relevant scientific literature. Various types of scientific sources have been chosen to include literature, including scientific articles, books, chapters from collective monographs, conference materials, etc. The following databases will be used for this: Scopus, PubMed and Google Scholar. Keywords such as psychological stability, post-traumatic period, recovery strategies after injuries, orderliness, stability are entered into the search databases.

The process of searching for sources took place from September to October 2024. The authors of the article paid attention to publications from such locations as Ukraine, the EU, the USA, and countries affected by military conflicts.

Previously, the authors were aware of 8 publications related to the topic of the study. 1789 results were initially found in the specified databases: Scopus, PubMed and Google Scholar. At the first stage of sampling, all duplicates were rejected - 321 results. After a short screening, which was based on the analysis of the found results, in particular, on the superficial analysis of titles, abstracts and keywords, 956 papers were obtained. The literature inclusion criteria were as follows:

1. Date range: from 2014 to 2024 (works of the last 10 years were taken into account)
2. The study describes the components of the formation of psychological flexibility
3. The work defines the formation of psychological flexibility based on practice
4. The study describes various recovery strategies after traumatic events
5. Language of research: English. Those works that had English-language abstracts were also subject to inclusion (see Figure 1).

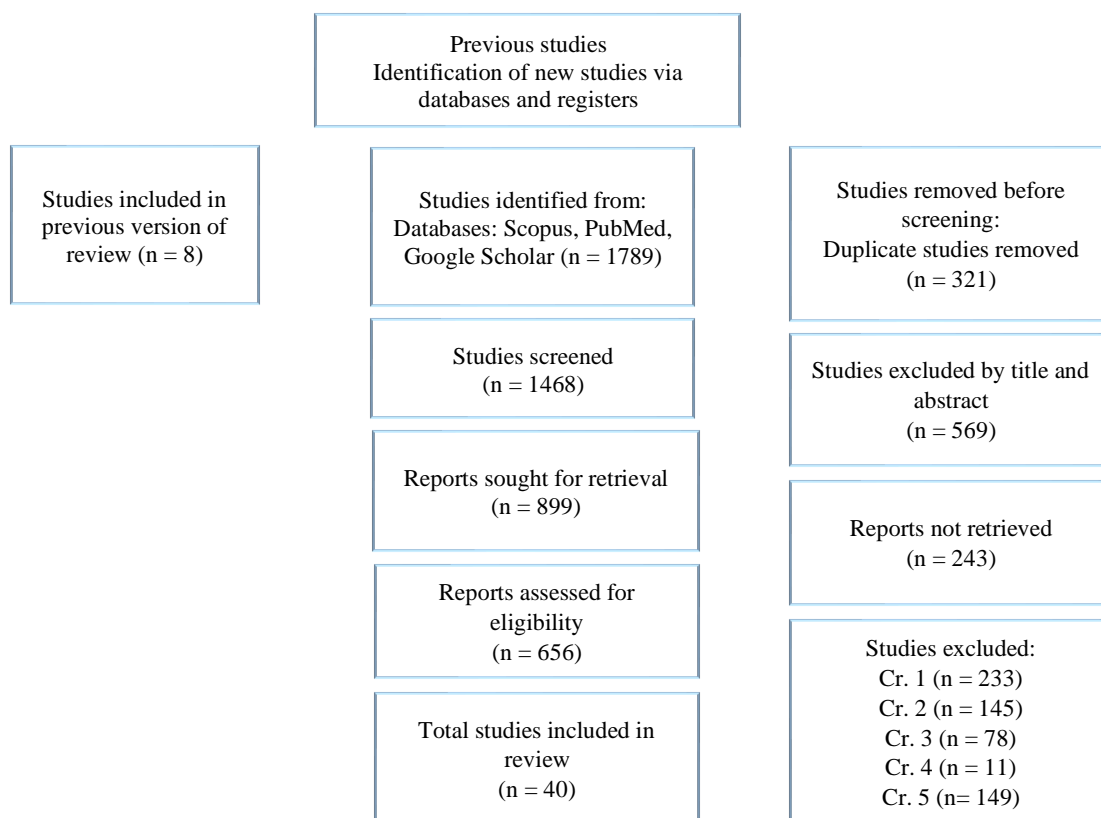


Figure 1. Using of PRISMA approach.
Source: Authors' development.

Data Analysis: The method of systematization and coding was used for data analysis. In particular, the found sources are divided according to key topics: psychological flexibility, recovery strategies after trauma, post-traumatic events. This was done in order to later systematize the results. After that, the results were synthesized. The data obtained from the literature analysis will be used to confirm or refute theses, which are formed on the basis of observations.

Observation: An important part of this research was also the observation that was conducted among participants who experienced traumatic events, in particular, military actions. The sample of individuals was purposive. The authors included in the study individuals who had a clear diagnosis of PTSD, underwent rehabilitation and gave consent to follow-up on their condition. Thus, the authors of the article observed 23 individuals who had an officially confirmed diagnosis of PTSD. All participants underwent rehabilitation in Ukrainian mental and physical health support centers. All study participants gave consent to the processing of their data under conditions of anonymity.

Direct observation of participants in their natural environment or during specially organized meetings played an important role. This made it possible to obtain objective data on the behavior of persons who suffered from injuries in real situations. However, structured observation was not carried out in the work, therefore, the results will only record the experience of the authors and some important opinions regarding the peculiarities of the formation of psychological flexibility.

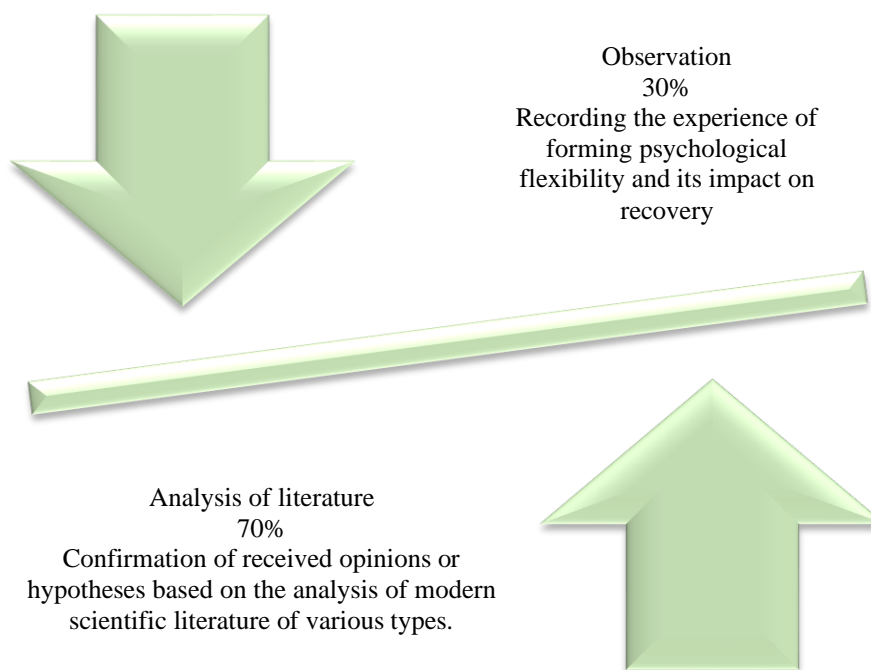


Figure 2. Structure of research methods

Source: Authors' development.

Data analysis of observation: The analysis of observation data included several stages in order to provide additional information about the behavior of individuals with PTSD. In particular, observation data were collected in naturalistic settings, where individuals with PTSD were engaged in structured and unstructured activities that were aimed at supporting their psychological and emotional well-being. Qualitative analysis tools (coding) were applied, based on the fact that information was systematically coded in special notebooks about each participant for recurring themes. In particular, the following recurring themes were identified: the use of psychological flexibility in practical settings, indicators of orderliness, behavioral signs of adaptation (development of new coping mechanisms). After that, the coded observations were compared with the main scientific findings contained in the sources. This was done in order to verify and contextualize new themes. In particular, behaviors that indicated psychological flexibility of the participants were compared with theoretical frameworks and empirical studies.

Synthesis and Interpretation

In this way, the main findings were synthesized into broader conclusions about the role of psychological flexibility in supporting recovery from trauma. The interpretation of the data focused on how these real-world observations align with or differ from existing models in the literature. The combination of observational studies and literature analysis provides a holistic approach to understanding the needs of children with posttraumatic stress disorder and the effectiveness of pedagogical interventions. So, as a result of combining the method of observation and analysis of the literature, an understanding of the importance of psychological flexibility in orderliness and adaptation after traumatic events was obtained.

Results and Discussion

Results: In their lives, the majority of people will go through at least one traumatic event (Bardeen & Fergus, 2016). For instance, the World Health Organization (WHO) evaluated trauma exposure in 24 countries (n = 68,894) in a series of epidemiological surveys. 70% of the participants said they had experienced one or more traumatic incidents. Estimates of lifetime trauma exposure in the United States may reach 90% based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (Jeffords et al., 2020), which includes Criterion A for Posttraumatic Stress Disorder (PTSD). A significant proportion of trauma survivors will have post-traumatic stress disorder (PTSD), although the majority of people who endure a traumatic event will recover naturally. Finding the causes and aggravating variables of posttraumatic stress disorder (PTS) symptoms is crucial because of the high levels of anguish and functional impairment linked to PTSD.

The dominance of psychological reactions over selected values and circumstances in directing actions is known as psychological inflexibility, and it is one of the factors that may support and exacerbate trauma (Bruno et al., 2024; Puolakanaho et al., 2020). Thus, developed psychological flexibility allows you to freely respond to life's challenges and not get stuck on negative thoughts or emotions. In addition, it also helps to find constructive ways of adapting to new situations. Therefore, psychological flexibility is important in stressful situations or in conditions of uncertainty. Its main components are formed from acceptance, which means the ability to consciously perceive one's thoughts and emotions, cognitive defusion, that is, the ability to distance oneself from one's thoughts and perceive them as temporary phenomena, contact with the current moment (mindfulness), value orientation, the ability to act in accordance with one's own principles and values, flexibility of behavior (ability to take responsibility for one's actions) (See Figure 3).

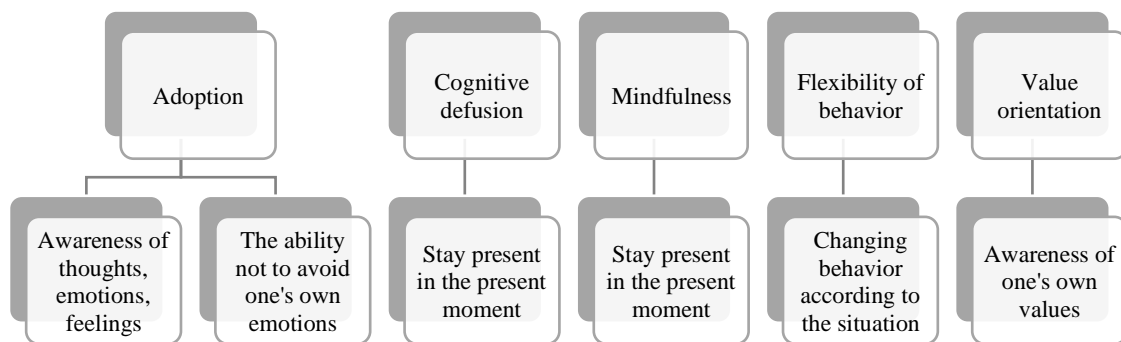


Figure 3. The main components of flexibility formation

Source: Authors' development.

According to the findings of a latent profile analysis, psychological inflexibility and psychological inflexibility can actually change over time apart and are significantly different from one another (Lysetskiy et al, 2024). Cross-sectional study results show that elements of psychological rigidity are linked to different types of psychopathology, including eating disorders, mood disorders, anxiety disorders, drug use disorders, and particularly post-traumatic stress disorder (PTS) (Wersebe et al., 2018). Observation of 23 individuals in Ukraine showed that most individuals had problems with emotional regulation, which consisted of sudden emotional outbursts or a prolonged state of anxiety (70%). Only 10% of individuals had stable emotional stability. In 65% of individuals, there was a noticeable desire to avoid certain activities that could remind them of the traumatic experience. At the same time, 40% showed increased irritability in

social situations. In the vast majority of individuals, hyperactivity or inattention during task performance was noticeable. Table 1 shows the main indicators for the observed individuals

Table 1.
Indicators of individuals subject to observation

Emotions and regulation	N	%
Difficulties with emotional regulation, emotional outbursts	16	70%
Effectively apply self-soothing skills with the support of staff	5	20%
Stiff emotions	2	10%
Behavioral responses		
Avoidance of certain activities	15	65%
Manifestations of aggression	9	40%
Hyperactivity and inattention	11	50%

Source: compiled by the authors

Experiential avoidance and cognitive fusion have been repeatedly shown to be significantly positively linked with PTS symptoms in a number of cross-sectional studies. Studies have shown varying degrees of connection between PTS symptoms and experience avoidance as well as between PTS symptoms and cognitive fusion.

Figure 4 illustrates the relationships between psychological inflexibility, its components, and various psychopathologies, with a particular focus on PTSD. In this figure, the central block expresses the psychological inflexibility from which two key components derive: experiential avoidance and cognitive fixation. These components have notable connections with PTSD and other psychopathologies (mood disorders, anxiety disorders, eating disorders, etc.).

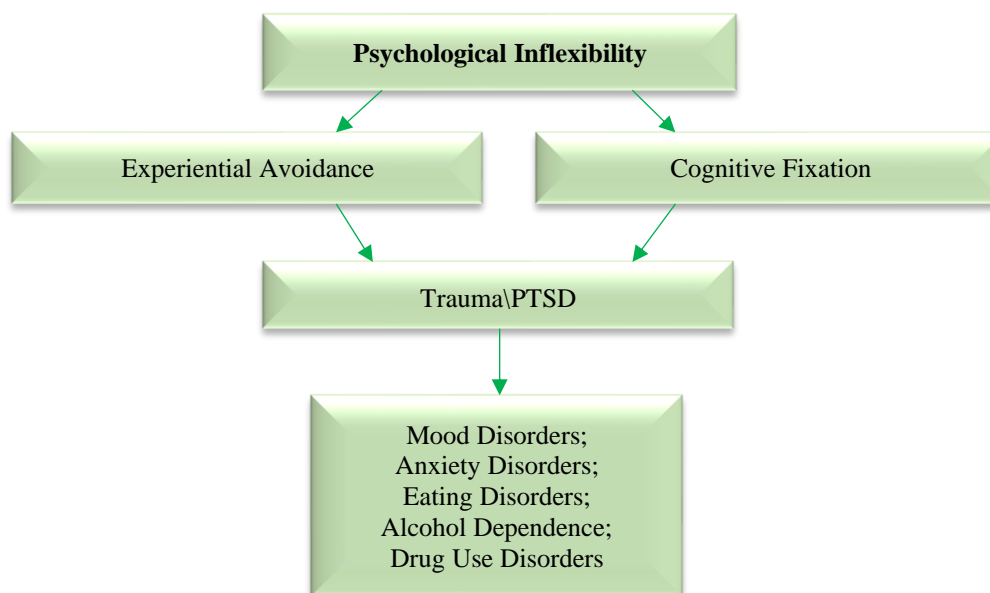


Figure 4. The relationship between psychological inflexibility and its components
Source: Authors' development.

The other four areas of psychological inflexibility - loss of engagement with the present moment, self as content, inaction, and lack of contact with values - and PTS symptoms have been the subject of relatively few published studies (Benfer et al., 2021; Daneshvar et al., 2022). Nevertheless, in certain research, it was discovered that PTS symptoms in adult veterans or active military personnel were substantially positively correlated with each category of psychological inflexibility. The magnitude of these effects varied from medium to considerable ($r_s = 0.44 - .66$). Furthermore, a stepwise regression analysis showed that, when all six psychological inflexibility categories were included in the analysis, cognitive fusion, experiential avoidance, inaction, and lack of engagement with the present moment were all substantially linked with PTS symptoms (Daneshvar et al., 2022).

During the development of psychological flexibility skills, 60% of individuals had difficulty adapting to structured learning tasks. Only 30% were able to complete the tasks correctly, but with the support of specialists. Only 10% of the observed individuals demonstrated high adaptability. Also, only 25% (6 individuals) were able to effectively express the basic signs of psychological flexibility in a changing environment. At the same time, 75% (17 individuals) expressed the need for additional measures to develop this quality. Progress was also noticeable during the observation. For example, after observation in structured conditions with the support of teachers, 40% expressed improvements in emotional regulation and social interaction skills. At the same time, 25% expressed a greater desire to participate in group activities. 15% of individuals demonstrated progress in performing individual adaptive tasks. So, there is a connection between the level of psychological flexibility and adaptation after traumatic situations. Psychological flexibility plays a prominent role in the recovery process after trauma (Bennett & Oliver, 2019; Hu et al., 2024). In particular, individuals with a high level of psychological flexibility are better able to cope with traumatic events, because they are able to respond flexibly to stressful conditions and avoid excessive emotional reactions. In addition, developed psychological flexibility makes it possible to manage emotions, find new ways to solve problems and not be in negative experiences. In turn, this helps to reduce the impact of stress on the individual's mental health and thus contributes to its recovery.

Table 1.
Impact of psychological flexibility on health

Aspect	Explanation	Authors	% from observation
Adaptation after serious illnesses	In patients with complex diseases, psychological flexibility is closely related to a better adaptation process. Patients who had developed psychological flexibility suffered less from anxiety and psychological problems.	Cherry et al. (2021), Filonenko et al. (2022), Napryeyenko et al. (2020), Moyer and Sandoz (2015), Watts and Luoma (2020), Cheng et al. (2021), Daneshvar et al. (2022), Doorley et al. (2020), Landi et al. (2022).	34%
Coping with traumatic events	The works determined that people with developed psychological flexibility who experienced psychological trauma, in particular the death of a loved one, were less associated with symptoms of psychological diseases (depression, anxiety, etc.).	Bennett and Oliver (2019), Fonseca et al. (2020), Gorday et al. (2023).	45%
Rehabilitation after injuries	In patients undergoing rehabilitation after physical injuries, developed psychological flexibility contributed to better coping with pain and the rehabilitation process in general.	Bardeen and Fergus (2016), Choi and Lee (2023), Filonenko et al. (2022), Kashdan et al. (2020), Lysetskyi et al. (2024), Pryzvsanska et al. (2024), Rysbayeva and Tormanova (2023).	21%

Source: Compiled by the authors.

So, these examples record the impact of psychological flexibility on the process of adaptation and recovery after difficult and traumatic events in a person's life.

Discussion: The proposed article is devoted to the characteristics of the role of psychological flexibility during recovery after traumatic events. In particular, the theoretical foundations of psychological flexibility and its components were analyzed, the connection between the level of psychological flexibility and adaptation after traumatic situations was determined, and the peculiarities of the influence of psychological flexibility on the recovery process after traumatic events were characterized.

First of all, it was established that psychological flexibility makes it possible to find constructive ways of adapting to modern situations, which makes it an important element of stability in stressful situations and conditions of uncertainty. This confirms the scientists' conclusions that its absence poses a threat to the psychological health of individuals even in the absence of aggravating circumstances, including PTSD

(Daneshvar et al., 2022; Fonseca et al., 2020; Pyszkowska, 2020). It also proves the validity of the results of those researchers who consider psychological flexibility one of the mandatory components for recovery after suffering complex psychological traumas (Bardeen & Fergus, 2016; Filonenko et al. (2022); Gloster et al., 2021; Kroska et al., 2020). На основі спостереження визначено, що більшість осіб мали проблеми із емоційною регуляцією, що полягало у раптових емоційних спалахах або тривалому стані тривоги, водночас, у деяких осіб помітним було бажання уникнути певних видів діяльності, які могли нагадати їм про травматичний досвід. Це корелюється із результатами інших вчених, у яких вказано на основні проблеми із емоційною адаптацією осіб із ПТСТР (Fonseca et al., 2020; Pyszkowska, 2020). Under such circumstances, understanding the importance of its components is quite relevant in the recovery process. It was established that such components are acceptance (the ability to consciously perceive one's thoughts and emotions), cognitive defusion (the ability to distance oneself from thoughts and perceive them as temporary phenomena), value orientation (the ability to act in accordance with one's own principles and values), flexibility in behavior (the ability take responsibility for one's actions). Researchers also point to a communicative skill, which also involves the ability to communicate and at the same time distance yourself from the opinions of other people (Pyszkowska, 2020; Stepanova et al., 2023). However, such conclusions are ambiguous. Some scientists point out that such conclusions have not yet received a proper empirical basis (Bruno et al., 2024; Marshall & Brockman, 2016; McCracken & Morley, 2014). It is worth agreeing with such cautious assessments, because after studying the scientific literature, no proper evidence of the existence of such an element was found.

During the observation, it was found that during the development of psychological flexibility skills, 60% of people had difficulties adapting to structured learning tasks, while 30% were able to complete the tasks correctly, but with the support of specialists. 25% were able to effectively express the main signs of psychological flexibility in a changing environment. The study also identified progress that was noticeable during the observation. In conditions of support, 40% expressed improvements in emotional regulation and social interaction skills. At the same time, 25% expressed a greater desire to participate in group activities. 15% of people demonstrated progress in completing individual adaptation tasks. Therefore, there is a connection between the level of psychological flexibility and adaptation after traumatic situations. Similar conclusions were obtained in other studies, where it was also emphasized that in the field of combating PTSD, the presence of high psychological flexibility is an indisputable advantage (Bruno et al., 2024; Daneshvar et al., 2022; Plys et al., 2023). In addition, it is worth agreeing with the opinion of scientists that the development of psychological flexibility makes it possible to manage one's own experiences and emotions, not to fall into dependence on them, and to maintain mental health (Wersebe et al., 2018). In view of this, further searches for opportunities for the integration of special trainings on the development of psychological flexibility for persons suffering from PTSD look promising.

The results also demonstrate the specifics of the impact of psychological flexibility on the recovery process after traumatic events. It is primarily about adaptation to normal life after serious illnesses, overcoming the consequences of traumatic events, rehabilitation after injuries. The obtained results confirm the scientists' conclusions that individuals with a high degree of psychological flexibility are much better able to overcome the consequences of traumatic events (Lysetskyi et al., 2024; McCracken et al., 2021; Reiff & Feldman, 2014; Whiting et al., 2017). Thanks to this, effective recovery is possible, which, moreover, takes place in shorter chronological intervals.

Therefore, the results of this study, which identified the importance of psychological flexibility in promoting disorder and adaptation in individuals with PTSD, have significant implications for clinical practice. Also, they constitute an important theoretical basis for the development of interventions with trauma outcomes. Thus, it is proven that psychological flexibility can be a basis in the system of planning therapeutic and pedagogical interventions. An important value is that approaches based on importance can be adapted for the younger population as well. In the future, this will give you the opportunity to improve your ability to adapt to change and effectively cope with stress. The proposed study is based on the use of a methodology that has certain limitations. First of all, it is about using a limited number of scientific works, the selection of which is determined by applied criteria. Instead, the emphasis was placed on English-language articles, while other studies written in other languages may have had relevant ideas that were not properly taken into account. Overall, this limitation does not affect the relevance of the study, as the studies analyzed focus largely on the study of coping with the consequences of PTSD, with relevant references to important non-English-language works. Accordingly, this aspect has been indirectly taken into account, although in general the problem of studying psychological flexibility based on a more thorough study of individual national experiences will still need further updating.

Conclusions

Hence, the paper shows that most people experience at least one traumatic event in their lifetime, with up to 70% of people in some countries reporting having experienced one or more such incidents, and in the US this figure can be as high as 90%. Although a significant number of trauma survivors may develop PTSD, most people recover naturally from trauma. Therefore, it is important to investigate the causes and factors that worsen PTSD symptoms. One of them is psychological inflexibility, which consists in the dominance of psychological reactions over values and circumstances, which can contribute to and exacerbate trauma. Instead, psychological flexibility is essential for successful adaptation to stressful situations and conditions of uncertainty. It includes acceptance, cognitive diffusion, contact with the present moment (mindfulness), value orientation and behavioral flexibility. It has been established that psychological inflexibility and psychological flexibility can change separately from each other over time and are significantly different from each other. Cross-sectional studies have shown that elements of psychological inflexibility are associated with different types of psychopathology, for example, eating disorders, mood disorders and anxiety disorders.

Moreover, the findings contribute to a deeper understanding of the role of psychological flexibility and inflexibility as distinct constructs in trauma recovery. The differentiation between these constructs underscores the need for refined theoretical models that explore their independent trajectories and interplay in psychopathology development and resolution.

This article also makes a significant contribution to trauma psychology by:

1. The authors highlight the role of psychological flexibility in overcoming the consequences of PTSD and in the recovery system after trauma. The authors offer a unique perspective on its independent and related consequences regarding the development of the problem and its overcoming through systemic support.
2. The paper also highlights the importance of the results of using targeted therapy methods as a tool for improving psychological resilience. This has made it possible to propose individual solutions that will promote resilient adaptive responses.
3. The paper also provides a concise summary of previous research that combines theoretical knowledge with real-world applications and outlines areas for further research to improve trauma treatment models.

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A scoping review of the effectiveness of cognitive-behavioral therapy in reducing ptsd symptoms in military personnel

Revisión general de la eficacia de la terapia cognitivo-conductual para reducir los síntomas del TEPT en el personal militar

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
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
Abstract


Posttraumatic stress disorder (PTSD) is a mental health condition that develops after experiencing or witnessing traumatic events. Cognitive behavioural therapy (CBT) is widely recognized as an effective evidence-based treatment for PTSD, particularly in military personnel. This study evaluates the efficacy of CBT for treating PTSD in this population. A systematic search of databases, including Web of Science, Google Scholar, Scopus, the Cochrane Library, and PubMed, identified 1807 studies using keywords such as "military," "veterans," "cognitive therapy," and "posttraumatic stress disorder." After screening titles and abstracts, 312 full-text articles were reviewed, with 51 publications meeting the inclusion criteria, which focused on RCTs, observational studies, meta-analyses, cohort studies, and case-control studies published since 2010. Non-


Resumen

El trastorno de estrés postraumático (TEPT) es un trastorno de salud mental que se desarrolla tras experimentar o presenciar acontecimientos traumáticos. La terapia cognitivo-conductual (TCC) está ampliamente reconocida como un tratamiento eficaz basado en la evidencia para el TEPT, particularmente en el personal militar. Este estudio evalúa la eficacia de la TCC para tratar el TEPT en esta población. Una búsqueda sistemática en bases de datos, incluyendo Web of Science, Google Scholar, Scopus, la Biblioteca Cochrane y PubMed, identificó 1807 estudios utilizando palabras clave como «militar», «veteranos», «terapia cognitiva» y «trastorno de estrés postraumático». Después de examinar los títulos y resúmenes, se revisaron 312 artículos de texto completo, con 51 publicaciones que cumplían los criterios de inclusión, que se centraron en

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peer-reviewed or unrelated articles were excluded. Findings reveal that CBT is effective in managing both acute and chronic PTSD, offering long-term and short-term benefits after various traumatic experiences. CBT is shown to be at least as effective as other psychological therapies, solidifying its role as a key treatment approach for PTSD in military personnel.

Keywords: cognitive therapy, posttraumatic stress disorder, mental disorder.

ECA, estudios observacionales, metanálisis, estudios de cohortes y estudios de casos y controles publicados desde 2010. Se excluyeron los artículos no revisados por pares o no relacionados. Los hallazgos revelan que la TCC es eficaz en el manejo del TEPT agudo y crónico, ofreciendo beneficios a largo y corto plazo después de varias experiencias traumáticas. La TCC ha demostrado ser al menos tan eficaz como otras terapias psicológicas, consolidando su papel como un enfoque de tratamiento clave para el TEPT en el personal militar.

Palabras clave: terapia cognitiva, trastorno de estrés postraumático, trastorno mental.

Introduction

Background

PTSD is a chronic impairing condition that develops following exposure to accidents that cause trauma. This illness can disrupt family and individual functioning, creating substantial financial, medical, and social problems. Veterans and active duty personnel are more likely to experience trauma and develop mental health issues. PTSD affects an estimated 21–41% of veterans who have returned from recent conflicts, while 7–15% experience syndromal depression (Song et al., 2020). Nightmares and Insomnia are common in people with PTSD and may be signs of the disorder itself or partially separate conditions (Krasnodemska et al., 2023). The present treatments for PTSD do not work well for sleep disruptions, and the results of PTSD treatment are worse for patients who also experience sleeplessness and nightmares. Furthermore, there is a risk of depression, anxiety, substance misuse, and suicide associated with sleeplessness and nightmares (Peterson et al., 2020).

Three subgroups exist within the various pharmacological and psychological types that currently address PTSD prevention: primary type, which takes place prior to the situations that cause trauma and involves preventing the event itself; secondary type, which occurs in the interim between the traumatic incident and the onset of PTSD; and tertiary type, which occurs after the PTSD symptoms start to show (Baig et al., 2021). Pharmacological therapies have shown encouraging outcomes in reducing the intensity of PTSD symptoms, while their total impact is small. A recent thorough review and meta-analysis of 21 studies carried out in 2021 found that selective serotonin reuptake inhibitors (SSRIs) such as sertraline, fluoxetine, and paroxetine, as well as the serotonin-norepinephrine reuptake inhibitor (SNRI) venlafaxine and the atypical antipsychotic quetiapine, were effective as separate therapies for PTSD (Fredman et al., 2020).

PTSD in adolescents and children is commonly treated in psychotherapy with cognitive behavioral therapy (Malarkey et al., 2024). By doing away with avoidant and safety-seeking behaviors that prevent people from self-correcting incorrect ideas, cognitive behavioral therapy helps people control their stress levels, which in turn lowers the risk of stress-related diseases and enhances mental health. A sort of psychotherapy called cognitive behavior therapy helps patients identify and change unhelpful or disturbing thought habits that have a negative influence on their behavior and emotions (Paiva et al., 2024).

Problem statement

Many veterans of the military forces suffer from post-traumatic stress disorder (PTSD). Changes in thoughts and emotions, discomfort in the body or mind, trouble sleeping, and unsettling thoughts, dreams, or feelings linked to the incidents are some of the symptoms. The quality of life for these individuals and their families is impacted by each of these symptoms.

Research focus

What researchers discover regarding the role of cognitive-behavioral therapy in the management of PTSD in military personnel, and what they might know or learn, has an impact on society at large, clinical practice,

and research. Our review focused on these implications to determine the best option for the management of PTSD in military personnel.

Research questions

1. Does cognitive behavior therapy work for PTSD??
2. What are the cognitive behavior therapy strategies for dealing with stress?
3. How does cognitive behavior therapy help Veterans?
4. What is the best therapy for PTSD in the military?

Research objectives

In this review, we aim to investigate the role of cognitive-behavioral therapy in the management of post-traumatic stress disorder in military personnel.

Literature review

PTSD is a mental health illness that occurs after witnessing or going through a stressful event. Combat exposure, natural catastrophes, sexual or physical assault, accidents, and other potentially life-threatening scenarios are all common PTSD triggers. PTSD symptoms might involve nightmares, flashbacks, hyperarousal, intrusive thoughts, avoidance of traumatic memories, and a lack of emotion (Tanev et al., 2020). It can have a substantial impact on a person's everyday life, relationships, and general health. PTSD is a curable disorder, and successful interventions such as trauma-focused psychotherapies (TFP) and pharmaceutical medications can assist patients in coping with and recovering from the impacts of trauma (Demchenko, Zahariichuk, Dergach, Porodko, & Pryzvanska, 2022). Early recognition and adequate assistance can make a significant difference in the course of recovery (Sloan et al., 2020).

Prevalence and importance

PTSD is often associated with poor personal outcomes, including physical health problems and co-occurring illnesses such as substance dependence. Data from the DSM-5 indicate that more than 80% of individuals with PTSD also experience one or more comorbid conditions. For instance, 48% of those with PTSD also have a concurrent mild traumatic brain injury. Additionally, there are significant links between PTSD and cognitive decline (Ma'ruf et al., 2024). Veterans and active military personnel exhibit a documented incidence rate of PTSD ranging from 5.4% to 16.8%, which is more than double that of the general population (Malarkey et al., 2024). Variations in these estimates depend on the patient population under investigation, the nature of traumatic incidents, and the methodology used for evaluation (Huda, 2023). The recent surge in international terrorism and armed conflict highlights the severe impact of PTSD. While this condition can affect individuals of any age, the majority of recent research focuses on returning veterans, making the military community a significant contributor to the body of knowledge on PTSD. Despite these advances, there remain notable gaps in research. Limited attention has been given to the effects of PTSD on children, leaving an important area of study underexplored (Fry et al., 2024).

Course of PTSD

For a long time, it was thought that PTSD developed linearly following trauma exposure, with the majority of patients seeing a remission of symptoms during the months that followed. Numerous studies showed that PTSD rates decreased six months after trauma compared to rates in the weeks following the incident provided evidence in favor of this theory (Gorinov & Mereniuk, 2022). Delay-onset PTSD, which the Diagnostic and Statistical Manual of Mental Disorders (DSM) has historically described as the onset of PTSD that appears at least half a year after the distressing event, was the exception to this pattern (Malaktaris et al., 2022).

Recent data has cast doubt on the idea that PTSD progresses in a straight line, suggesting instead that a person's status is not static and that the disorder's intensity varies over time, sometimes getting worse and sometimes getting better. The trajectories of PTSD have been mapped using latent growth mixture modeling in recent studies. These maps reliably show that there are four classes: delayed reaction, which initially exhibits low levels of symptoms but eventually increases them, recovery, which shows a consistent reduction in PTSD symptoms, and chronic distress, which shows a constant increase in symptoms, a

resilient class which consistently has few symptoms of PTSD (Bryan et al., 2022). Network analysis, which takes into account the degree of links between symptoms, also provides evidence for the progressive nature of the PTSD illness (Miloradova, 2023). During the initial acute phase following trauma, symptoms of PTSD seem to be less closely associated with established factors, such as active avoidance and re-experiencing, but over time they become more tightly tied (LoSavio et al., 2023).

Symptoms of PTSD

Constantly unpleasant memories, avoiding triggers associated with the trauma, unfavorable changes in mood and thought patterns, and hyperarousal are some of the symptoms (table 1). Based on DSM-5 criteria, a person can be diagnosed if their ability to operate normally has been markedly hindered for a month. It is not uncommon for symptoms to manifest years later, even in cases where the consequences are severe (Skopp, Kaplan, Todd, Drell, & Pratt, 2023).

Table 1.
Symptoms of PTSD

Proposed ICD-11 criteria ¹⁷	DSM-5 criteria ¹⁴
Intrusion symptoms	
Obtrusive memories, flashbacks, or nightmares that are usually accompanied by intense bodily sensations and powerful, overpowering emotions like fear or horror	<ul style="list-style-type: none"> - Recurrent, involuntary, and intrusive distressing memories - Noticeable physiological reactions to cues - Repeated distressing dreams (content and/or affect-related) - Intense or prolonged psychological distress to cues - Dissociative reaction (feeling or acting as if the event is recurring)
Avoidance	
<ul style="list-style-type: none"> - Avoiding thinking about or remembering the incident or incidents - Avoiding individuals, places, and activities that bring up the incident or incidents in mind 	<ul style="list-style-type: none"> - Staying away from or trying to push away distressing thoughts or feelings associated with or arising from the trauma - The act of avoiding or attempting to ignore cues from outside sources, such as people, situations, activities, conversations, objects, and locations
Negative alterations in cognition and mood	
Not applicable	<ul style="list-style-type: none"> - The inability to recall a crucial detail (usually because of dissociative amnesia) - A chronic lack of ability to experience positive emotions (love, happiness, fulfillment). - persistently having unreasonable expectations of oneself, other people, or the world, or thinking negative thoughts about any of these things (e.g., "I am bad," "No one can be trusted," or "The world is completely dangerous"). - Persistent, distorted cognitions regarding the etiology or complications that lead to the blame of others or self-blame - Notably lowered interest or participation in significant activities - Feelings of separation or estrangement from others - A persistently bad emotional state (such as terror, fear, rage, guilt, or shame)
Alterations in arousal and reactivity	
Persistent feelings of increased danger right now, as demonstrated, for instance, by increased alertness or a heightened startle response to sounds that come as a surprise	<ul style="list-style-type: none"> - Anger and irrational outbursts (with little to no provocation) - Sleep disturbance - Reckless or self-destructive behavior - Problems with concentration - Exaggerated startle response - Hypervigilance
Additional criteria for complex PTSD	
<ul style="list-style-type: none"> - Severe and widespread issues with affect regulation - Persistent views of oneself as devalued, defeated, or unworthy, coupled with intense and widespread emotions of guilt, humiliation, or failure connected to the stressor - Ongoing issues maintaining connections and feeling connected to others 	Not applicable

Source: authors' development

Symptom Overlap and Comorbidity in PTSD

According to the DSM-5, PTSD shares many physiological symptoms with substance use disorders, major depressive disorder (MDD), and other anxiety disorders, as well as other mental health conditions.

Epidemiological data from the National Comorbidity Survey conducted in 1995 reveal that at least three additional mental illnesses were present in 59% of males and 44% of females with PTSD. A long-term epidemiological survey indicates that approximately 91% of individuals with PTSD also meet the criteria for other psychiatric disorders.

The significant symptom overlap makes it challenging to differentiate PTSD from complex mental disorders in certain cases, particularly when trauma histories are unclear (Pokharel et al., 2024).

A substantial proportion of individuals with PTSD also receive a diagnosis of major depressive disorder (MDD) despite these being distinct conditions (Schnurr et al., 2022). Depression is especially likely to occur with PTSD following traumatic events.

PTSD symptoms that are nonspecific include the NACM and hyperarousal clusters, which overlap significantly with symptoms of MDD. Common symptoms of both PTSD and MDD include difficulties with concentration, sleep disturbances, social withdrawal, avoidance behaviours, reduced cognitive functioning, and a lack of interest or pleasure in positive activities (Zaitsev, 2023).

Mood-related symptoms associated with both PTSD and MDD are typically long-lasting, often persisting for several months. A study on DSM-5 criteria for PTSD and depression found that higher levels of somatic and affective depression correlated with increased NACM symptom severity, which, in turn, was linked to greater PTSD severity (Peterson et al., 2022).

PTSD and Military

It is often recognized that both veterans and active military people frequently endure severe stress and go through a variety of traumatic, potentially fatal experiences. They thus have an especially high chance of experiencing PTSD, which may be considered PTSD connected to the military. In operational infantry battalions, the frequency of PTSD connected to military service following deployment to Afghanistan or Iraq was demonstrated to be 13.2%. According to different databases, 11% of soldiers still experienced symptoms of PTSD forty years later after the war in Vietnam (Sloan et al., 2022). Furthermore, an analysis of the frequency of PTSD in veterans found that up to 23% of them had the disorder. It was shown that PTSD and alcohol abuse were the most prevalent mental illnesses that military personnel assigned to conflict zones reported having. It was shown that alcohol abuse and PTSD were the most prevalent mental illnesses mentioned by military members sent to war zones (Perez Garcia et al., 2021).

However, it has been discovered that alcohol abuse is far more common than previously thought to exist in people and may prolong the PTSD course. It is also mentioned that service personnel who suffer from mental illnesses, particularly PTSD, may feel stigmatized strongly. This is because they may be afraid of what their peers and military leadership would think of them, which prevents them from getting the competent medical care they need. Since PTSD related to military service negatively affects the army's combat effectiveness, appropriate steps should be taken to address this problem (Macdonald et al., 2022). Numerous pharmaceutical and psychosocial therapies are now being used to treat PTSD. Numerous studies have been conducted on the effectiveness of psychotherapies, which are often classified as "trauma-focused" or "non-trauma-focused." (Christ et al., 2022).

The guidelines state that the treatments with the most evidence from clinical trials are prolonged exposure, cognitive behavior therapy, and eye movement desensitization and reprocessing. Evidence-based treatment alternatives for non-trauma-focused psychotherapies include present-centered therapy, interpersonal psychotherapy, and stress inoculation training. Treatment for PTSD also frequently involves the use of pharmacotherapies (Andersen et al., 2021).

Table 2.
Prevalence of PTSD in military personnel and veterans

Country	Sample Size (n)	Method	Time after return	Population	Prevalence (%)
Dutch (Reijnen, Rademaker, Vermetten, & Geuze, 2015)	994	DSM-IV	6 months	soldiers coming back from their assignment in Afghanistan	8.9
USA (Sandweiss, 2011)	22630	DSM-IV	5 months	soldiers coming back from their assignment in Iraq and Afghanistan	8.1
USA (Sundin et al., 2014)	1560	DSM-IV	4 months	soldiers coming back from their assignment in Iraq	16.8
USA (MacGregor, Tang, Dougherty, & Galarneau, 2013)	3403	ICD-9-CM	1-6 months	soldiers coming back from their assignment in Iraq	16.3
USA (Macera, Aralis, Highfill-McRoy, & Rauh, 2014)	31534	DSM-IV	6 months	soldiers coming back from their assignment in Afghanistan, Iraq, or Kuwait	5.4
UK (Sundin et al., 2014)	313	DSM-IV	12 months	soldiers coming back from their assignment in Iraq	6.7

Source: authors' development

Cognitive Therapy in PTSD Treatment

Overview of Cognitive Behavior Therapy Cognitive behavior therapy (CBT) is structured, didactic, and goal-oriented. This practical, interactive approach involves the patient and therapist working together to modify thought and behavior patterns to enhance the patient's quality of life and overall mood. Therapeutic procedures are tailored to the patient's diagnosis and challenges, with most cognitive-behavioral psychotherapists customizing care to meet each client's specific needs (LoSavio et al., 2021).

Evidence-Based Therapies for PTSD There are numerous evidence-based therapies for PTSD, with CBT being the most researched. Originally designed for rape survivors, CBT has been used for various trauma types and demographics, including active-duty military personnel and veterans. Numerous RCTs have confirmed CBT's effectiveness in veteran populations. Recent RCTs have shown CBT to be effective in treating PTSD in military personnel (Alavi et al., 2021).

Effectiveness in Military Populations Although CBT has generally been beneficial for military samples, some data indicate less stable outcomes. The effect sizes in two RCTs with active-duty participants were medium-to-large but smaller than those typically observed in other samples, with less improvement in depression symptoms. A meta-analysis indicated that PTSD treatments were less effective for combat-related PTSD compared to other trauma types (Resick et al., 2021).

Methodology

General Background

The trauma exposures, comorbidity and mental disease rates, and treatment response of military and veteran groups are distinct. The extent to which cognitive behavioral therapy may be suitable for veterans and military people is yet unknown, despite reviews indicating that cognitive behavior therapy can be helpful in treating mental health issues. Although most reviews concur that cognitive behavioural therapy has potential benefits for treating mental health issues, authors have identified a number of constraints that could impact assessments of cognitive behaviour therapy 's efficacy and applicability.

Inclusion Criteria:

- Research methodology includes RCTs, observational studies, meta-analyses, cohort studies, and case-control studies.
- Selected recent articles from 2010 to 2024 with a cut-off date, to refresh the knowledge.

- Studies that highlighted the role of cognitive therapy in the management of military personnel with PTSD.

Exclusion criterio

- Non-peer review articles such as study proposals, opinions, and letters to the editor.
- Articles not linked to our topic.

Information Sources

Data Collection

Justification for Choice of Databases

A comprehensive literature search was performed using multiple online databases, including Web of Science, Google Scholar, Scopus, Cochrane Library, and PubMed. These databases were selected due to their relevance and reliability in providing high-quality academic sources. Web of Science offered extensive coverage of scientific research across various disciplines, enabling access to various peer-reviewed articles. Google Scholar facilitated access to diverse academic literature, including theses, books, and conference papers, ensuring that relevant studies were not overlooked. As one of the largest abstract and citation databases, Scopus provided thorough coverage of scientific, technical, and medical research, which was critical for this analysis. The Cochrane Library, recognized for its systematic reviews and meta-analyses of clinical trials, contributed high-quality, evidence-based studies. PubMed offered an extensive repository of biomedical and life sciences literature, which was indispensable for identifying studies focusing on PTSD and cognitive therapy.

The search was conducted using specific keywords, including “military,” “veterans,” “cognitive therapy,” “mental disorder,” and “posttraumatic stress disorder.” This approach ensured that a comprehensive range of academic articles relevant to the research topic was included in the analysis.

Data collection

Three steps were engaged in the review of the involved studies. The first step was importing the search strategy's findings from electronic databases into a sheet of Microsoft Excel using EndNote software. The articles' titles and abstracts that were entered into the sheet of Excel were filtered in the second stage. The evaluation of the relevant citations from Stage 2's complete text came next. We also double-checked the research references to make sure no ones were overlooked.

Statistical analysis

We carried out a qualitative analysis of the earlier research findings. Since our study is a systematic review, we were unable to do a quantitative analysis. In order to draw conclusions, it is necessary to identify and compare more than two studies that provide data on the outcomes that will be examined in the quantitative analysis. In our research, we tried a quantitative analysis, but we were unable to locate particular findings that were pertinent to our topic or publications that offered comparable data. We carried out a qualitative examination of articles pertinent to our topic, presented their findings, and compared them in order to obtain solid proof as well as up-to-date results and conclusions.

Results

The search approach yielded 1807 articles. A review of these articles was conducted to identify those relevant to the research topic. Following the screening of titles and abstracts, 312 articles underwent full-text review. For the purposes of data compilation and analysis, as well as for writing on the subject, 51 publications were ultimately included (Figure 1,2).

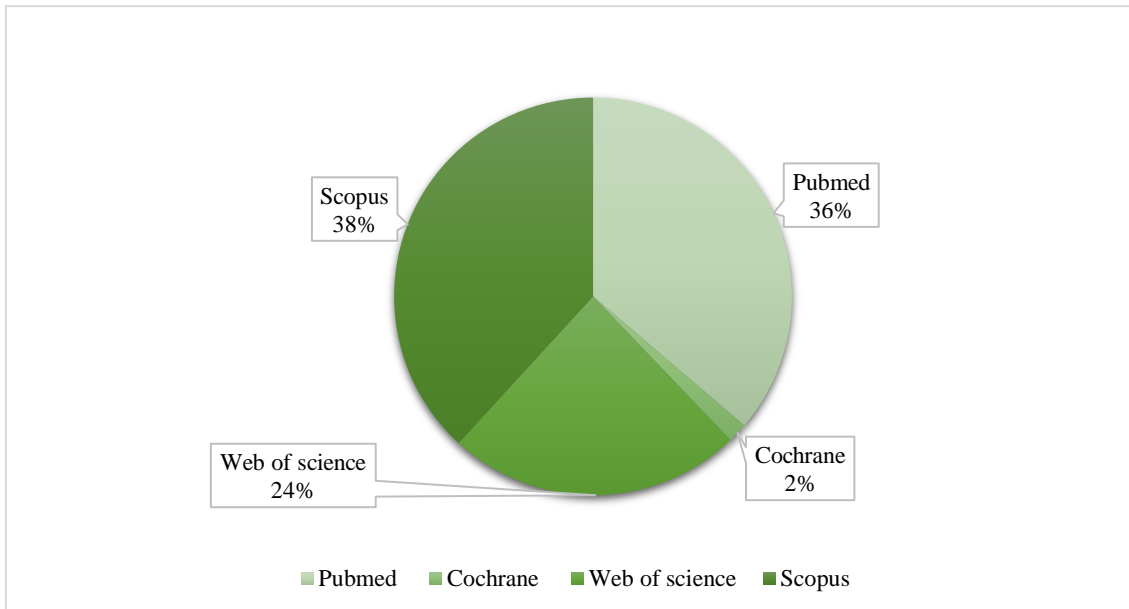


Figure 1. Distribution of Selected Articles Across Major Databases for Systematic Review

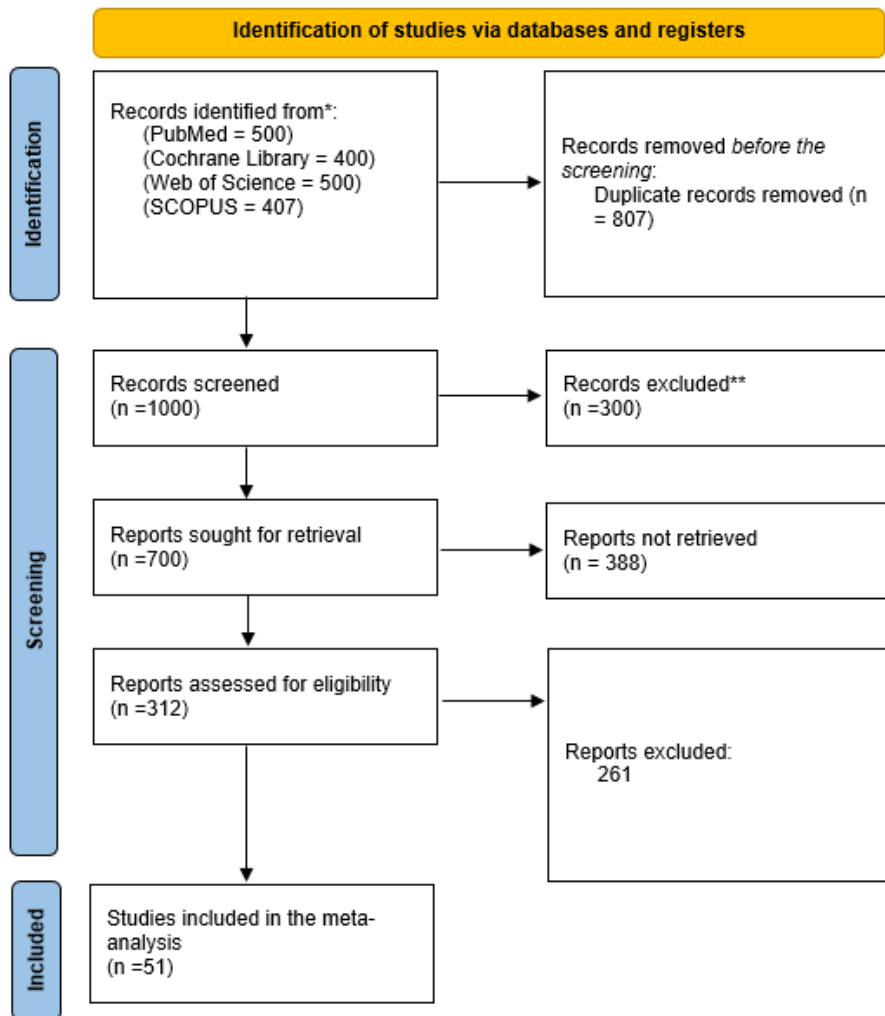


Figure 2. PRISMA flow chart of our literature search.
Source: authors' development

Heller et al. involved a total of 123 patients. All participants got the group-delivered cognitive behavior therapy intervention for the first 12 weeks of treatment (Phase 1), and after that, they were randomly assigned to attend 12 weekly 60-minute individual cognitive behavior therapy sessions (Phase 2). The end of cognitive behavior therapy was found to have a minor positive impact on PTSD and depressive symptoms, which persisted a year later after receiving Phase 2 individual treatment. Participants in the trauma-focused Phase 2 therapy demonstrated similar levels of symptom reduction and maintenance of treatment improvements as compared to those in the non-trauma-focused Phase 2 treatment. For veterans with a history of trauma, depression, and SUD, cognitive behavior therapy seems to be beneficial overall (Haller et al., 2016).

The research now shows compelling evidence that cognitive behavior therapy is a safe and effective treatment for both acute and chronic PTSD following a range of traumatic events in children, adults, and adolescents. Up to 50% of PTSD patients do not respond to cognitive behavior therapy, which could be caused by comorbidity and the study sample's demographics. In a variety of cultural situations, cognitive behavior therapy has been validated and successfully used by community therapists who have undergone brief training in both group and individual settings. PTSD has been successfully treated with web-based cognitive behavioral therapy. There is little data to offer firm recommendations, but some studies have shown that cognitive behavior therapy can serve as a preventive measure. The alteration in maladaptive cognitive functioning linked to PTSD has mostly acted as a mediator for the effects of cognitive behavior therapy. Numerous studies also document alterations in electroencephalography, functional neuroimaging, and physiology that are correlated with cognitive behavior therapy response (Kar, 2011).

Four equal interventional cohorts were randomly assigned to the participants in a prior study: (cohort a) problem-solving therapy; (cohort b) exposure therapy; (cohort c) combined therapy (exposure therapy with problem-solving); and (cohort d) a control cohort. Using the GSI and SF36 scores, they discovered that the mean SF36 scores for the participants at baseline were 36.4 ± 3.2 for cohort (a), 41.18 ± 2.4 for cohort (b), 35.53 ± 3.3 for cohort (c), and 45.9 ± 4.6 for cohort (d). The mean SF36 scores considerably improved after the study intervention. After a follow-up period, the mean SF36 scores showed an identical significant improvement. At baseline, the mean GSI of the patients in cohorts (a), (b), (c), and (d) was 1.78 ± 0.3 , 1.62 ± 0.3 , and 1.85 ± 0.2 , respectively. The mean GSI significantly improved as a result of the research intervention. After a period of observation, the average GSI demonstrated an equally noteworthy improvement (Ahmadizadeh et al., 2013).

In order to assess the relative effectiveness of prolonged exposure (PE) and cognitive behavior therapy in enhancing intimacy functioning in active service military personnel with PTSD or veterans and their intimate partners, a randomized controlled trial was conducted. There was a general consistency for relationship outcomes, where PE did not demonstrate any improvement while CBCT produced notable improvements. Relationship satisfaction between service members and veterans, relationship satisfaction between partners, and relationship problems as rated by service members and veterans all showed this pattern. In terms of PTSD outcomes, both conditions showed substantial improvements in both self-reported and clinician-rated PTSD symptoms. In the cognitive behavior therapy cohort, partner-reported PTSD symptoms dramatically got better but not in the PE cohort (Monson et al., 2024).

Discussion

Studies on the treatment of patients with PTSD have focused on both psychotherapy and medication. Several studies have used cognitive behaviour therapy to treat PTSD, with the finding that it is the first-line treatment for PTSD connected to conflict, particularly in chronic patients. Cognitive behaviour therapy has shown promise as a treatment for PTSD sufferers and has the potential to reduce symptoms more quickly. According to patients with PTSD, they showed the best outcomes from cognitive therapy within the first two months of their treatment. PTSD may negatively impact QOL in both non-veterans and veterans, and a recent meta-analysis on QOL in individuals with anxiety disorders discovered that, among other factors, PTSD was the primary source of QOL impairment in these patients (Peterson et al., 2020).

The results of the cognitive behavior therapy treatments were consistent with previous meta-analyses of cognitive behavior therapy sessions on depression ($d = 0.41$) and PTSD ($d = -0.60$) carried out with non-military samples, and the benefits were strong across a variety of primary and secondary research outcomes (Andersson et al., 2014). This demonstrates how effective cognitive behavior therapy is. Furthermore, the size of our results ($g = 0.54$) was comparable to other research on cognitive behavior therapy for depression

($g = 0.71$) and PTSD in general society ($g = 0.72$) (Sijbrandij et al., 2016). The relative similarity of these results, despite their significantly lower sample size, confirms the validity of cognitive behavior therapy in general and their adaptability to a variety of delivery methods, such as phone, app, and internet-based delivery. Cognitive behavior therapies were found to be differently beneficial based on a number of parameters in addition to the gathered effects (Taylor et al., 2017). Enhancements in symptoms were more pronounced for participants getting additional therapies, such as medication and adjuvant therapies, in addition to cognitive behavior therapy, than for those not receiving additional therapies (Liu et al., 2023).

It's significant in and of itself that there may be a correlation between treatment preference and an interest in how relationships function. Recognising that PTSD sufferers are a diverse group with a range of motivations for seeking treatment as well as preferred treatments is crucial (Meis et al., 2019). Previous research shows that having close relationships is a major factor in encouraging people to seek treatment for PTSD and that the functioning of couples' and families' relationships is linked to the chance of completing trauma-focused PTSD therapy and the results obtained. Furthermore, it is commonly known that patient preferences have a significant role in therapy participation and outcomes for a range of illnesses. To increase the chance that PTSD sufferers and their loved ones will participate in and benefit from treatment, it is crucial to provide a variety of efficient treatments (Windle et al., 2020).

When compared to male and military subgroups, the improved PTSD symptoms in civilian and female populations at follow-up match earlier findings at short- and medium-term follow-up. Notably, the results of treatment for PTSD did not vary with respect to the period of follow-up, suggesting that improvements in symptoms continued for more than a year following treatment. There are currently few trials with extended follow-up periods, and further research is needed to prove therapy benefits beyond a year after treatment (Kline et al., 2018).

The results of this study are encouraging because, in veteran and service member populations, PTSD can be challenging to treat. Veterans showed improvements in their functional disability, comorbid symptoms of anxiety and sadness, and PTSD. In addition, the individuals expressed a high degree of satisfaction with the treatment. The study contributes to the increasing body of research demonstrating that trauma-focused group therapy had smaller impact sizes than trauma-focused individual therapy. The present study adds credence to the increasing body of research, especially pertaining to the veteran and service-member populations, that has not discovered any appreciable variations between conditions for treatments that are trauma-focused and those that are not (Hoge & Chard, 2018; Steenkamp et al., 2015).

After discovering about the treatment at Session 1, active duty military people generally felt that it was credible and had high expectations for it. When evaluated one week after the last session, these favorable expectations continued throughout treatment, which is significant because behavioral treatments rely on patients' willingness to participate in the treatment's activities (Pruiksma et al., 2018). The study found that active duty service members might do well in activities involving nightmare exposure and rewriting. Comparing the rates of treatment initiation to civilian studies, they were somewhat higher. Given how mobile active duty service members are and how frequently they move between duty posts, this is especially noteworthy. Among active-duty military soldiers, cognitive behavior therapy significantly reduced the number of PTSD measures. Participants believed that cognitive behavior therapy was both practical and credible (Pruiksma et al., 2020).

Limitations

Despite the comprehensive search and selection process, several limitations were identified in this scoping review. The heterogeneity of study designs posed significant challenges. The included studies employed diverse methodologies, such as randomized controlled trials, cohort studies, and observational studies, which prevented the feasibility of a meta-analysis. Variations in study designs and outcome measures further limited the ability to conduct quantitative synthesis, reducing the potential to draw robust statistical conclusions across studies.

Language and date restrictions also presented constraints. The review included only studies published in English since 2010, potentially excluding relevant research published in other languages or earlier studies that could have provided valuable context and additional insights.

Another limitation was the narrow focus on specific populations. Most of the studies examined veterans and active-duty military personnel, with minimal attention to other groups, such as children or individuals with non-combat-related PTSD. This limited focus reduces the generalizability of the findings to broader populations affected by PTSD.

Conclusions

This review highlights that cognitive behaviour therapy (CBT) is an effective treatment for both chronic and acute post-traumatic stress disorder (PTSD), with significant short- and long-term benefits. The findings indicate that CBT is at least as effective as other psychological therapies, consistently improving quality of life during treatment. Notably, the most substantial symptomatic improvements are observed within the first three months, with 60% of patients experiencing symptom relief.

These findings have important implications for both theory and practice. They underscore the importance of early intervention in PTSD treatment and suggest that CBT should be considered a first-line therapeutic option for military personnel and other populations affected by trauma. Additionally, the results contribute to the growing body of evidence supporting CBT's role in enhancing the quality of life for PTSD patients. For future research, focusing on identifying predictive characteristics and physiological markers could help develop preventive strategies, reducing the incidence of PTSD and its broader societal impact. This study's contribution lies in consolidating the evidence for CBT's effectiveness in diverse trauma scenarios and offering new avenues for targeted interventions.

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Responsible management in administrative management: Innovative approaches and forecasts

Gestión Responsable en la Gestión Administrativa: Enfoques Innovadores y Previsiones

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
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Abstract


In modern business, a rational combination of administrative and responsible management is an integrated management instrument promoting adaptive development and implementation of innovative technologies. The study aims to generalise approaches to defining the essence and role of responsible management in the administrative management system and clarify the factors that ensure the efficiency of management processes. To achieve the research objective, factor analysis was used to systematise the main factors that influence the effectiveness of the responsible business management system. As a result of the factor analysis on the example of PJSC CB "Privat Bank", it was found that for today's business, it is essential to analyse a


Resumen


En la empresa moderna, la combinación racional de gestión administrativa y gestión responsable es un instrumento integrado de gestión que promueve el desarrollo adaptativo y la aplicación de tecnologías innovadoras. El estudio pretende generalizar los enfoques para definir la esencia y el papel de la gestión responsable en el sistema de gestión administrativa y aclarar los factores que garantizan la eficacia de los procesos de gestión. Para alcanzar el objetivo de la investigación, se utilizó el análisis factorial para sistematizar los principales factores que influyen en la eficacia del sistema de gestión empresarial responsable. Como resultado del análisis factorial sobre el ejemplo de PJSC CB «Privat Bank», se constató que para la empresa actual es esencial analizar un conjunto significativo

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significant set of indicators and study them in dynamics. Two factors were explicitly identified for the selected company: the factor of strategic development and business reliability, which includes the banking business reliability ratio, the equity protection ratio, the maximum risk ratio, the rating of the reliability of banking products, the rating of public confidence in the bank; as well as the factor of investment attractiveness of the business, which includes the capital multiplier coefficient, the standard of significant risks. In general, the combination of administrative and responsible management can open up significant additional opportunities for effective development.

Keywords: responsible management, resource-saving, administrative management, social responsibility, factor analysis, innovative approaches to management.

Introduction

Context

Responsibility in management originates from the paradigm of human existence, in which any results of one's actions are directly related to him as a performer of a specific task and a source of transformations in the world. The ability of an individual to take responsibility for his or her actions is related to conscious prognosticating, i.e. the ability to predict the consequences of specific influences and to act purposefully, considering the analysis of the prospects for the development of events.

Research problem

The main problem with implementing responsible management principles in a company is that only some companies have sufficient financial resources to implement an appropriate responsibility policy. In addition, tracking performance in this area requires a significant investment in setting goals, monitoring indicators and adapting the approach to constantly changing environmental conditions, which not all organisations can afford.

Research Focus is focused on identifying the peculiarities of implementing a responsible management system in the classical practice of administrative management in modern business development.

Definition of the Problem

In administrative management, responsibility is inextricably linked to functional roles in the organisational structure: different positions in the company's hierarchy are associated with powers and imply different areas and degrees of responsibility for the people involved in implementing their tasks.

Objectives and Significance of the Study

The research aim is to summarise approaches to understanding the essence and significance of responsible management in the administrative management system and specify the factors that ensure the effectiveness of management processes in modern administrative management.

To achieve this goal, the following tasks should be solved: determining the specifics of building a responsible management system; to specify the features of combining administrative and responsible management against the background of the introduction of modern innovative management technologies; to identify business development factors that allow assessing the effectiveness of responsible management.

de indicadores y estudiarlos en dinámica. Para la empresa seleccionada se identificaron explícitamente dos factores: el factor de desarrollo estratégico y fiabilidad del negocio, que incluye el coeficiente de fiabilidad del negocio bancario, el coeficiente de protección del capital propio, el coeficiente de riesgo máximo, la calificación de la fiabilidad de los productos bancarios, la calificación de la confianza del público en el banco; así como el factor de atractivo inversor del negocio, que incluye el coeficiente multiplicador del capital, el estándar de riesgos significativos. En general, la combinación de una gestión administrativa y responsable puede abrir importantes oportunidades adicionales para un desarrollo eficaz.

Palabras clave: gestión responsable, ahorro de recursos, gestión administrativa, responsabilidad social, análisis factorial, enfoques innovadores de gestión.

Literature review

Specialists in the field of quality management have identified the fundamental principles underlying the competent delegation of authority and the creation of a responsible management system (AlHamad et al., 2022; Baraja & Chaniago, 2023; Ivanov et al., 2024), as shown in Figure 1.

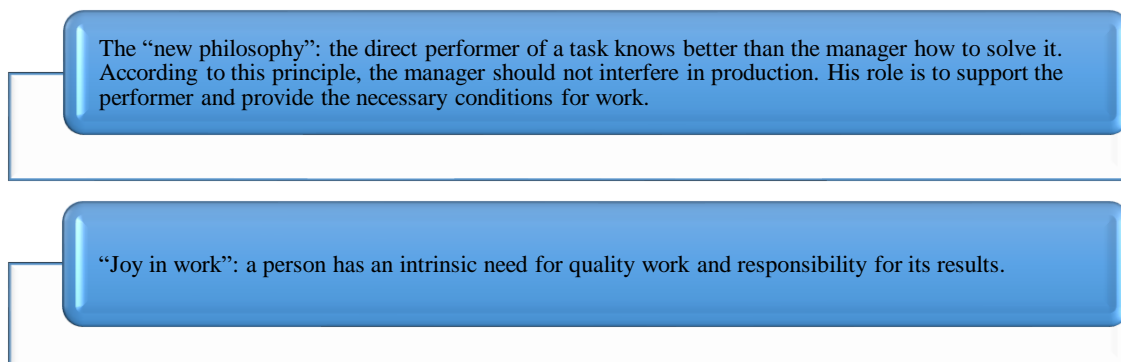


Figure 1. Fundamental principles of competent delegation of authority within responsible management. Source: Compiled by the authors based on Lu et al. (2020), Malik et al. (2021), and Kim & Yoon (2022).

Delegation of responsibility within an organisation is the process of transferring tasks, competences and partially powers from a direct manager to subordinates. On the one hand, this allows the manager to get rid of some of the functions and focus on implementing the company's strategy. On the other hand, delegation is a tool for motivating staff, linking increased responsibility with access to power and personal development. In today's business environment, special attention is also paid to corporate social responsibility, which involves the voluntary participation of companies in improving the life of society, caring for the rights of employees, protecting the environment and developing the territory where their business operates. The founder of the theory of corporate social responsibility is considered to be the American economist G. Bowen (1908-1989), who in his 1953 book "The Social Responsibility of the Businessman" (Bowen, 2013) expressed its essence as "the implementation of policies, decision-making, or adherence to a line of behaviour that is desirable from the standpoint of the goals and values of society" (Barbosa et al., 2020; Gil-Gomez et al., 2020). Pryimak et al. (2024) argue that innovative approaches to risk management are pivotal for improving decision-making processes and enhancing public administration's adaptability. Their study highlights the dual challenge of integrating technological solutions while addressing bureaucratic impediments and resource constraints, especially in the Ukrainian context. Subsequently, the theory of corporate social responsibility has become widespread in the business environment, along with the recognition of globalisation and the prospects for further development of modern administrative management designed to address global environmental and social issues, as well as the emergence of the concept of sustainable development, which would "meet the needs of the living without depriving future generations of the opportunity to meet their needs" (Aleksieienko et al., 2020; Lam et al., 2021; Vdovichen et al., 2023). Corporate responsibility as a concept has evolved under pressure from trade unions, environmental activists and public representatives interested in the sustainable development of individual companies, nature and society (Sayed, 2023; Srijani et al., 2023; Verbivska et al., 2023). However, over time, it has come to be perceived as a competitive advantage in the process of creating an attractive image of an organisation in the eyes of the public. Summarising the views of researchers on the implementation of the responsible management concept, it becomes possible to systematise its advantages and peculiarities of application in the modern business environment (Table 1).

Table 1.
Advantages and features of applying the concept of responsible management by modern business

Peculiarities of applying the concept of responsible management	Characteristics
Ability to increase the value of business intangibles	Commitment to the principles of sustainable development contributes to the formation of intangible assets, such as business reputation, trust and consumer loyalty to the brand.
Formation and development of the social security system	The availability of social guarantees and staff benefits helps to attract and retain valuable employees in a company with limited human resources.
Ensuring conditions for sustainable business development	The organisation is able to create a stable, predictable and favourable environment to support and develop business.
Creating a system of staff motivation through responsible management	A comprehensive system of responsible management will create a responsible attitude towards the staff, which will create a positive impression of the company and create a system of internal business development.
Sharing experiences on the possibilities of using responsible management	The successful experience of the business in developing a responsible management system will encourage other companies to join this approach to management.
Promoting responsible values in shaping the image of business	These trends meet the requirements of the modern market and create prerequisites for the development of corporate social responsibility in the future.

Source: Compiled by the authors based on (Oharenko et al., 2022; Uquillas Granizo et al., 2024)

The peculiarities of the application of responsible and administrative management, presented in Table 1, allow to effectively manage an organisation or enterprise in the modern business environment, based on the principles of organisation of managerial innovations, i.e. on the guidelines developed by theory and practice, which should be followed in the process of innovation management. Knowledge of and adherence to the principles can improve the efficiency of preparation and implementation of managerial innovations and ultimately increase the effectiveness of administrative activities. There are general and technological principles for organising managerial innovations. The general principles include the principle of controllability of the innovation process, the principle of relevance of innovations, and the principle of systematic innovation. The principle of controllability of the innovation process means that there are objective prerequisites for exerting managerial influence on the process of development and implementation of innovations. Implementation of innovations is not a spontaneous process. Achieving an innovative effect requires coordinated actions to reduce deviations from the chosen course. This is necessary because the innovation process is not automatically regulated. The task of purposeful management of the innovation process is to ensure that the actual state of the innovation process is in line with the desired, planned state. The solution to this task involves the implementation of all management functions, from planning to controlling changes. The operational performance of these functions should be assigned to the relevant competent service (body) in the administrative institution. The principle of the relevance of innovations means that managerial innovations should be seen as the result of the organisational development of the administrative activity system. The current state of the management system is reflected in the content of the planned organisational changes. For this reason, the innovation project should be organically linked to the existing needs of the management body to improve the structure and methods of management. Based on the literature analysis, it is worth noting that the policy of responsible management is based on a set of principles that determine the interaction between the company, on the one hand, and employees, shareholders, partners, the community, and the environment, on the other. The current situation confirms the need to intensify efforts to adopt responsible management, as this will help solve global problems and maximise the efficiency of organisations and businesses.

Methodology

Data Selection

During the study, a certain sequence of stages was carried out, which allowed reasonable and systematic results to be obtained. At the first stage, the specifics of building a responsible management system for modern business were determined, considering the possibilities of combining responsible and administrative management. The next step was to identify the peculiarities of combining administrative and responsible management against the background of the introduction of modern innovative management technologies. Next, the article specifies the factors of business development that make it possible to assess the effectiveness of management responsible.

Literary sources for the study were selected based on their relevance, with the main focus on works published over the past five years. This made it possible to consider current trends in the development of administrative management within the framework of modern management theory.

Objectivity in the selection of sources was ensured by involving works published in different countries and focusing on keywords rather than specific authors. The keywords used for the literature search include administrative management, responsible management, and modern theories of business management.

Data Analysis

The basic research method chosen was bibliometric analysis, which allows us to draw reasonable conclusions based on the analysis of scientific sources. The scientific basis for the study was selected by searching the main databases of Web of Science and Scopus. In the process of conducting the research and selecting scientific sources, the time period for searching the database was determined from January 2019 to October 2024 to better match the continuity and completeness of the research conducted over the past 5 years. It was the analysis of scientific publications for this period that allowed us to identify the most relevant trends in the development of modern responsible and administrative management.

The literature was selected using the following keywords: “responsible management”, “modern trends in administrative management”, “new approaches to the formation of the concept of responsible management”, and “responsible management for modern business”. As a result of applying all these search conditions and selecting scientific sources, 65 of the most relevant publications were selected. It is also worth emphasising the wide geography of the scientific search; publications of scientists from different countries were analysed, which allowed us to identify global trends in the development of modern responsible and administrative management.

Instruments and Procedures

The main research tools are based on the analysis of the experience of using innovative administrative management tools by companies and the generalisation of this experience to formulate recommendations on the opportunities and risks of applying the latest procedures in the management of enterprises with a focus on responsible management. Innovative tools may vary significantly depending on the specific business, but the system of innovative management itself involves the introduction of modern digital technologies to facilitate the construction of a management system. First of all, we analysed the opportunities that arise for responsible management in the process of implementing planning, organisational and control functions. The proposed tools for implementing innovative development of the administrative management system may be useful primarily for managers of large companies interested in improving management systems and forming a system of corporate responsibility of business. As a separate method of determining the factors of business development that allow assessing the effectiveness of responsible management, the factor analysis was chosen, which allows systematising data on the state and development of the business into groups of factors that will directly reflect the effectiveness of responsible management. The selection of indicators for further factor analysis was based on the analysis of the direct results of business activities, such as the PJSCB Privat Bank. The statistical characteristics of the resulting factor model were also analysed, which prove that the model provides adequate results and that the conclusions drawn on its basis can be considered representative. Accordingly, based on the factor analysis, it can be argued that the implementation experience can be useful for most business representatives who combine responsible and administrative management or plan to implement responsible management approaches. In addition, it should be emphasised that the initial set of basic indicators for the implementation of factor analysis may be unique for each individual business and take into account its industry specifics, current financial position or key development targets.

Limitations

The study is not significantly limited by the research sources or information on the company's financial condition. However, it should assess the effectiveness of responsible management based on internal qualitative and quantitative development indicators, which are not publicly available and may constitute a commercial secret. Factor analysis is a fairly versatile research tool, but it has certain limitations that should be taken into account when implementing the study. In particular, attention should be paid to the selection of initial data for further factor analysis. The initial data should follow a normal distribution law and be reliable, i.e., taken from official sources, particularly financial statements or other official documents.

Findings

The problem of implementing the latest approaches to responsible and administrative management requires analysis of a significant number of scientific sources. These sources were selected and processed according to the PRISMA scheme, as shown in Figure 2.

In total, 100 sources of scientific literature were selected for the study. Still, for various reasons (inconsistency of the research object, duplication, narrow specialisation of certain studies), 65 sources were retained for direct use in the research process, fully meeting the requirements for sources for the study established above. In the selected scientific sources, the emphasis was placed on those publications that mainly relate to the development of administrative management in modern conditions.

The global community has always been interested in ensuring the most efficient and economical use of various resources. This issue has become particularly relevant today, as the linear economic growth caused in the last century has provoked several social problems, which can be solved by transitioning to a closed-loop economy (or circular economy). A closed-loop economy reflects the economic activity of society and even a set of market relations based on the renewal of resources. Along with the growing trends in the circular economy, managing production in the new environment is becoming increasingly important. The development of a new field, responsible management, based on integrating international standards in organisational management, has been devoted to solving this problem (Abbas et al., 2020; Barykin et al., 2021; Bryson & George, 2020).

The specifics of responsible management can be reflected in the principles of a company's policy that are making the transition to a circular economy and are aimed mainly at the following essential tasks (Chychun et al., 2023; Mariono & Sabar, 2023; Pushkina, 2024):

- Minimising the negative impact of the company's activities on the economic and social environment;
- Creation of economic benefits for the active development of society;
- Improving working conditions for the company's employees;
- Conservation and economical use of all types of resources.

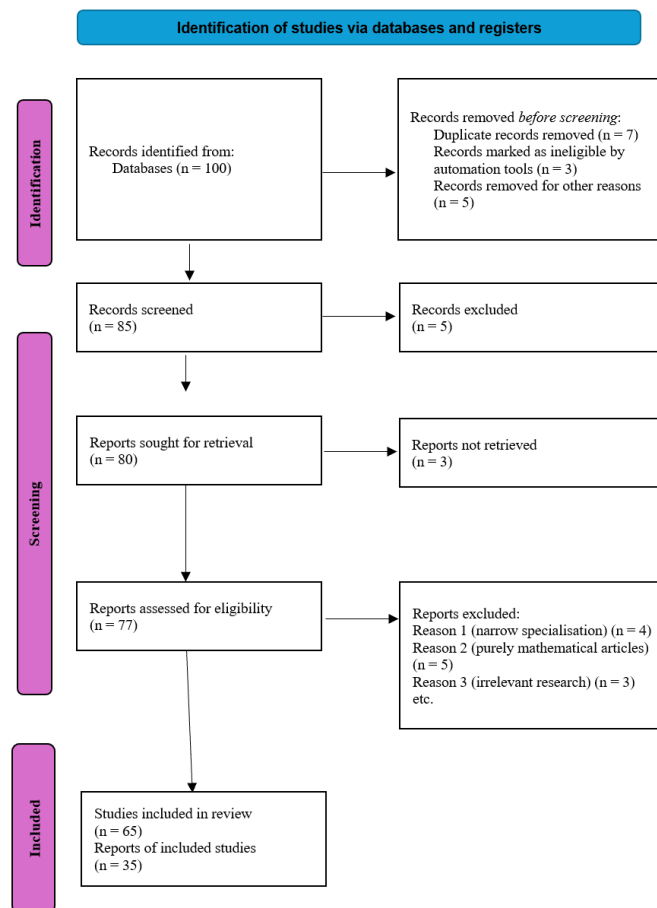


Fig. 2. Scheme of selection of literature sources for the study

As mentioned above, the concept of "responsible management" is relatively new in the literature. It is reflected mainly in the studies of foreign authors whose research considers both the concept's main provisions and the strategy for its development.

In recent years, the concept of integrated management has prevailed, but there are significant differences between it and the concept of responsible management, which combines the specifics of responsible and administrative management (Mura, 2022).

According to the most relevant and innovative approaches to implementing innovative management, responsibility for the social impact of management activities is an essential element of management. Managers should achieve a positive social effect as one of their primary responsibilities by actively identifying social needs and turning them into business opportunities. Thus, responsible management of an organisation or any structure is a way of planning, organising and evaluating the organisation's activities with due regard to the interests of the global environment for the development and prosperity of both present and future generations. With the development of scientific thought in the context of management theory, one can see how the concept of responsible management has been improving and, in recent years, has begun to transform into management using the latest innovative technologies. The contribution of scientists in the current review provides a wide range of ideas for the development of responsible management.

At the beginning of the 21st century, the importance of responsible management has grown exponentially. Management scholars have a broad consensus that responsible management is a sustainable trend. Time will tell whether it is simply a new aspect that will become part of the usual understanding of management science or the next step in the evolution towards the field of top management (Okpebenyo et al., 2024; Riabov & Riabova, 2021; Storozhyk, 2024).

Tretiak et al. (2024) emphasize that an interdisciplinary approach to paradigmatic evaluation is essential for improving decision-making processes in local public management. They propose integrating empirical data with methodological innovation to enhance administrative practices and forecast more effective management outcomes. Modern management, which is mainly focused on business adaptation to an unstable external environment, involves significant changes in the system of administrative management implementation. Accordingly, attention should be paid to the current trends in management processes that are typical for a business that is developing in today's environment:

1. Sustainability should be aimed at creating prerequisites for stable business development in an uncertain environment (Alrowwad et al., 2020; Bannikova, 2022; Cichosz et al., 2020).
2. Responsibility implies business leaders' ability to take responsibility for their actions and their possible impact on the internal and external environment of the business (Asgarov & Mustafayev, 2024; Criado & Guevara-Gómez, 2021).
3. Ethics, which emphasises that management decisions should fit into the system of general ethical norms and principles that underline the formation of the business image and public opinion about it (Dooranov et al., 2022; Serikova et al., 2018).

Since today an essential component in the management of any enterprise or organisation is a sustainable development policy, which is also a tool for the transition to a circular economy, its principles, in line with the concept of responsible management, should help the organisation avoid, reduce and control the harmful impact of its activities on society and the population, comply with applicable legal requirements and be part of a trend that customers value. Sustainable development considers the concept of quality of life from a complex economic, social and environmental perspective, promoting the idea of a balance between economic development, social justice, efficient use and preservation of the environment (Iastremska et al., 2024; Lapuente & Van de Walle, 2020; Leo, 2024). A key element of sustainable development is reconciling development and resource-saving opportunities, which contributes to an integrated decision-making process at the global, regional, national, or local levels.

Thus, adopting and systematically implementing a set of methods for implementing the principle of responsibility in management can help achieve optimal results for the benefit of all stakeholders.

In order to ensure the effective development and implementation of a responsible management system to address social and governance issues, it is necessary to balance service tasks and powers. Thus, the goals

of economic and social policy to address social problems in the concept of responsible management should include the following provisions (Bachynskyi, 2024; Saxena et al., 2024):

- Changing the size of economic growth in order to maintain responsible goals;
- Changes in the quality of economic growth processes;
- Meeting the basic needs of the population;
- Ensuring a level of controlled population growth;
- Preserving and strengthening the resource base;
- Technological restructuring and its control;
- Integrating economic, social, energy and environmental decisions into a single process.

From the above, the responsible management policy is based on a set of principles that define the interaction between the company, on the one hand, and employees, shareholders, partners, the community and the environment, on the other. The current situation confirms the need to intensify efforts to adopt responsible management, as this will help solve global problems and maximise the efficiency of organisations and businesses.

Thus, in today's conditions, administrative management is a field of management that focuses on the organisation and coordination of various aspects of an organisation or enterprise. Its arsenal has many tools and methods that allow it to obtain a positive result.

Table 2 shows some administrative management features in actively implementing responsible management approaches. It is proposed to consider these features through the classical management functions, but with an awareness of how they are implemented in modern conditions.

Table 2.
Specifics of the combination of administrative and responsible management against the background of the introduction of modern innovative management technologies.

Component of the implementation of administrative management	Specifics of implementing administrative management tools with due regard to responsible management	Opportunities to apply innovations to improve management processes
Planning	The administrative manager determines the objectives, strategies and tactics necessary to achieve these objectives and determines whether these actions may have a negative impact on the public interest	Possibilities of using artificial intelligence to predict scenarios of impact on public interests
Organisation.	When organising the management process, attention should be paid to ensuring that managers at every level are aware of the responsibility for their decisions and are part of the responsible management system	Business process modelling tools can be used to effectively organise the process
Personnel management	Administrative management includes the selection, recruitment, training and motivation of staff. And responsible management is very closely related to the issues of interaction with staff	Optimisation of HR processes is possible through the introduction of innovative HR management approaches
Resource management	Administrative management is aimed, among other things, at the efficient use of financial, material and other resources to achieve the organisation's goals, which is consistent with the concept of responsible management	Combining the responsible management system with administrative management is already an innovative management aspect and can have a significant impact on business performance
Information management	Administrative management involves collecting, processing and analysing information to make informed decisions, and when implementing responsible management, the aspect of determining the impact on social aspects is also introduced	To manage information, modern management uses the full range of possible information technologies and information resources
Monitoring and evaluation of the effectiveness of measures	Continuous monitoring of the implementation of plans and achievement of goals, as well as evaluation of results, allows administrators to make timely adjustments and adhere to the goals of responsible management	The main tool for monitoring performance may be the implementation of factor analysis to identify specific factors that ensure the effectiveness of responsible management

Source: Compiled by the authors based on Bannikov et al. (2022), Haefner et al. (2021), and Tregubov et al. (2021).

The peculiarities of the application of responsible and administrative management, presented in Table 2, allow for effective management of an organisation or enterprise in the modern business environment based on the principles of organisation of managerial innovations, i.e. on the guidelines developed by theory and practice, which should be followed in the process of innovation management. Knowledge of and adherence to the principles can improve the efficiency of preparation and implementation of managerial innovations and ultimately increase the effectiveness of administrative activities. There are general and technological principles for organising managerial innovations.

The general principles include (Lam et al., 2021; Sayed, 2023): the principle of controllability of the innovation process, the principle of relevance of innovations, and the principle of systemic innovation.

The principle of controllability of the innovation process means that there are objective prerequisites for managerial influence on the process of development and implementation of innovations. Implementation of innovations is not a spontaneous process. Achieving an innovative effect requires coordinated actions to reduce deviations from the chosen course. This is necessary because the innovation process is not automatically regulated. The task of purposeful management of the innovation process is to ensure that the actual state of the innovation process is in line with the desired, planned state.

The solution to this task involves the implementation of all management functions, from planning to controlling changes. The operational performance of these functions should be assigned to the relevant competent service (body) in the administrative institution.

The principle of the relevance of innovations means that managerial innovations should be seen as the result of organisational development of the administrative system. The current state of the management system is reflected in the content of the planned organisational changes. For this reason, the innovation project should be organically linked to the existing needs of the management body to improve the structure and methods of management.

One of the pioneering companies in the field of responsible management in Ukraine was PJSC CB PrivatBank, which has been adhering to the principles of responsible management for more than ten years.

It is on its example that it is logical to analyse the factors of administrative and responsible management performance using factor analysis. Table 3 shows the initial data for factor analysis - key indicators of management performance.

Table 3.

Initial data for factor analysis - key performance indicators of the management of PJSC CB "PrivatBank"

Variable notation	Indicator name	For the period		
		2021	2022	2023
Var 1	Banking business reliability ratio	0,21	0,16	0,20
Var 2	Shareholders' equity protection ratio	3,78	7,24	3,09
Var 3	Equity multiplier ratio	1,50	1,86	1,95
Var 4	Maximum risk exposure standard	22,2	20,5	24,1
Var 5	High risk standard	10,1	9,3	9,3
Var 6	Rating assessment of the reliability of banking products	1,21	1,16	1,20
Var 7	Rating assessment of public confidence in the bank	0,19	0,23	0,17

Source: Compiled by the authors

The results of the factor analysis are shown in Fig. 3.

Factor Loadings (Unrotated) (Spreadsheet2)			
Extraction: Principal components (Marked loadings are >,700000)			
Variable	Factor 1	Factor 2	
Var1	-0,993165	-0,116721	
Var2	0,973914	-0,226917	
Var3	0,395499	0,918467	
Var4	-0,808734	0,588175	
Var5	-0,561946	-0,827174	
Var6	-0,993165	-0,116721	
Var7	0,918467	-0,395499	
Expl. Var	4,891094	2,108906	
Prp. Totl	0,698728	0,301272	

Fig. 3. Distribution of factors because of factor analysis of the effectiveness of the combination of administrative and responsible management on the example of PJSC CB “PrivatBank”
 Source: Compiled by the authors.

According to Fig. 3, it becomes possible to identify two factors that allow assessing the effectiveness of the combination of administrative and responsible management. A description of the set of indicators for each of the factors is provided in Table 4.

Table 4.

Results of the factor analysis of performance indicators of the combination of administrative and responsible management of PJSC CB “PrivatBank”

Name of the factor	Composition of factor indicators	Description
A factor of strategic development and business reliability	Banking business reliability ratio, equity capital adequacy ratio, maximum risk exposure ratio, rating of reliability of banking products, rating of public confidence in the bank	Reflects the effectiveness of management as such and the impact of management decisions on the company's image and financial position
Factor of investment attractiveness of business	Capital multiplier ratio, high risk ratio	Indicates the ability of the business to be attractive to investors and keep risks within regulatory limits

Source: Compiled by the authors

The factor analysis tool can be adapted to each specific type of business, but it should be emphasised that its use makes it possible to fully systematise and group key indicators of a particular business's development, form a system for monitoring the effectiveness of management methods and styles and assess the rationality of the chosen management strategy.

Discussion

The study primarily identifies the latest approaches to combining administrative and responsible management tools. At the same time, responsible management is seen as an opportunity to adapt to the latest conditions of business development with innovative digital technologies, which makes it possible to significantly improve the conditions for business development and ensure an increase in the efficiency of using available resources.

Modern administrative management allows wider opportunities for improvement and development of an organisation based on its own, primarily administrative, resources that mobilise its synergistic effect.

Implementation of the administrative management system allows for the discovery of unused management elements and the increase of the management system's synergistic effect in the organisation.

Administrative management in European and Asian companies has evolved from the development of a classical administrative management system to lean manufacturing, information technology, and further quality management systems (Komalasari et al., 2020; Lăzăroiu et al., 2020; Fatima & Elbanna, 2023).

Therefore, it should be emphasised that the administrative management system is primary. Any management improvement in companies around the world usually begins with establishing an administrative system. It is the foundation of effective management. However, it should be emphasised that administrative management, if not implemented rationally, can create additional risks for management processes and significantly affect staff productivity. All these aspects should be taken into account in the process of planning actions to implement management systems. In addition, certain risks are created by the irrational use of digital technologies in response to trends in the modern economic space. Accordingly, business representatives should focus on the most active implementation of digital tools and consider the appropriateness of using a particular tool.

Modern administrative management on the verge of 2023–2024 allows for the implementation of a process approach to management and the use of its capabilities (Baraja & Chaniago, 2023). This is important for small organisations, as it solves the problem of manageability, which increases as they grow and develop.

It is even more critical for medium and large organisations with many lines of business that need more flexibility due to the complexity of their management. This idea was proved in the course of the research and factor analysis based on the data of PJSC CB “PrivatBank”.

The application of the process approach allows for an audit of the existing management system at enterprises in order to separate all end-to-end processes of production of goods and services from each other (Bryhinets et al., 2020; Rozsa et al., 2021; Scherer & Voegtlin, 2020). However, researchers need to focus on adapting administrative management to responsible management approaches when building a comprehensive management system focused on optimising the use of all types of resources and the optimal implementation of innovations. However, many innovations only produce serious results if they are based on a modern administrative management system that uses the possibilities of a responsible approach and rational use of various types of resources.

If an enterprise wants to improve management efficiency, it should start by identifying gaps in the existing management system and creating the conditions for further improvement.

Innovative administrative management can be a reasonable basis for mastering responsible management methods, the use of information technology, and the application of quality systems (Bacq & Aguilera, 2022; Wiesböck & Hess, 2020; Dmytriyev et al., 2021). However, at the same time, administrative management allows you to move to the organisation of careful production of goods or provision of services. Lean manufacturing is a revolutionary, breakthrough approach to management in general and quality management in particular, as it ensures the long-term competitiveness of enterprises without significant capital investment. Accordingly, lean manufacturing can be considered the first step towards implementing responsible management, which most scholars do not mention today or focus on creating an administrative management system with elements of responsible management. Drawing from the innovative risk management strategies in public administration, Pryimak et al. (2024) emphasize the critical role of integrating advanced mechanisms at multiple governance levels to foster sustainable and efficient management practices. Their findings highlight the necessity for adaptive strategies tailored to regional and local contexts, underlining the interplay between decentralization and resource optimization to achieve overarching strategic goals within public administration frameworks.

In general, most researchers prove that one of the trends in modern innovative administrative management is introducing a responsible management system (Azmat et al., 2023; Marques & Gomes, 2020; Pharmacist, 2024). However, it is worth supplementing the opinions of scientists with an emphasis on modern opportunities for the development of administrative management, taking into account the latest digital technologies that can facilitate the process of creating and developing a new management system based on a combination of administrative and responsible management concepts. This can be achieved by

introducing internal quality control systems or creating additional areas for optimising HR, ensuring responsible management conditions and attracting more employees to the new system.

The issue of expanding the administrative management toolkit is currently being considered by scholars in different countries and from different perspectives. One group of researchers (Redko et al., 2024; Wiesböck & Hess, 2020) focuses on the fact that successful enterprise management requires precise regulation of all administrative processes. Other researchers (Sembiyeva et al., 2023; Shkarlet et al., 2020), on the contrary, suggest that it is essential for modern businesses to build a flexible management system that will allow them to adapt to the environment and quickly adjust to market requirements. As a result of the author's study, it is difficult to disagree with the second group of researchers since today's business operates in a highly volatile environment, and the ability to develop and adapt becomes the key to effective functioning and the possibility of obtaining positive changes. Accordingly, a flexible and adaptive management system can more efficiently respond to changes in the external environment and create the basis for rapid adaptation to new conditions. In this case, the business will have more opportunities to overcome the negative impact of the external environment and create preconditions for further development.

Another controversial issue in analyzing the innovative development of administrative management is the integration of digital technologies into contemporary management systems. Buriak and Petchenko (2021), Kaldygozova (2024), and Prylypko (2023) emphasize that the necessity of adopting the latest digital technologies in management is evident. However, it is crucial to consider the risks, including significant initial costs and the substantial restructuring of company personnel. This process requires the recruitment of IT specialists and the training of existing staff to adapt effectively to new digital tools implemented within the organization. Cybersecurity is an important aspect highlighted in various studies (Tkachova et al., 2023; Tiurina et al., 2022; Padilla-Lozano & Collazzo, 2022). In addition, it is worth supporting the opinion of scholars who emphasise the need to pay special attention to building a data protection and information security system when planning to develop an administrative management system using digital platforms. Particular attention should be paid to protecting customer and counterparty data and developing a reliable cybersecurity system since the reputation and image of a company largely depend on the seriousness of its attitude to information protection. At the same time, cybersecurity issues should be secondary to developing or updating management approaches, as management efficiency should remain the primary goal, and cybersecurity is a prerequisite for creating a secure business environment.

Conclusion

Modern administrative management requires new approaches to developing the management system, which is what responsible management is becoming today. The study found that for most companies, it is relevant and appropriate to introduce a combination of administrative and responsible management, as it makes it possible to perform social functions and ensure effective internal development processes.

It can be argued that a flexible working model based on responsible management is becoming a trend today, as a development of which a growing number of companies around the world are moving to flexible working models, such as remote work, flexible working hours and other alternatives to the traditional office environment. This requires new approaches to human resources management and workflow organisation but also yields positive results in resource savings.

While conducting a factor analysis on the example of PJSC CB "Privat Bank", it was found that it is essential for today's business to analyse a significant set of indicators and study them in dynamics. Two factors were explicitly identified for the selected company: the factor of strategic development and business reliability, which includes the banking business reliability ratio, the equity protection ratio, the maximum risk ratio, the rating of the reliability of banking products, the rating of public confidence in the bank; as well as the factor of investment attractiveness of the business, which includes the capital multiplier ratio, the standard of significant risks.

Since responsible management involves close cooperation with the staff, working with the staff to determine the optimal methods and tools of responsible management can be highlighted as a promising area for further research on the subject of the article.

Specific contributions of the study

Responsible management in modern management theory opens up new opportunities for businesses to actively use the latest tools in the management process.

The main result of the study is that, using factor analysis, it is proved that modern tools of responsible management can be used in business development and management decision-making. In addition, innovative approaches to administrative management can positively impact the formation of the company's image in the market and indirectly affect the financial condition by attracting additional investors, creating the possibility of more reasonable investment financing, expanding markets, etc.

Implications for the findings

For business practice and business development in the current environment, responsible management provides an opportunity to focus on strategic development and set strategic goals that will meet the requirements of the internal business environment and take into account most aspects of socially responsible business growth. In the innovative management theory, responsible management is viewed not only as a system of business management rules but also as a concept and strategy for the company's development. It is a philosophy that influences the formation of strategic goals and tactical measures to achieve them.

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The collaborative economy and its disruptive impact on traditional markets

La economía colaborativa y su impacto disruptivo en los mercados tradicionales

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Abstract


The sharing economy has emerged as a disruptive force, transforming how goods and services are accessed and utilized. This paper comprehensively analyzes the benefits, challenges, and impacts of the sharing economy on traditional markets. Through a systematic literature review, the study examines this collaborative model's economic, social, and environmental implications. Key findings highlight the increased efficiency and sustainability of resource utilization but also reveal challenges such as regulatory complexities and disruptions in conventional business models. The study underscores the need for holistic frameworks to protect stakeholders and ensure the sustainable growth of sharing economy platforms. Furthermore, it emphasizes the importance of continuous research


Resumen


La economía colaborativa se ha convertido en una fuerza disruptiva que está transformando la forma en que se accede y se utilizan los bienes y servicios. Este artículo analiza exhaustivamente las ventajas, los retos y las repercusiones de la economía colaborativa en los mercados tradicionales. A través de una revisión sistemática de la literatura, el estudio examina las implicaciones económicas, sociales y medioambientales de este modelo colaborativo. Las principales conclusiones ponen de relieve el aumento de la eficiencia y la sostenibilidad en la utilización de los recursos, pero también revelan retos como las complejidades normativas y las perturbaciones en los modelos de negocio convencionales. El estudio subraya la necesidad de marcos holísticos para proteger a las partes interesadas y garantizar el crecimiento sostenible de las plataformas de economía

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to address emerging trends and challenges in this dynamic landscape.

Keywords: economic theory, sharing economy, sharing consumption, sustainability, market.
JEL Codes
L81, L86, Q55, R41

colaborativa. Además, subraya la importancia de la investigación continua para abordar las tendencias y retos emergentes en este dinámico panorama.

Palabras clave: teoría económica, economía colaborativa, consumo colaborativo, sostenibilidad, mercado.

Introduction

The collaborative economy, also known as the sharing economy, refers to a peer-to-peer (P2P) economic model that facilitates access to goods and services through community-based platforms, often enabled by digital technology. Unlike traditional ownership models, the collaborative economy emphasizes shared access, optimizing the use of underutilized assets and fostering a community-centric approach to consumption (Sturgeon, 2021). Prominent examples include platforms such as Airbnb, Uber, and Lyft, which enable individuals to monetize dormant resources while providing cost-effective alternatives for consumers (Mukundhan, 2023; Shah & Shah, 2024; Gerwe & Silva, 2023). The resurgence of this model has transformed conventional market dynamics, reshaping consumption patterns and business models (Rong et al., 2021). It has introduced new opportunities for resource utilization, increased flexibility in employment, and fostered innovation across industries. However, the collaborative economy has also presented significant challenges, including regulatory complexities, labour market disruptions, and ethical concerns regarding job security and income stability (Bibri et al., 2024). The environmental implications of the sharing economy, ranging from resource efficiency to potential adverse effects on waste and emissions, further add to its multifaceted impact (Tretiak et al., 2024; Tripp et al., 2023; Rohatiuk et al., 2024). This study examines the sharing economy's relevance and implications in the context of modern economic, social, and environmental landscapes. By systematically reviewing existing literature, the research aims to provide a holistic analysis of its benefits, challenges, and effects on traditional markets. The objectives are to explore how the sharing economy facilitates access to goods and services, reduces costs, and promotes sustainability while addressing associated legal, economic, and social issues. The study also investigates how traditional markets such as retail, transportation, and lodging are adapting to the rise of collaborative platforms, along with the motivations and satisfaction levels of participants in this evolving economic model.

The scope of this article encompasses a comprehensive review of the sharing economy's influence on stakeholders, including policymakers, consumers, service providers, and businesses. It aims to provide actionable insights to maximize the benefits of this economic model while mitigating its drawbacks. The structure of the article is as follows: the introduction defines the collaborative economy and outlines the research context, objectives, and scope; the literature review synthesizes prior studies and identifies knowledge gaps; the methodology section details the research approach; the results and discussion explore key findings and their implications; and the conclusion summarizes contributions, raises future research questions, and highlights recommendations for stakeholders.

Literature Review

The idea of the "sharing economy" has become a major topic of both theoretical and applied economics today. The sharing economy is different from traditional economic models because it values access over ownership and depends on digital platforms instead of direct interactions between people to make transactions possible (Gruber, 2020; Tripp et al., 2023). In this model, helping others and being social is more important than having things. It changes how people act, how companies run, and how rules are followed. A lot of research has been done on how the sharing economy has changed work, relationships, and the economy as a whole. This review uses both old and new studies to come up with its ideas. They show all the good and bad things about normal markets when put together. Suprunenko et al. (2024) examine how globalization changes the working of businesses in the digital economy. In different ways, it shows how the sharing economy changes in rich and poor countries. For example, the consistency of data and the ease of getting to markets are not the same in each place. Melnyk et al. (2023) state that a stable government is important for economic growth and security, especially when there is a crisis. They learned that the economy can be fixed by allowing everyone to see the government, making rules that work for everyone, and getting people from different countries to work together.

Evolution of the Sharing Economy

This is a big change from traditional economies that are based on having things to ones that are based on access and making the best use of resources. This is also known as collaborative consumption. Botsman and Rogers (2010) came up with this idea and showed how it could be used to share resources and make the market work better. People can now do business directly with each other through digital platforms, instead of going through agents making transactions cheaper (Hamari et al., 2016). This new tech changes how we make money and use things. Uber and Zipcar, for example, want access over control (Hallem et al., 2020; Shah & Shah, 2023). This area of study is mostly about how markets and businesses work and how technology changes them. Hallem et al. (2020) and Shah and Shah (2023) investigated the sharing economy's operational details. However, regional differences in technology, regulations, and consumer behavior have received little attention. We have not figured out how to apply these models globally yet.

Drivers of Participation

People join the sharing economy to save money, help other people, and take care of the earth. Platforms like Airbnb and Uber let service providers make extra revenues and allow people get services for less money. The sharing economy is also unique because it has social benefits, like helping people learn about other countries and build communities. Sharing spaces online like Couchsurfing brings people together and makes them friendlier, especially in places where people do not have many friends (Santos et al., 2020).

One way to help the earth is to use car-sharing services that reduce carbon pollution. Other ways are to reduce waste and spending. There are lots of reasons why people join the sharing economy, and this review of studies does a good job of showing them. But there is not a strong link between the natural, social, and financial forces. As an example, think about how much financial concerns and environmental concerns overlap, particularly in places where the economy is struggling. The way these motivations affect both consumer and provider behavior in different situations should be looked at in a more comprehensive way in future study.

Benefits of the Sharing Economy

People have praised the sharing economy for its ability to make the best use of resources, lower transaction costs, and give everyone access to services. Airbnb and Uber make the most of assets that are not being used to their full potential, which is good for both the companies and the customers' bottom lines (Sadowski, 2020; Li & Fang, 2022). Digital tools that build trust, like review systems, make transactions even smoother (Markman et al., 2021). According to Shah and Asghar (2024), the sharing economy is also in line with sustainability goals because it encourages people to reuse and share things, which cuts down on waste and resource loss. By addressing issues like parking shortages and creating new markets like co-working spaces and peer-to-peer lending platforms, it not only helps the environment, but it also inspires people to start their own enterprises (Ahsan, 2020; Orhani, 2023). Many good things about the sharing economy have been studied, but most of it has only looked at the economic and environmental parts. A study by Sadowski (2020) and Shah and Asghar (2024) looks at how to be eco-friendly and make the best use of resources. However, few research have examined the relationship between these benefits and social business. Further investigation into the interplay between social justice, environmental sustainability, and economic innovation is necessary to have a clearer view of the sharing economy's impact.

Challenges and Risks of the Sharing Economy

Due to the rapid expansion of the sharing economy, numerous significant issues have surfaced. These problems are mostly with labor rules and data privacy. Cornelissen and Cholakova (2021) and Tan et al. (2021) both explain how dangerous it is for gig workers because they are not protected the same way normal workers are because they are often seen as self-employed. Because of this lack of clarity, there have been cases and calls for changes to the rules. Concerns about data protection make things even more complicated because platforms collect a lot of personal data that could be misused or leaked (Cheah et al., 2024). There are risks in the sharing economy because it is competitive. When a market is saturated, monopolistic practices emerge, which are bad for innovation and consumers' freedom of choice (Sanon et al., 2022). There is a lot of information in the books about the problems the sharing economy is having, mostly with rules and workers' rights. However, research like Cornelissen and Cholakova's (2021) mostly examines the rights of job workers in developed economies and does not indicate these problems

show up in developing economies. Also, even though Cheah et al. (2024) and Berg et al. (2020) talk about data privacy risks, not much is known about how well current regulatory systems work at reducing these problems. There needs to be research that compares how different regulatory methods affect the growth and morality of the sharing economy.

Impact on Traditional Markets

The sharing economy has completely changed many traditional businesses, mainly in the retail, transportation, and hospitality sectors. Airbnb has helped hotels lose 10% of their revenue in high-concentration markets by giving customers more affordable and varied lodging choices (Barron et al., 2021). Ride-sharing apps like Uber and Lyft have also changed transportation by making taxis less expensive. This has had a big effect on the income of standard service providers (Liu et al., 2021). Online clothing rental and resale platforms have become popular in retail, which has led some traditional companies to change their business models. For example, hotels are starting to offer "home-style" suites, and stores are looking into rental services (Khan, 2022; Morewedge et al., 2021; Marengo & Seidl, 2021)

Most of it is about large companies like hotels and transportation. Researchers are still not fully exploring new fields like healthcare and education, even though they have the power to make big changes. Also, while Khan (2022) and Barron et al. (2021) studies show how traditional businesses are changing, more research is needed to see if these hybrid models can work in the long run. Academics should also investigate how large corporations operating in conventional marketplaces may leverage the sharing economy to foster collaboration rather than competition among their employees.

Knowledge Gaps and Future Directions

Most research on the effects of the sharing economy on work is focused on immediate issues like worker classification, stable pay, and job security. Gig employment is often precarious, according to research such as those of Cornelissen and Cholakova (2021) and Tan et al. (2021). However, there is not a lot of research on how this type of work affects workers' career paths in the long run. Some important questions are still open: What effects does rely on gig work have on learning new skills, moving up in job, or planning for retirement? Will gig work still be a good way to be flexible as the world economy changes? Additionally, most of the research that has been done so far has been on labor problems in developed countries, with not much attention paid to how gig work affects the way work is done in developing regions. In low-income countries, the sharing economy might have a different effect. It might help fill job openings, but workers may be more at risk because there are not as many rights for them. This research will look at how the sharing economy has changed labor markets over the long term by looking at changes in how people learn new skills, move between jobs, and have positive and negative experiences at work. It will also look into how these dynamics are different in emerging and developed countries, giving us a more complete picture of how gig work affects job markets around the world.

There are not many studies that examine how governments and lawmakers are adapting to the sharing economy because it is grown faster than normal governing systems. Tawalbeh et al. (2020) and Cheah et al. (2024) look into problems like paying taxes, legal issues, and protecting workers. Many studies, though, do not look at how well or poorly different control methods work. For example, how do the rights and duties of platform operators and gig workers differ in the US, Germany, and India, where the rules are different? What can we learn from these methods about how to make policies that are flexible and useful around the world? For example, how can laws make sure that platforms grow without taking advantage of workers or communities while still promoting innovation and fairness? How do regulatory flaws impact women, migrant workers, and other underrepresented groups more than others? Examining the successes and failures of various government responses to the sharing economy, this study will draw conclusions. It will also find the best ways for lawmakers to make sure that regulations are fair while also encouraging new ideas. Ethical concerns will be taken into account when proposing models that protect weak groups and encourage economic growth for everyone.

Some researchers assert that sharing economy is good for the environment because it reduces waste and the use of resources. However, its effects on sustainability depend on the business or location. Sharing resources can help lower carbon pollution, as shown by studies like Zhu and Liu (2021) and Shah and Asghar (2024). If more people use shared services like ride-hailing, more vehicles may be needed, which could lead to more pollution overall, (Boopathi, 2024). The problem is even harder to solve because it is different in each

region. For example, ride-sharing apps might be better for the climate in cities with good public transportation than in the suburbs or rural areas where people drive lots. Also, how people from different countries feel about sharing resources may vary, which could impact the amount of time people use sharing economy methods and their environmental impact. This study will consider cultural and regional factors when examining the effects of the sharing economy on certain industries, such as transportation and hotels. It will determine the environmental benefits of the sharing economy and offer solutions to mitigate any negative impacts.

The sharing economy's potential to foster cross-cultural understanding is one of its underexplored features. There is no data on the quality and depth of the relationships formed through sites like Couchsurfing and Airbnb, while they do allow users to meet new individuals. Do sharing economy sites really help people trust each other and work together, or do they just make it easy for people to do business? What kinds of culture norms and social situations change the amount that these tools help people connect with each other? It is also still not clear what role the sharing economy plays in multicultural or underserved places. There are times when the sharing economy could help people work together and be a part of the economy. But not enough rights could make inequality worse because groups that are not given enough help could have trouble getting in or be impacted. This study will center on the ways in which the sharing economy facilitates cross-cultural and cross-economic trust-building. It will examine the merits and cons of platforms in underserved and mixed-use regions. We can learn more about the sharing economy's potential to open society up and make it more equitable by conducting surveys and having in-depth conversations with consumers and suppliers.

Previous study has mostly looked at a few well-known industries, like transportation (like Uber) and hospitality (like Airbnb). Health care, schooling, and farming are some areas that could be greatly affected by these changes but have not been explored yet. Similarly, there is a lack of data regarding the adaptability of sharing economy models to different cultures and locations. The local infrastructure, the administration, and cultural views are also important factors to consider. In what ways do these factors influence the adoption and utilization of sharing economy practices? Health care and education are two areas that have not been looked into as much. This research will look at how these crucial areas might be better served by the shared economy in terms of accessibility and efficiency. The group will also look at regional flexibility, which means they will look at how local factors affect the success of platforms and come up with ways to make sharing economy models work in different places.

Methodology

Approach and Research Design

The most recent and important study on the sharing economy was put together using a systematic literature review (SLR). Finding key trends, gaps, and patterns while getting a full idea of the topic is made easier with this method. A study of peer-reviewed academic literature from 2020 to 2024 was conducted, with a focus on new developments and insights in the field. Fifty-eight studies that met the standards for inclusion were included in the final analysis.

Database Selection

Three well-known academic sources were picked because they cover a wide range of subjects and have a lot of high-quality peer-reviewed literature: Scopus was chosen because it indexes a lot of journal articles and papers in many fields, such as sociology, economics, and environmental studies. PubMed is a library that is mostly used for health sciences, but it was included because it is starting to include more studies about society and the environment. JSTOR database is well-known for having a lot of information in the humanities and social sciences. It gave us important information about the sharing economy's culture and social aspects.

Keyword Strategy

To capture a broad range of studies relevant to the sharing economy, a structured keyword strategy was implemented. Boolean operators (AND, OR) were used to refine searches. The following table 1 outlines the key search strings used:

Table 1.
Keywords strategy

Keyword Combination	Purpose
“Sharing economy AND economic impact”	To identify studies focused on economic outcomes.
“Collaborative consumption OR market disruption”	To explore transformations in traditional markets.
“Sharing economy AND sustainability”	To highlight environmental impacts.
“Peer-to-peer lending OR ride-sharing platforms”	To focus on specific sharing platforms.

This strategy ensured comprehensive coverage of studies addressing the sharing economy’s economic, social, and environmental dimensions.

Selection Criteria

The inclusion and exclusion criteria were designed to ensure relevance, quality, and alignment with the research objectives. The following table 2 summarizes the criteria:

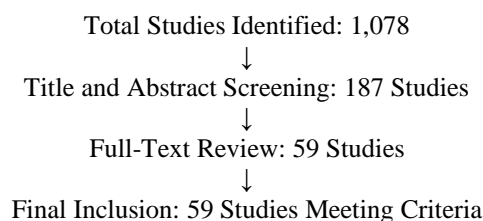
Table 2.
Selection criteria

Criterion	Inclusion	Exclusion
Time Frame	Articles published between 2020–2024.	Articles published before 2020.
Type of Literature	Peer-reviewed journal articles, books, and conference papers.	Non-peer-reviewed materials, such as blogs or opinion pieces.
Language	Studies published in English.	Studies in languages other than English.
Geographical Scope	Studies with global or regional relevance, particularly from North America, Europe, and Asia.	Studies focusing exclusively on regions with limited sharing economy activity.
Relevance to Topic	Studies addressing economic, social, or environmental dimensions of the sharing economy.	Studies not directly related to the sharing economy.

While looking different world perspectives, the study focused on places like North America, Europe, and Asia that have strong sharing economy ecosystems. This focus helped people understand both global trends and regional differences, giving a full picture of the sharing economy in a range of economic and cultural settings. A structured method was used for the research, which included screening, thematic coding, and synthesis: The first search in the database turned up 1,078 items. 187 studies were found to be significant after their titles and abstracts were looked over. A full-text review was done, and 59 studies met the conditions for inclusion. To code the chosen studies, they were put into tools for qualitative analysis, like NVivo. The economic effect, the changing nature of work, the long-term health of the environment, and the social and cultural aspects were some of the main themes. There were also sub-themes found, such as problems with regulations and differences between regions.

Inclusion and Exclusion Flow Chart

The following flow chart illustrates the selection process,



Results and Discussion

The most important results from recent studies look at the pros, cons, and effects of the Sharing economy. These are the results of the systematic literature review. Recent studies have developed an interesting idea of how the sharing economy can help cities grow sustainably. Kozłak (2020) says there is more and more proof that platforms for the Sharing economy, especially those dealing with housing and transportation,

could make a big difference in lowering carbon emissions and replacing traditional services in cities. Because car-sharing programs limit the use of private vehicles, they aid in mitigating urban air pollution and traffic congestion. Another way that home-sharing platforms can help the environment is by maximizing the use of existing buildings. This means that less new construction will be needed.

Another interesting finding is that the Sharing economy might bring people together. There are many stories about business deals in such an economy. However, some research has shown that the social interactions that these platforms allow are also important for building social capital (Davlembayeva et al., 2020; Pryimak et al., 2024). For instance, sites like Couchsurfing offer a place to stay and help people from different cultures meet and connect, creating networks that span global boundaries (Santos et al., 2020). Previous research has mostly looked at the gig economy as part of the sharing economy, and it is incredible how unstable gig work is. However, new studies are starting to show how these platforms are changing the job market. For example, the Sharing economy's flexibility and business opportunities are changing people's expectations about their careers and how they want to balance work and life in many areas, not just those who do gig work. This more significant impact on labour markets is crucial but has received little attention in the literature.

Most analyses of the Sharing economy's impact on established markets have focused on how it disrupts established markets and increases competition. However, new evidence reveals that consumers are getting more options and that established companies are being forced to innovate to stay competitive in the Sharing economy (Foramitti et al., 2020; Orel, Khodykina, & Chernova, 2023). In response to the meteoric rise of home-sharing platforms, several conventional hotels are expanding their offerings to include themed stays and long-term rentals. This is to meet the needs of modern travellers who want to have a variety of unique experiences.

Identification of Gaps in Previous Literature

These unique insights also help find a few holes in the existing literature on the sharing economy: Studies in the past have mostly looked at economic factors and have not given enough weight to the social effects of the sharing economy. The fact that these platforms help people connect with each other and understand different cultures suggests that they have a deeper social aspect that needs more research. It is known that it is good for the environment, but more research is needed to figure out how much better it is in different places and on different platforms. In this way, we could get a fuller picture of how it helps promote sustainable development. With all the attention on gig work, the effects of the Sharing economy on the job market as a whole have been somewhat overlooked.

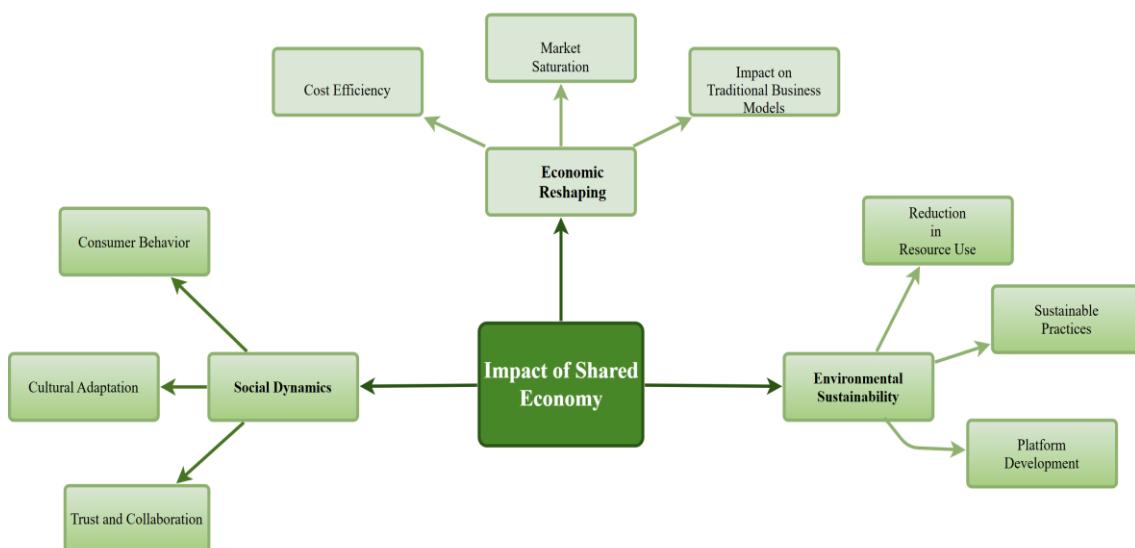


Figure 1. Thematic Network Diagram.

Source: authors' own development

Figure 1 makes it easier to see the main themes and sub-themes that are connected to the Sharing economy. The central node, “Impact of Sharing Economy,” serves as a focal point and illustrates the far-reaching effects of the Sharing economy on society. As a unifying principle, economic reshaping is essential. One of the subthemes is “Cost Efficiency,” which explains how the policy benefits companies and individuals financially. One more subtheme that demonstrates how Sharing economy platforms have filled markets with competition is market saturation. Another part of the report discusses the effects on established industries brought about by the growth of the Sharing economy. Sociodynamics benefits include the rise of sharing economy platforms, which have made it easier for people to connect with each other and work together. One more subtheme, “Shifts in Consumer Behavior,” looks at how people get and use goods and services, such as the growing trend of borrowing instead of buying. It also clarifies cultural exchange, specifically how activities in the Sharing economy help people from different cultures understand and exchange with each other. The graphic also makes a big deal of the idea of environmental sustainability. One of its subthemes, “Reduction in Resource Use,” explains how people can have less of an effect on the planet by doing things like sharing resources. An article called “Promotion of Sustainable Practices” talks about how the Sharing economy makes people more eco-friendly. Another theme is “Urban Development,” which is about how the Sharing economy helps cities grow and change in a way that does not negatively impact the environment.

Figure 1 makes it easy to see how these themes are linked. For example, when the market is saturated, consumers change how they act in social dynamics because they have to adjust to a more competitive market with more choices. Promoting sustainable practices is helped by cost efficiency, which makes it possible for people to behave in environmentally friendly ways without breaking the bank. The Effects on Traditional Industries are also linked to More Active Communities, showing how changes in the economy can lead to new ways of socializing.

Table 3.
Benefits of the Sharing Economy

Author(s)	Year	Key Findings
Crommelin et al.	2020	Increased consumer access to goods/services
Mouratidis et al.	2021	Reduction in costs, enhanced sustainability
Woo et al.	2024	Improved community engagement and social cohesion
Guzman et al	2024	Innovation in service delivery models
Henry et al.	2021	Expansion of economic opportunities in rural areas

Source: authors' own development

Crommelin et al. (2020) found that services like Uber and Airbnb have made it easier for people to get around and stay in places. These services break down hurdles like cost and location that used to make them less accessible. According to Mouratidis et al. (2021), the sharing economy saves money, especially when it comes to living and transportation in cities. By using fewer resources, these savings are also good for the earth and the economy as a whole. Woo et al. (2024) said that sharing platforms can get people more involved in their neighborhoods and help them make new friends by getting them to talk to each other. Speaking about new ways to provide services, Guzman et al. (2024) discovered that sharing assets and knowledge has made services easier for more people to get, especially in healthcare and education.

Table 4.
Challenges in the Sharing Economy

Author(s)	Year	Key Findings
Kirchner & Schüßler	2020	Regulatory hurdles and market resistance
Räisänen et al.	2021	Quality control and trust issues among users
Malik et al.	2021	Gig worker exploitation and job insecurity
Tawalbeh et al.	2020	Data security concerns and privacy breaches
Cui et al.	2022	Intensification of market competition

Kirchner and Schüßler (2020) write about the big regulatory problems that new platforms for the sharing economy have to deal with. For example, they say that they have to follow a lot of different foreign laws, which can slow down growth. According to Räisänen et al. (2021), trust is still a big issue, as users aren't

sure about the quality and reliability of peer-to-peer services. Malik et al. (2021) talk about the effects on the job market and say that gig workers are often taken advantage of and don't have stability in their jobs.

Table 5.
Impact on Traditional Markets

Author(s)	Year	Key Findings
Marano et al.	2020	Disruption in hotel and taxi industries
Morewedge et al.	2021	Shift in consumer behavior from ownership to sharing
Song et al.	2022	Enhanced competitive strategies in retail sectors
El-Sayed	2022	Increased market segmentation and niche offerings
Kahiluoto et al.	2020	Resilience of local economies to market disruptions

Source: authors' own development

As the sharing economy grows, more and more companies are providing unique services to meet the wants of specific groups. The Sharing Economy is hard to understand and has many sides, as shown by our systematic literature study. They show that it is important in a lot of different situations. It is thought that the main benefits are lower costs, easier access to goods and services, and big steps toward being more eco-friendly. Both the economy and the environment benefit from the Sharing economy because of these advantages, demonstrating that idle assets can be used. Because regulations are still complicated, it is hard to add new business models to systems that are already in place. More evidence that labour laws need updating to reflect the evolving nature of work emerges from the fact that gig economy workers experience rights violations and job insecurity. Privacy of information and service quality were also mentioned as concerns. It became abundantly clear in this case that robust safeguards are required to guarantee the security and dependability of peer-to-peer transactions. There is a significant effect on conventional markets as well. Because of the increased mobility of the Sharing economy, once-solid sectors like the hotel and transportation industries have been severely impacted. Because of these platforms, even well-known businesses have gone out of business. Still, the market needs to adapt to this new reality as well. In order to get back on their feet, many well-known businesses are incorporating the idea of sharing into their plans.

People and businesses both benefit in the long run when they work together. People can make better use of their resources that aren't being used by others by taking part in the collaborative economy. These two companies, Uber and Airbnb, have changed their industries by giving regular people a new way to make money from their empty rooms and cars. People are more likely to compare prices and shop around when they have more options. Products and services that were hard to get before are now easy for a wider group of people to get. It has also changed how people buy things; more and more people are choosing to use things instead of buying them outright. Many problems have come up with putting Sharing economy models into practice in the real world. Governments and regulatory bodies are trying to deal with the effects of these new business models in a way that follows current laws and rules. This has made regulation more difficult. In many places, it's clear that the government and taxi companies are strongly against ride-sharing services like Uber. In the same way, Airbnb has been criticized for supposedly making it harder to find affordable housing and driving up rental prices in big cities.

Established businesses are now competing in a collaborative economy, which has led some to try new things or at least make changes. In response to the rise of personalized and often cheaper lodging options offered by home-sharing platforms, hotels are working hard to develop new and creative services. This ongoing issue illustrates how economic theories on market behaviour and market structure can be utilized to show how competition enhances market conditions and introduces innovative goods and services. Even with the changes already happening, the Sharing economy can still grow and change in the years to come, especially as technology improves. AI and machine learning could be improved even more so that assets and services better match what customers want. This would make things run more smoothly and improve the user experience. Examples of technologies that could improve the reliability and security of transactions include blockchain. This would lower transaction costs by cutting out intermediaries.

Policies and regulations will shape Much of the Sharing economy's future. Successful frameworks strike a balance between consumer protection, fair labour practices, innovation, and healthy competition. This is very important in today's gig economy, where the line between full-time employees and self-employed people is blurring. This has the potential to spark new legislation, which could inspire the development of

standards for sharing economy platform administration. Aside from financial success, the Sharing economy model must meet other criteria for sustainability. It is important to look at how it affects both people and the world. Environmentally friendly shared economy sites that cut down on waste and pollution are likely to keep growing as more people become aware of the problem. But these platforms have to last a long time without making social problems worse or making traffic and air pollution worse in cities.

Implications on the economy: disruption and new ideas

The sharing economy has big changes in standard markets and also helps people come up with new ideas. Platforms like Uber and Airbnb have changed the transportation and lodging businesses by making them easier and cheaper to use. Companies that have been around for a while have had to come up with new ideas and give more because there is more competition. Foramitti et al. (2020) talk about how normal hotels now offer themed stays or long-term rentals to meet the needs of customers whose tastes have changed because of the sharing economy. Customers now have more choices and pay less because of this change, but it has also put pressure on standard businesses. Like this: Airbnb is shaking up the hotel business by letting people book unique and personalized stays. The fact that Marriott added the "Homes & Villas" area shows how big companies are changing to adapt to the popularity of websites that let people share their homes. There have been protests and government pushbacks all over the world because Uber and Lyft have impacted the established taxi business. In New York City, the worth of taxi medallions has dropped a lot, making it harder for traditional drivers to make a living. Looking ahead, new ideas are likely to make standard markets even more fragmented, forcing companies to use hybrid models or work together with sharing platforms to stay competitive.

Effects on the environment: promoting sustainability

Making better use of resources and lowering waste, the sharing economy helps the environment. By lowering the number of private cars on the road, Koźlak (2020) says that car-sharing programs help clean up the air and ease traffic in cities. Home-sharing websites like Airbnb also make the most of buildings that are already there, which could mean that less new buildings are needed. Shared cars like Zipcar's business plan makes it less important to own a car, which makes city dwellers more likely to use shared cars. Studies have shown that one shared car can replace as many as thirteen personal cars. This cuts down on waste and pollution. Home sharing: Airbnb's website encourages travelers to stay in places that are already there instead of building new hotels, which take a lot of time, money, and work. There are big environmental benefits, but they vary from platform to platform and area to area. If more people use ride-hailing services in places with good public transportation, for instance, this could lead to more smog and traffic. To get the best out of rules, they should promote platforms that are good for the environment and discourage people from using services too much, which could hurt other people.

Building social capital

The sharing economy encourages communication and cultural exchange between people. For example, Couchsurfing makes it easier for people all over the world to meet with each other (Santos et al., 2020; Zaitsev, 2023). These tools allow people from different cultures to connect with each other and strengthen social ties within communities. On Couchsurfing, hosts and guests share their cultures with each other, which helps people understand each other and connect with people around the world. As an example, a Couchsurfing event in Istanbul brought together tourists and locals, who became friends and learned more about each other's cultures. Woo et al. (2024) found that sharing systems, like neighborhood-based tool libraries, help communities stick together by getting people to work together and depend on each other. Even with these benefits, social cohesion levels vary between platforms and areas. Some platforms may build social capital, while others may build transactional relationships that don't really link people. Platform designers and policymakers need to put trust, inclusion, and community involvement at the top of their lists of priorities.

Flexibility and Precarity in the Job Market

With the sharing economy, workers can now choose their own schedules and ways to make money, giving the job market more freedom than ever before. But this freedom often comes at the cost of safety and security at work (Malik et al., 2021). Ride-Hailing Drivers have open schedules, but they also have problems, like not having benefits and having unstable income. In California, Proposition 22 labeled gig

workers as independent contractors, which has led to more arguments about fair labor practices. Fiverr and Upwork allow freelancers find work all over the world, but they also make a "race to the bottom" happen as workers fight on price. These changes show that new labor laws are needed that balance freedom with protections. Governments must set up systems that make sure workers get fair pay, perks, and ways to bargain as a group.

Effects on Culture

People's tastes have changed because the sharing economy values access over ownership. According to Morewedge et al. (2021), more people choose to rent or borrow instead of buy things to save money and protect the earth. Websites like Rent the Runway let people rent expensive clothes instead of buying them, which cuts down on waste in an industry known for being bad for the environment. Co-working places like WeWork offer flexible office options that startups and freelancers who want to save money and work together will like. This change in behavior makes standard business models less viable while encouraging new ideas. Companies need to adjust to the rising need for shared and recurring services. This trend will likely increase as more environmentally conscious younger customers enter the market.

Implications for Regulation

To deal with the problem of rising housing prices and shortages caused by Airbnb, cities like Barcelona have put in place strict rules on short-term rentals. Notable breaches, like Uber's 2016 data hack, show how important it is to have strong privacy measures. Clear rules are needed to protect consumers, make sure competition is fair, and hold platforms accountable. It is important for policymakers to find a balance between promoting new ideas and reducing the bad effects of the sharing economy on society. The sharing economy has changed business, the environment, and people's lives in big ways. There are big problems that businesses, lawmakers, and researchers need to be aware of because it has the power to change everything. Businesses need to be open to new ideas to stay competitive in markets that have been changed by the sharing economy. Putting money into eco-friendly methods and mixed business plans will pay off in the long run. Rules must be changed to safeguard workers, keep data safe, and protect the environment while also supporting new thoughts. A better understanding of the meaning of the sharing economy can be achieved by examining existing examples and practices.

Conclusions

The sharing economy has fundamentally reshaped traditional economic theories, redefining how People can get to, use, and value things and services. Collective consumption has the ability to change everything by making better use of resources and giving everyone access to things that were once seen as extras. The sharing economy has helped the environment by cutting down on waste, making better use of current assets, and lowering the need for new production in cities where space and resources are limited. Although the sharing economy has grown quickly, it has also caused many problems as well as many benefits. Most of these are legal gaps that happen when old laws do not work with new ways of doing business. Concerns about shaking up the market must be dealt with in creative ways if we want to add the sharing economy to the way things are done now. We also need to find ways for new platforms and existing businesses to work together. Because things have changed so quickly, some businesses have been able to handle the new competition that platforms for the sharing economy have brought. Other businesses, on the other hand, have run into trouble staying open.

Another big problem in the sharing economy is how workers are treated. This is very important as the gig economy grows. Not many labor rules cover everything, like benefits, job security, and fair pay, so it's easy to take advantage of a lot of workers. The most important thing for lawmakers to do is to make labor laws that protect workers while still letting the gig economy be flexible. This kind of investigation is necessary if we want to know if the sharing economy will be sustainable and equitable. In the sharing economy, they also need to protect workers and customers, push for new ideas, and be good to the environment. So that everything is fair, we need rules that make platforms responsible, help them offer better services, and give them a reason to use green methods. To meet customer needs, businesses must adapt their plans to make things work better, be more flexible, and last longer. There are natural, social, and economic parts of the sharing economy that are all examined in this study. It adds to our understanding of the evolution of collaborative consumption by zeroing in on the most recent shifts (2020–2024). This is a new study that looks at the different places where the sharing economy can work. It shows that results are different based

on the area and type of site used. On top of that, it helps us learn more about how the sharing economy changes society, especially how it can bring people together and encourage cultural exchange, which wasn't looked at much in earlier research. The study also looks at how the sharing economy will change the job market in the long run. It finds that big changes need to be made to the way work is done to make room for gig work.

This study not only helps us learn more about the sharing economy, but it also points out important areas that need more research. Researchers should examine how lawmakers can make flexible rules that can keep up with the fast changes in platforms for the sharing economy while still making sure that everyone is fair and responsible. It would be interesting to compare and contrast countries that have managed to strike a balance between innovation and consumer and worker safety. Another area of study is how much the sharing economy promotes real social capital and cultural exchange, as well as finding platform designs that put community-building and inclusion first.

Some other things that should be examine how the sharing economy impacts the environment in towns, suburbs, and rural areas. This will help us find ways to make it better for the environment. Making shared economy sites more eco-friendly with new technologies like AI and blockchain is another idea that should be thought about. To make sure that gig work stays a true and fair way to make a living, it is also important to look at how it changes workers' long-term job prospects, skill development, and financial security. Unexplored domains such as healthcare, education, and agriculture may be impacted by the shared economy. Additionally, this may inspire fresh applications of the principles behind group purchasing. It is possible that sharing economies could make the world market more fair, healthy, and efficient. But this goal cannot be reached unless there is a careful mix between new rules and ideas and making sure everyone feels welcome. The findings of this study necessitate concerted effort from those in academia, government, and business. That is the only way for the sharing economy to transform into a just and secure method for businesses and society to interact. Push for responsible behavior, make rules that are easy to follow, and do more research so that the sharing economy can reach its full potential and create chances that are good for everyone, including people, groups, and the environment.

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The power of partnership in higher education

Сила партнерства у вищій освіті

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Abstract


The article considers the content and essential features of partnership, identifies the main principles of partnership, and shows their role in the internal system of ensuring the quality of education in a higher education institution; indicates significant approaches and barriers in the process of implementing partnership pedagogy, the most common methods of cooperation between enterprises and organizations and higher education institutions, clusters of partnership forms and partnership models of business structures and universities. The advantages and directions of partnership in the organization of the educational process of higher education


Анотація


У статті розглянуто зміст та сутнісні ознаки партнерства; виокремлено основні принципи партнерства та показано їх роль у внутрішній системі забезпечення якості освіти в закладі вищої освіти; зазначені вагомні підходи та бар'єри у процесі реалізації педагогіки партнерства, найбільш поширені методи співпраці підприємств й організацій та закладів вищої освіти, кластери форм партнерства та моделі партнерства підприємницьких структур та університетів. Обґрунтовано переваги та напрями партнерства в організації освітнього процесу закладів вищої освіти та при співпраці з бізнес-корпораціями. Мета експериментальної


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institutions and cooperation with business corporations are substantiated. The purpose of the experimental work was to prove the need to implement the developed author's methodology for forming the communicative competence of future specialists when implementing partnership relations, which will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist. The results of the comparison of the ascertaining and formative stages of the experiment indicate positive changes in the levels of formation of communicative competence of future specialists of the experimental group when implementing partnership relations. The results of the experiment make it possible to speak about the effectiveness of the methodology for the formation of communicative competence of future specialists when implementing partnership relations at the formative stage of the experiment.

Keywords: partnership, higher education institutions, partnership pedagogy, student values, communicative competence.

роботи полягала в доведенні необхідності впровадження розробленої авторської методики формування комунікативної компетентності майбутніх фахівців при упровадженні партнерських взаємин, що сприятиме зростанню творчого рівня партнерської взаємодії і як результат – комунікативної компетентності майбутнього фахівця. Результати порівняння констатувального й формувального етапів експерименту говорять про позитивні зміни у рівнях формування комунікативної компетентності майбутніх фахівців експериментальної групи при упровадженні партнерських взаємин. Результати експерименту дають можливість говорити про ефективність реалізованої на формувальному етапі експерименту методику формування комунікативної компетентності майбутніх фахівців при упровадженні партнерських взаємин.

Ключові слова: партнерство, заклади вищої освіти, педагогіка партнерства, цінності студентів, комунікативна компетентність.

Introduction

In modern conditions, an important stage of modernization of higher education systems and innovative and socio-economic development of countries is underway. The creation of clusters of higher education institutions is one of the most important directions of modernization in different regions of the world. Determining the methods of the educational process and forms, establishing the content of education in modern higher education institutions, carrying out scientific activities in them, and integrating education and production when training future specialists is an acute problem. To this end, it is relevant to study the experience of forming partnership relations between the business environment and educational institutions and their methods and forms (Rayevnyeva et al., 2018).

Such modernization of modern education involves the construction of an internal system for ensuring the quality of education in each educational institution, the effectiveness of the process of creation, which depends on the interaction of participants in the educational process, the rational use of resources, many qualitative factors, measures aimed at organizing effective management, and the creation of a favorable atmosphere for partnership (Voronova, 2022). Therefore, the study of the role of partnership in the organization of the educational process of higher education institutions is relevant, necessary, and significant in modern society and is being studied by scientists on a global scale.

Today, only 34% of companies cooperate with higher education institutions in the field of employment; these are mainly large and medium-sized companies. The main motives for establishing business partnerships with higher education institutions are: training specialists who meet the company's needs and access to a highly qualified labor force. Accordingly, the most common forms of cooperation are internships and student practice, lectures, student projects, competitions, and career guidance events. One of the tasks of educational institutions is the employment of graduates, primarily those who studied on a budget form of education. For this purpose, almost all higher education institutions have employment centers or career centers. Their survey showed that the vast majority of them work on average with 100-200 companies. Universities are proactive in establishing partnerships regarding the employment of graduates. According to the survey, 2/3 of the partnerships established by employment departments were initiated by department and university employees, and 1/3 were initiated by business representatives.

Ensuring the successful implementation of the ideas and principles of pedagogical partnership in modern educational institutions should be significantly facilitated by properly organized methodological work, namely: for professional growth and organized scientific and methodological support, which helps to create

a differentiated acmeological educational space in which cooperation takes place between equal partners on the principles of humanism, humanism, facilitation, individualization, continuous professional development of pedagogical workers along individual educational trajectories.

At the same time, new ways and forms of managing the development of pedagogical partnerships of teachers of socio-economic demands have become innovative for methodological work. The study of the regulatory framework, the current state of the declared problem of managing the development of pedagogical partnership of teachers, and the implementation in practice of a system of managerial influences on the development of this competence help to identify several contradictions between:

- Modern child-centric trends in education and insufficient implementation of managerial influences on the development of pedagogical partnership of teachers;
- The need to manage the development of pedagogical partnerships of teachers and the unpreparedness of management entities to implement this aspect of their activities;
- The relevance of the transition to a new level of relations in the educational environment and the insufficient level of ensuring the necessary organizational and pedagogical conditions for this.

The need to overcome the above contradictions and the relevance of the problems determined the topic of our article.

Literature Review

The problem of partnership attracts the attention of many Ukrainian and foreign scientists as a subject of research, the main directions of which are: theoretical and methodological principles of the formation of relationships; general pedagogical concepts of new educational technologies; humane professional communication of the teacher and students; historical aspect of the development of subject-subject relations of the teacher and students.

Today, the issue of partnership pedagogy has become key in the education of the modern generation. Partnerships between the teacher, student, and parents are one of the key principles of high-quality reform of the Ukrainian school. The new Ukrainian school sets the task of forming in children such competencies as: communication in the state, native language; communication in foreign languages; mathematical literacy; competencies in natural sciences and technologies; information and digital competence; the ability to learn throughout life, social and civic; innovation and entrepreneurship; awareness and ability to express oneself in culture; ecological literacy and healthy life.

The essence of the concept of "partnership pedagogy" is revealed, the feasibility of studying this direction of pedagogy is proven, and the principles on which partnership pedagogy is based are indicated by T. Fedirchuk & V. Didukh (2019). Partnership pedagogy is substantiated as a factor in the formation of effective interaction between participants in the educational process based on partnership pedagogy. Types of partnership pedagogy are commented on, and their specifics are revealed. An experimental study of the level of readiness of future primary school teachers for interaction with participants in the educational process is conducted, and the results of the study based on partnership pedagogy are presented.

The analysis of the literature demonstrates the diversity of research vectors of partnership pedagogy: definition of the term "partnership"; conceptual foundations of partnership pedagogy; psychology of partnership interaction; aspects of partnership interaction between students and a teacher; partnership interaction between participants in the educational process of primary school. S. Voronova (2022) also provides an interpretation of the concept of partnership, defines and reveals the components of partnership, and shows its role in the internal system of ensuring the quality of education. From the perspective of consulting parents and teachers on various issues of upbringing, partnership, violence, bullying, cooperation, and interaction are considered, and methods for forming teachers' competencies in social partnership in education psychology of partnership interaction are presented. O. Tadeush (2020) pays attention in his research to the substantiation of the concept of "educational partnership in a higher education institution" as a holistic open system characterized by internal and external multifunctional connections and including organizational, subject, effective, content-target components. In the space of higher education, the problem of educational partnership was analyzed and the directions of educational partnership were determined in a modern university and the principles of educational partnership were revealed (openness, scientificity, humanization, sociocultural compliance, complexity, mobility, systematicity, acceptability of

innovations and traditions, competence, long-term, optimism, variability, harmony, tolerance, technology) and types by direction: introversion direction and extraversion direction, which are coordinated by mechanisms of integration, identification, socialization, aimed at intellectual and moral development and personal self-determination and professional self-determination, professional self-realization of higher education applicants.

The essence of the concept of "educational partnership" is also substantiated; criteria are formulated, a system of educational partnership of higher education is developed, and obstacles to the formation of partnership relations in higher education are identified by H. Matukova, K. Safyan & N. Barashova (2024). In the conditions of higher education, partnership interaction is represented by a specific form of cooperation, which provides for a wide range of areas of cooperation of stakeholders, teachers, and students. Obstacles that arise when organizing partnership interaction in the educational process, which can arise and inhibit partnership relations, are shown. When forming a partnership system in higher education, criteria for evaluating partnerships are proposed, which should be guided by the conditions of pedagogical interaction.

Research into various aspects of partnership pedagogy has become the subject of analysis by many scholars. This, in turn, gives us reason to assert that the problem of partnership pedagogy is relevant and requires further research. The problem of pedagogical partnership in higher education is raised by H. Holos, who analyzed the essence and indicated the reason for the importance of this concept in several educational directives and current publications; indicated the essential features of pedagogical productive partnership (positive interdependence of participants in the educational process, inclusiveness, etc.); gave arguments in favor of using this practice, taking into account the developmental impact of pedagogical partnership; showed ways to implement pedagogical partnership in classes using interactive teaching methods (debates, situational tasks, projects, mutual learning by students) in higher education. In the training of vocational education teachers, an analysis of the current state of partnership was carried out by V. Radkevych, O. Borodienko, V. Kruchek & O. Radkevych (2020). As a result of an experimental study, scientists showed the imperfection of the modern system of training vocational education teachers (inconsistency with labor market requirements, unsystematic cooperation of potential employers and subjects of the educational process, remoteness from production conditions, insufficient professional and practical orientation of training, theorization of training, failure to use all potential opportunities for cooperation with international organizations, trade unions, employment centers). A general comparative analysis of national and foreign experience in partnership relations development of areas of interaction between business structures and higher education institutions at the current stage of development of the higher education system and economy was made; optimal methods and forms of interaction between higher education institutions and the business environment were determined; problems that arise when implementing partnerships in the educational sphere were highlighted by scientists O. Rayevnyeva, I. Aksonova & V. Ostapenko (2018). Problems of development of business structures interaction of higher education with them were highlighted; the specifics of higher education systems of progressive foreign countries were considered, and it was determined that there are certain innovative models of partnership formation between higher education, government bodies, and the business environment within each of the countries.

The content of the main methodological provisions of partnership pedagogy is consistently and logically presented, technologies for involving parents in the educational process and the foundations of cooperation with parents are revealed, the features of pedagogical communication in a safe environment with subjects of the educational process are highlighted, the specifics and essence of using pedagogical support with participants in the educational process and implementing project technologies of partnership interaction in higher education institutions V. Kovalchuk (2023) are highlighted. A. Cardini (2006) identifies the following as the main barriers to organizing educational partnerships: functional and structural barriers (goals and resources), procedural barriers (culture and professional language), and cultural barriers (status differences and trust).

In turn, scientists from foreign countries consider the problem of partnership and draw attention to its importance. The works of scientists from foreign countries are of great importance in the formation of partnership pedagogy. Analysis of foreign research works provides grounds for better orientation in scientific approaches to the essence of partnership (partnership interaction) and its place in the modern educational space. The purpose of the research by C. Bamber & E. Elezi (2020) is to encourage higher education institutions working in partnerships to evaluate the development of partnerships not only based on financial indicators but also take into consideration the newly created knowledge as a result of social

capital, monitoring and reviewing and continuing professional development of staff. M. Lanford (2020) explores this in her article Long-term Sustainability in Global Partnerships in Higher Education. Scientists A. Cornelius-Bell, P. Bell & M. Dollinger (2023) advance holistic voice and partnership through an active student participation (ASP) approach, which is necessary for liberatory higher education informed by practitioners and researchers together.

The analysis of literary sources gives grounds to conclude that scientists have revealed the essence of the concept of "partnership pedagogy", proved the feasibility of studying this direction of pedagogy, indicated the principles on which partnership pedagogy is based, substantiated the feasibility of using pedagogical partnership in higher education institutions as a form of organizing joint activities that takes place on the principles of individual responsibility of students, positive interdependence; made a comparative analysis of the national and foreign experience of partnership relations. The need to improve teaching methods, enhance the quality of training of future specialists, and the need to introduce new management mechanisms for innovative training, organizing a system of practical training for education seekers through the establishment of close cooperation with employers, advanced training, expanding partnership relations between higher education institutions, vocational and other interested parties is proven.

PURPOSE OF THE ARTICLE: to study the problem of partnership as a component of the internal system of ensuring the quality of education and to clarify the role of partnership in organizing the educational process of higher education institutions.

Methodology

Analysis completed

The research methodology for studying the problem of partnership as a component of the internal system of ensuring the quality of education and clarifying the role of partnership in the organization of the educational process of higher education institutions was carried out using the principles.

1. Theoretical principles were substantiated using theoretical methods of scientific research: analysis of scientific literature, legislative and regulatory documents, comparison, synthesis, abstraction, idealization, concretization, modeling, induction and deduction, the method of generalizing information, and systematic and logical analysis to clarify the current state of partnership in the training of specialists in higher education institutions.
2. Methodological principles were substantiated using empirical research methods: conversation, observation, questionnaires, pedagogical diagnostics, pedagogical experiment, and modular control.

The purpose of the experimental work: to prove the need to implement the developed author's methodology for the formation of communicative competence of future specialists when implementing partnership relations, which will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

Considering the development of partnership relations as the most productive system of pedagogical interaction, the criteria that determine its effectiveness in organizing the educational process of higher education institutions have been identified, which are a necessary condition for creating favorable partnership relations between students, teachers, and the management of the educational institution, will help everyone in determining organizational measures and educational activities for the formation of communicative competence of future specialists when implementing partnership relations.

The results of the study were checked using the Fisher angular transformation criterion and showed:

In the process of the experiment, a study was carried out on the formation of communicative competence of future specialists in the implementation of partnership relations, the level of respondents' mastery of methods and forms of partnership pedagogy.

The criteria (motivational, cognitive, activity), indicators, and levels (elementary, constructive, creative) of the formation of communicative competence of future specialists in the implementation of partnership relations and the level of respondents' mastery of methods and forms of partnership pedagogy were determined.

A methodology for the formation of communicative competence of future specialists in the implementation of partnership relations, which is significant in pedagogical activity in a certain direction, has been developed. The methodology, in the context of the communicative competence of future specialists, provided for the formation of a high level of partnership interaction among specialists.

The experiment aimed to test the hypothesis that the implementation of the developed author's methodology for the formation of communicative competence of future specialists in the implementation of partnership relations will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

The experiment provided for the conduct of stages: ascertaining and forming. The results of the ascertaining stage of the experiment indicate a low state of formation of partnership interaction among students. Therefore, the developed methodology for the formation of communicative competence of future specialists in the implementation of partnership relations was introduced.

The results of the comparison of the ascertaining and formative stages of the experiment indicate positive changes in the levels of formation of communicative competence of future specialists when implementing partnership relations.

In the respondents of the experimental group, we observe an increase, and in the respondents of the control group, we do not observe significant changes in the dynamics of the level of formation of communicative competence of future specialists when implementing partnership relations. The results of the experiment make it possible to talk about the effectiveness of the methodology for the formation of communicative competence of future specialists when implementing partnership relations at the formative stage of the experiment.

When determining the sample of subjects, the general specificity of the research subject was taken into account. The total sample size was 140 subjects. When forming the sample, the criteria of content, representativeness, and equivalence were taken into account. The sample was formed by random selection using the technical procedure for calculating the selection step.

The reliability and validity of the obtained results and the objectivity of their assessment were ensured by applying a set of different research methods, using a group of respondents from educational institutions to analyze the results.

To assess the homogeneity of experimental and control data, statistical processing was carried out using MS Excel and SPSS (Statistical Package for Social Science) programs.

In our article, we used quantitative methods of data analysis. This group of empirical research methods includes methods of obtaining information about the object under study that allow identifying its quantitative characteristics.

Results and Discussion

1. Content and essential features of partnership.

In the conditions of higher education, partnership interaction is a specific form of cooperation that provides for a wide range of areas of cooperation between stakeholders, teachers, and higher education applicants. Partnership processes within the internal system of ensuring the quality of education in higher education are present at all stages of its development.

We consider partnership as an innovative modern interaction through the exchange of ideas, experiences, moods, and feelings; as the organization of effective cooperation with various social institutions in the socialization of students, their training, and upbringing; as the definition of common ways and actions to achieve cooperation in the educational process of higher education; as feedback and subject-subject relations of cooperation (Shetelya et al., 2023).

Partnership in higher education is considered as follows:

- One of the aspects of the openness of the pedagogical system, as a requirement for the educational space, as a social skill, when attention is focused on synergy, interaction, and learning carried out together with higher education students (Holos, 2022).
- A system of relationships that occur constantly in the process of joint activity;
- An organizational form of joint activity that, under appropriate conditions of active participation in the implementation of labor and its distribution, involves the union of individuals;
- A special type of relationship, connections that characterize the changes of teachers and higher education students, processes of mutual influence (subject-object “leadership”; subject-subject “on the level”; relations between teachers and students as “the one who is led and the one who leads”);
- A method of relationships and interaction organized on the principles of equality, voluntariness, and complementarity of the results of the activities of all participants in the educational process or professional activity, under which clearly coordinated and agreed actions of participants in a common cause are preserved, the rights of each of the parties, based on the principles of equality and mutual benefit;
- As a process of personal “exchange” and activity, resulting in the development of teachers and students and mutual enrichment of personalities (spiritual and informational “exchange” involves the exchange of thoughts, ideas, interests, feelings, etc., that which is the property of the inner world of a person, his interaction; practical – covers their real actions);
- A model of interpersonal relations – competition in the relations of subjects of activity; cooperation, as a necessary imbalance, or optimal educational activity of psychologically compatible subjects;
- A self-motivated process of establishing contacts with other people;
- A psychological indicator of the level of professional and personal growth of a person;
- As a specific form of organization of human activity, where communication is a way of realizing the needs of subjects, a necessary condition of activity, requiring the joining of efforts in influencing the individual’s isolated subject of activity;
- A way of solving problems, a guarantor of productive relations between people;
- Especially organized contact of the student with the teacher, long or temporary, characterized by their connection and mutual conditionality with the aim of changes in the activity, behavior, and relationships of a person;
- Psychological phenomenon – a process of participation, empathy, and mutual understanding;
- Pedagogical phenomenon – a specially organized, purposeful, socially significant process as a result of which the participants in the interaction undergo positive transformations;
- A social phenomenon characterized by the realization of objectively existing connections with the world and with each other of higher school teachers and students (Tadeush, 2020).

Based on partnership, we define the interaction of subjects of the educational process as the unity of opposite ways of exchange (communication, activity), opposite types of relationship (subject-object, subject-subject), and opposite types of content of exchange (practical, spiritual) (Knysh et al., 2023).

Today requires updating the system of relationships between applicants for educational space and the teacher, which are built on support, mutual trust, active cooperation with students, acceptance of collective proposals, and their discussion, which has a positive impact on the educational environment. Thus, there is an improvement in methodological tools (application of collaborative learning methods, active participation of the individual in the educational process, organization of research work, interactive technologies, use of the project method, creation of problem situations, stimulation of self-educational activity, stimulation of expressing one's own opinions, introduction of methods of mutual verification and self-assessment (Holos, 2022).

2. The main principles of partnership and their role in the internal system of ensuring the quality of education in a higher education institution.

Let us highlight the main principles of partnership:

- Positive and friendly attitude towards others;
- Respect for the human personality, recognition of peculiarity and uniqueness;

- Distribution of leadership (the right to choose and responsibility for it, proactivity, horizontality of relations);
- Humanization and openness;
- Socio-cultural conformity;
- Trust in each other and relationships;
- Acceptability of traditions and innovations;
- Organization of activities using the technique of “mutual respect – interaction – dialogue”;
- Social partnership (parity distribution of obligations, obligation to fulfill agreements, observance of equality of parties, voluntariness of acceptance);
- Construction of humanistic methods and benchmarks of achievement during joint activities (Kovalchuk, 2023):
 - Variability and mobility;
 - Systematicity and complexity;
 - Optimism and long-term;
 - Technological and efficiency;
 - Competence and scientificity;
 - Tolerance and harmony.

The pedagogical partnership is an interdisciplinary phenomenon, supplemented in content and updated in form by a variant of cooperative pedagogy. Collaborative work helps to implement pedagogical partnership, and interaction creates a favorable environment for the professional and personal development of the student and teacher. Therefore, the formula of pedagogical partnership is the absence of psychological distance in the educational environment in combination with interactive educational methods (Holos, 2022).

The potential foundations of partnership are laid in the very nature of man in the form of his social nature, cooperative principle, the dialogic nature of self-awareness and consciousness, which characterizes him as a factor in the formation of a subject, personality, person, and is the most important condition for his self-realization (Stratan-Artyshkova et al., 2022).

In the internal system of ensuring the quality of education in higher education institutions and partnership relations of all participants in the educational process, communication is important, which is based on openness, informality, constructiveness, and respect for another person. In such relationships, through the work of the Internet platform, the information space created by the educational institution acquires a certain importance, where communication takes place between the community, participants in the educational process, and educational resources.

Innovative forms of communication include communication using electronic means (trainings, round tables, webinars, master classes, Internet platforms, discussions, meetings), the purpose of which is a regular and constant process of communication for a more conscious involvement of applicants in the educational process, which affects the student's academic progress, helps in building an individual educational trajectory, adaptation to the educational process, provides information on the assessment and criteria for assessing the educational achievements of applicants for higher education (Voronova, 2022).

When implementing partnership pedagogy and organizing an internal system for ensuring the quality of education in a higher education institution, subject-subject relationships are taken into account – it is psychological basis. This type of relationship allows the student to act independently, and the educational process is the most optimal. However, other participants in the educational process take a tutoring position and act together. Therefore, the task of leaders, students, and teachers is to create a favorable atmosphere for the development of students' capabilities, which would satisfy their emotional, intellectual, and social needs (Kolomoiets et al., 2022).

3. Approaches and barriers in the process of implementing partnership pedagogy.

In the process of implementing partnership pedagogy, the following approaches are most significant:

- A personally oriented approach, which ensures the interaction of the teacher and the student with great respect for the person;

- A partnership approach, which ensures the organization of cooperation and the distribution of functions between participants in the educational process (Fedirchuk & Didukh, 2019).

Let us consider the groups of barriers that are the main ones in the development of educational partnerships:

- 1) Barriers associated with the organization of new forms of interaction– organizational barriers (localized experience of professional activity in education, lack of experience of teachers in participating in partnerships, administrative procedures, high employment, compensation and payment of labor for hidden costs of implementing the partnership);
- 2) Barriers associated with negative previous experience of participating in partnerships, with the definition of role positions in partnerships (responsibility in partnerships for determining status traditionally lies with the university, division of labor), in terms of the development of professional competence– anxiety of teachers, with leading specialists in the industry, communicative dominance of employers, top managers in meetings, discussions, dialogical interaction);
- 3) Barriers associated with the time factor (individual time resources of partnership participants, duration of the process of establishing partnership relations, assessment of individual contribution, financing of time costs, orientation towards reflective practices);
- 4) Barriers associated in educational conditions with the need to reconcile theory and practice (reflection of professional experience, orientation towards reproducing the pedagogical practice of an experienced teacher, formation of the practice of joint reflection) (Knysh et al., 2024).

4. The most common methods of cooperation between enterprise organizations and higher education institutions are clusters of partnership forms and partnership models of business structures and universities.

The most common methods of cooperation between enterprise organizations and higher education institutions are:

- Professionalization of education;
- Constant updating of skills and knowledge of specialists due to their aging;
- Taking into account the requirements of the industry when developing curricula;
- Reduction within the framework of multidisciplinary training of specialties;
- Development of partnership relations between higher education institutions and enterprises, including the contribution of enterprises to the modernization of educational equipment; organization of internships at the enterprise; participation of professionals in the learning process;
- Interaction at the stage of organizing the educational process – joint training of specialists by higher education institutions and companies; training, internships at the enterprise as a key element of vocational education;
- Various forms of employment promotion, which are the most developed method today, characterized by joint scientific and technical research, a variety of forms;
- A method of using in preparing students for later life, the evaluation of the success of educational programs and periodic studies of the professional career of graduates, as well as for assessing the effectiveness of existing programs of interaction between higher education and business (Sulym et al., 2023).

Methods of cooperation between enterprises and organizations and higher education institutions effectively contribute to the development of partnership relations between them and interaction between higher education and business structures, which should be resolved at the stage of obtaining education.

Analysis of the issues of collaboration between higher education and business structures in modern practice allowed us to generalize the main types and identify the following clusters of partnership forms (Pokidina, 2016):

- Collaboration in the field of development and research;
- Student mobility;
- Academic mobility;
- Implementation of the project “lifelong learning”;
- Curriculum development;

- Commercialization of results;
- Management;
- Entrepreneurial initiatives.

The most effective models of partnership between business structures and universities are the following (Lebedeva & Mytروفanova, 2017):

- Internship programs – enterprises take on internships for graduate students and prepare them for their requirements. Since retraining one employee costs the enterprise up to \$5,000, internships are beneficial for enterprises, where during the internship, students undergo an adaptation process, acquire practical skills, get acquainted with corporate culture, etc. Such a partnership satisfies the needs of enterprises in a highly qualified workforce more than it affects the increase in the level of practical training of university students;
- Training laboratories and courses from the enterprise increase the quality of training of specialists, and this can be partially solved by providing educational institutions with technologies in the format of training centers, laboratories, modern equipment, etc., which expands the opportunities for students, who will be able to acquire practical skills and knowledge with the help of modern equipment. This type of partnership between higher education institutions and enterprises that take an active part in educational activities has a highly positive impact on the national education system: preparation of textbooks, development of educational programs, creation of a system for advanced training of teachers and students, etc.;
- Programs of student competitions from the enterprise are created to stimulate students' interest in scientific and research work in the field of their chosen specialty, the possibility of supporting and identifying the most gifted students, to demonstrate creativity and independence in solving specific practical situations. Student competitions are a necessary and integral process of education and have a more indirect impact on the quality of specialist training;
- Lifelong training of teachers and employees of the enterprise, which is necessary to eliminate the imbalance in the labor market between the supply and demand of specialists when the skills and knowledge of graduates do not sufficiently meet the requirements of employers due to the rapid obsolescence of professional skills, enterprises, and higher education institutions – then it is advisable to cooperate according to this model;
- Creation of innovation centers, technology parks, and science parks, which contribute to the construction of "technological business incubators" and small innovative firms, providing a connection with a scientific center, a local university, a set of services, and financial circles. The creation of technoparks is the result of the activities of regions, new jobs, an effective mechanism for overcoming crises and revival;
- Other models of interaction – endowments, targeted contributions to the development of universities, excursions to the enterprise, publication of educational literature, support for research, preparation of scientific works, etc. (Rayevnyeva et al., 2018).

5. Advantages and directions of partnership in the organization of the educational process of higher education institutions and cooperation with business corporations.

Let us highlight the most significant advantages of partnership in the organization of the educational process of higher education institutions and cooperation with business corporations and enterprises:

- The functioning of relations between partners focused on the connection of practical professional activities with the theoretical component, with the coordination of the educational process;
- The possibility of students obtaining additional qualifications in the process of specialized training;
- Integration of skills and knowledge in the context of professional training of specialists;
- Financial support for educational infrastructure, active participation of the employer in the creation of a production and educational cluster;
- Mobility of education, which expresses the need for a flexible response of the vocational education system to external changes in the business environment and internal system changes;
- The focus on the common goals of the interaction participants through the correlation of the content of education with practical experience and constant feedback on solving real educational and professional tasks;
- Taking into account the capabilities, interests, expectations, and needs of the interaction participants;

- The possibility of collective discussion of current tasks;
- Organization of exchange of experience;
- Existing mechanisms of self-regulation and mutual support of the community;
- Public recognition of achievements, stimulation, and encouragement of active participants;
- Widespread use of dialogical forms of work (Puhach et al., 2021).

In higher education, the partnership is conditioned by integration processes and occurs in introversification and extraversification directions.

The introversification direction includes scientific and methodological partnership, pedagogical partnership, and corporate partnership.

The extraversification direction includes business and education partnerships, scientific partnerships, socio-cultural partnerships, informal partnerships, social partnerships, and information partnerships.

The specified directions and types of partnership in modern higher education are coordinated by mechanisms of identification, integration, and socialization, which determine the multifunctionality of opportunities and the multifacetedness of their goals and are aimed at intellectual and moral development, personal and professional self-determination, and further professional self-realization of higher education applicants (Tadeush, 2020).

6. Experimental research.

The purpose of the experimental study: to prove the need to implement the developed author's methodology for the formation of communicative competence of future specialists when implementing partnership relations, which will contribute to the growth of the creative level of partnership interaction as a result– the communicative competence of the future specialist.

Considering the development of partnership relations as the most productive system of pedagogical interaction, the criteria that determine its effectiveness in organizing the educational process of higher education institutions are identified:

- The right of each participant in pedagogical interaction to authenticity;
- The formation of the personal and professional readiness of the specialist to humanize the professional environment;
- Positive interdependence of the subjects of partnership;
- Openness;
- The ability to satisfy interpersonal needs in the partnership process;
- A partnership that provides a favorable psychological climate of interaction;
- A high level of development of communication skills;
- Awareness of the internal and external motivation of the joint activities of future specialists.

A necessary condition for creating favorable partnership relations between students, teachers, and the management of an educational institution is to take into account the selected criteria that will help everyone in determining organizational measures and educational measures regarding the formation of communicative competence of future specialists when implementing partnership relations.

The readiness of specialists to interact based on partnership implies the formation of:

- The ability to use methods, forms, and organizations of interaction with colleagues based on partnership to form communicative competence;
- Orientation and attitude in the process of establishing pedagogical interaction to the use of partnership in professional activities;
- Acquisition of knowledge about the essence and basic principles of partnership as a pedagogical technology.

A declarative study was conducted. In the process of the study, the respondents were 140 graduating students of higher education.

The study consisted of survey blocks.

The questions of the first block contributed to identifying the level of understanding of the concept, components of partnership, and the principles on which partnership is based. The survey results showed that only 25% of respondents correctly understand the concept of "partnership", and 15% realize the significance of the principles on which partnership is based.

The answers to the questions of the second block made it possible to find out the opinion of respondents about the importance of using partnership and its impact on the formation of communicative competence of future specialists when implementing partnership relations. The results of the study showed that the majority of respondents (70%) believe that the use of partnership relations is effective and important in the formation of communicative competence of future specialists.

The questions of the third block were aimed at determining the self-assessment of the level of formation of communicative competence of future specialists when implementing partnership relations and the level of respondents' mastery of methods and forms of partnership pedagogy. The results showed that only 20% of respondents have a high level of self-assessment of mastery of forms and methods of partnership pedagogy and formed communicative competence in the implementation of partnership relations.

The results of the study were checked using the Fisher angular transformation criterion and showed:

- The need to update the system of training specialists, the organization of the educational process of higher education institutions, the development and implementation of innovative technologies in the field of education, and communicative methods;
- The need to change the components content of professional disciplines, the introduction of new disciplines, strengthening their humanitarian orientation, the search for new organizational forms of training in higher education;
- Constant consideration of world experience in personnel training, the role of partnership in the organization of the educational process of higher education institutions;
- Strengthening interaction with foreign higher education institutions.

During the experiment, a study was carried out on the formation of communicative competence of future specialists when implementing partnership relationships and the level of respondents' mastery of methods and forms of partnership pedagogy.

The criteria (motivational, cognitive, activity), indicators, and levels (elementary, constructive, creative) of the formation of the communicative competence of future specialists in the implementation of partnership relations, the level of respondents' mastery of methods, and forms of partnership pedagogy were determined.

A methodology for the formation of the communicative competence of future specialists in the implementation of partnership relations was developed, which is significant in pedagogical activity in a certain direction. The methodology, in the context of the communicative competence of future specialists, provided for the formation of a high level of partnership interaction among specialists.

The experiment aimed to test the hypothesis that the implementation of the developed author's methodology for the formation of the communicative competence of future specialists in the implementation of partnership relations will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist. The experiment provided for the conduct of the stages: ascertaining and formative. The results of the ascertaining stage of the experiment indicate a low state of formation of students' partner interaction (Fig. 1):

- 18% of respondents in the EG and 19% of respondents in the CG have a creative level of partner interaction;
- 27% in the EG and 26% in the CG have a constructive level of outlined interaction, which indicates insufficient motivation to master basic competencies, lack of a creative approach in communication, and low level of ability to apply creative, innovative technologies to solve professional and pedagogical tasks.

- 55% of respondents in the EG and 55% of respondents in the CG have an elementary level of partner interaction.

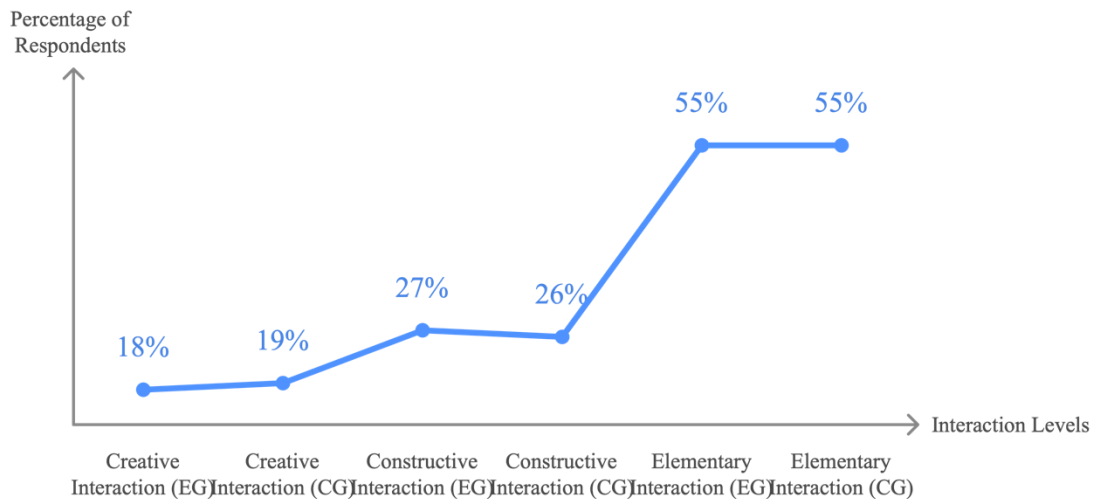


Figure 1. Levels of Partner Interaction Among Students in EG and CG.

Therefore, a developed methodology for forming the communicative competence of future specialists when implementing partner relationships was introduced.

The stages of implementing the author's methodology for forming the communicative competence of future specialists when implementing partnership relationships were as follows:

The motivational stage included creating positive attitudes towards the methodology for forming communicative competence of future specialists when implementing partnership relationships; ensuring an emotionally positive climate in the practical and educational activities of students; awareness of the role of partnership interaction; creating an open, communicative space for presenting the results of educational activities, personal self-expression; forming a value-based attitude towards the profession.

The cognitive stage included the formation of organizational, communicative, design, reflective, and creative abilities, skills, and abilities of students and the formation of professional knowledge, which included the acquisition of knowledge about the essence and content of communicative activity, methods of interaction in conflict situations, the sphere of pedagogical communication, and methods of communicative interaction with subjects of professional activity.

The activity stage provided for reflection on social and communicative experience, development of communicative skills and abilities in situations of professional interaction, analysis of the formed level of communicative competence, and correction of the level by applying the methodology of forming communicative competence of future specialists when implementing partnership relations.

The results of the comparison of the ascertaining and formative stages of the experiment indicate positive changes in the levels of formation of communicative competence of future specialists when implementing partnership relations.

In the respondents of the experimental group, we observe an increase in (Fig. 2):

- Creative level – from 18% to 27%;
- Constructive level – from 27% to 64% and a decrease in the indicators of the elementary level.

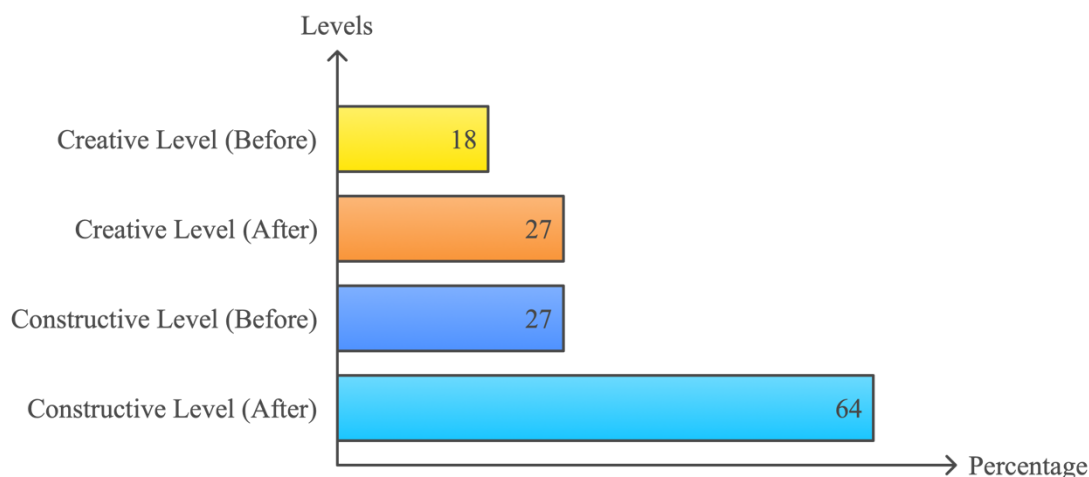


Figure 2. Changes in Respondents' Levels in Experimental Group.

In the respondents of the control group, we do not observe significant changes in the level of formation of communicative competence of future specialists in the implementation of partnership relationships. Using the Fisher angular transformation criterion, the results of the experimental work were checked ($\varphi_{emp} * > \varphi_{cr} *$) is 2.98, which indicates $\varphi_{emp} * > \varphi_{cr} *$).

The results of the experiment make it possible to talk about the effectiveness of the method of forming communicative competence of future specialists in the implementation of partnership relationships at the formative stage of the experiment.

The theoretical significance of the article is that it reveals and considers the content and essential features of partnership; identifies the main principles of partnership and shows their role in the internal system of ensuring the quality of education in a higher education institution; indicates significant approaches and barriers in the process of implementing partnership pedagogy, the most common methods of cooperation between enterprises and organizations and higher education institutions, clusters of partnership forms and partnership models of business structures and universities.

The practical significance of the research results is the need to implement the developed author's methodology for forming the communicative competence of future specialists when implementing partnership relationships, which will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist; the conclusions and results of the article can be used to introduce partnership pedagogy into the educational process as a component of managing the educational process of higher education.

The analysis of literary sources gave us grounds to conclude that scientists have revealed the essence of the concept of "partnership pedagogy", proved the feasibility of studying this direction of pedagogy, indicated the principles on which partnership pedagogy is based; substantiated the feasibility of using pedagogical partnership in higher education institutions as a form of organizing joint activities that takes place on the principles of individual responsibility of students, positive interdependence.

Significant in the analysis of the scientists' research is that it has been proven the need to improve teaching methods, strengthen the quality of training of future specialists, and the need to introduce new management mechanisms for innovative training, organizing a system of practical training for education seekers.

Therefore, the purpose of our experimental work was to develop and prove the need to implement the developed author's methodology for forming communicative competence of future specialists when implementing partnership relationships, which will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

The experiment aimed to test the hypothesis that the implementation of the developed author's methodology for the formation of communicative competence of future specialists in the implementation of partnership

relations will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

The results of the experiment make it possible to talk about the effectiveness of the methodology for the formation of communicative competence of future specialists in the implementation of partnership relations implemented at the formative stage of the experiment.

Conclusions

The content and essential features of partnership are considered; the main principles of partnership are highlighted, and their role in the internal system of ensuring the quality of education in a higher education institution is shown; significant approaches and barriers in the process of implementing partnership pedagogy are indicated, the most common methods of cooperation between enterprises and organizations and higher education institutions, clusters of partnership forms and partnership models of business structures and universities are indicated. The advantages and directions of partnership in organizing the educational process of higher education institutions and in cooperation with business corporations are substantiated.

The purpose of the experimental work was to prove the need to implement the developed author's methodology for forming the communicative competence of future specialists when implementing partnership relations, which will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

Considering the development of partnership relations as the most productive system of pedagogical interaction, the criteria that determine its effectiveness in organizing the educational process of higher education institutions are identified, which are a necessary condition for creating favorable partnership relations between students, teachers, and the management of the educational institution, will help everyone in determining organizational measures and educational activities regarding the formation of communicative competence of future specialists in the implementation of partnership relations.

An ascertaining study was conducted. In the process of the study, the respondents were 140 students in their final year of higher education.

The results of the study were checked using the Fisher angular transformation criterion and showed.

In the process of the experiment, a study was carried out on the formation of communicative competence of future specialists in the implementation of partnership relations, the level of respondents' mastery of methods and forms of partnership pedagogy.

The criteria (motivational, cognitive, activity), indicators, and levels (elementary, constructive, creative) of the formation of the communicative competence of future specialists in the implementation of partnership relations, the level of respondents' mastery of methods, and forms of partnership pedagogy were determined.

A methodology for the formation of the communicative competence of future specialists in the implementation of partnership relations was developed, which is significant in pedagogical activity in a certain direction. The methodology, in the context of the communicative competence of future specialists, provided for the formation of a high level of partnership interaction among specialists.

The experiment aimed to test the hypothesis that the implementation of the developed author's methodology for the formation of the communicative competence of future specialists in the implementation of partnership relations will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

The experiment provided for the conduct of the stages: ascertaining and formative. The results of the ascertaining stage of the experiment indicate a low state of formation of students' partnership interaction. Therefore, the developed methodology for the formation of communicative competence of future specialists in the implementation of partnership relations was introduced.

The results of the comparison of the ascertaining and formative stages of the experiment indicate positive changes in the levels of formation of communicative competence of future specialists in the implementation of partnership relations. In the respondents of the experimental group, we observe an increase, and in the respondents of the control group, we do not observe significant changes in the dynamics of the level of formation of communicative competence of future specialists in the implementation of partnership relations. The results of the experiment make it possible to talk about the effectiveness of the methodology for the formation of communicative competence of future specialists in the implementation of partnership relations at the formative stage of the experiment.

Regarding recommendations, it should be noted that at the stage of forming partnerships between higher education institutions and business structures, due to insufficient application in practice of the basic provisions of risk management, many projects are not fully completed. In this regard, there is a need to develop approaches to partnership risk management, which is because the basis of interaction is the effective distribution of risks and profits between partners. This aspect of the problem can be the subject of further research in the field of forming mutually beneficial partnerships between universities and businesses.

The contribution to the research is the implementation of the developed author's methodology for forming the communicative competence of future specialists in the implementation of partnership relations, which will contribute to the growth of the creative level of partnership interaction and, as a result, the communicative competence of the future specialist.

Ideas for future research, in our opinion, the construction of an optimal model of cooperation between business and universities in Ukrainian realities should be based on the principles of high autonomy and initiative, primarily of university management, in maintaining a dialogue with business representatives, identifying and responding to their needs in providing requested specialists and developed innovative ideas. Organizationally, this process should include career and knowledge transfer centers, which today are in the structure of universities, have appropriate documentary support, but in practice implement only a small number of the tasks set. Those educational institutions that achieve success in these areas become more attractive to both applicants and employers, and this is a guarantee of their financial stability.

The prospects for further research in the direction of implementing partnerships in higher education are: design of a model of partnership interaction; disclosure of a strategy for the development of partnership relations; introduction of effective forms and methods of partnership into the educational process of higher education; monitoring the results of partnership interaction, establishing feedback with partnership participants, researching the effectiveness, and making changes to partnership relations.

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