ОДЕСЬКИЙ ДЕРЖАВНИЙ АГРАРНИЙ УНІВЕРСИТЕТ

ІНОЗЕМНА МОВА

У НАУКОВІЙ ДІЯЛЬНОСТІ

Навчальний посібник

Одеса – 2021 – Odesa

УДК 81.111
І 67

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Рекомендовано до друку Науково-методичною радою
Одеського державного аграрного університету.
Протокол № 12 від 30 червня 2021 року

І 67 **Іноземна мова** у науковій діяльності: навч. посіб. / Н. М. Колісніченко, С. В. Насакіна, А. П. Маєв. – Одеса : ОРІДУ НАДУ, 2021. – 122 с.

У навчальному посібнику розкриваються основні засади забезпечення іншомовної комунікації у науковій діяльності з агро-, вет- та менеджерської спеціальностей. Призначено для здобувачів вищої освіти третього (докторського) рівня у: галузі знань 20 «Аграрні науки і продовольство» за спеціальностями 201 «Агрономія» та 204 «Технологія виробництва і переробки продукції тваринництва», галузі знань 21 «Ветеринарна медицина» за спеціальностями 211 «Ветеринарна медицина» та 212 «Ветеринарна гігієна, санітарія і експертиза», галузі знань 07 «Управління та адміністрування» за спеціальністю 073 «Менеджмент». Відповідно до програми викладено тематичні тексти та вправи до них щодо напрацювань в науці агрономії, економіки, менеджменту, ветеринарної медицини; підготовки наукових робіт – академічного письма; засад презентації наукової доповіді.

Видання адресовано для науково-педагогічних працівників закладів вищої освіти при підготовці курсів/циклів занять з питань іншомовної комунікації в науковій діяльності, ведення бесіди на різноманітні теми агрономії, представлення наукових досліджень іноземною мовою.

З М І С Т

ПЕРЕДМОВА

Процеси глобалізації, розвиток сучасного суспільства ставить перед вищою школою нові вимоги до підготовки фахівців: вміння креативно мислити, знаходити ефективні варіанти вирішення проблем, будувати і висловлювати свої ідеї чітко і логічно, представляти результати своєї творчої праці у формі академічних текстів. Удосконалення системи вищої освіти України реалізується на засадах академічної доброчесності. Крім того, постає завдання навчити здобувачів спілкуванню в іншомовному середовищі - формулювати й доводити власні думки, гіпотези й висновки, оформлювати академічний текст відповідно з світовими та європейськими нормами.

Матеріал навчального посібника – це логічно скомбіновані теми як агрономічного, ветеринарного, економічного та менеджерського напрямку, так і наукової діяльності молодих вчених. Матеріал посібника націлений на здобуття знань щодо організації, мовно-стилістичного оформлення і редагування академічних текстів. Використовувалися матеріали, які допоможуть вирішити актуальні проблеми здобувачів при написанні академічного тексту: моделі академічного письма, правила презентації наукових ідей, структура наукових праць, особливості написання статей, тез. До кожної із тем розроблено творчі практичні завдання. У процесі їх виконання здобувачі можуть навчитися аналітично сприймати інформацію, розуміти структуру і цілісність тексту, визначати складові елементи тексту, самостійно створювати матеріал для дослідження, використовуючи можливості Інтернет мережі. У практичних завданнях передбачено написання власних оригінальних академічних текстів.

Кожна тема навчального посібника має однакову структуру, що складається: з теоретичної частини, де висвітлено ключові питання теми; переліку основних визначень, понять і термінів; практичних завдань для аудиторної роботи; блоку питань для самоконтроля; рекомендованих джерел.

Навчальний посібник підготовлено для здобувачів вищої освіти третього (докторського) рівня у галузі знань 20 «Аграрні науки і продовольство» за спеціальностями 201 «Агрономія» та 204 «Технологія виробництва і переробки продукції тваринництва», галузі знань 21 «Ветеринарна медицина» за спеціальностями 211 «Ветеринарна медицина» та 212 «Ветеринарна гігієна, санітарія і експертиза», галузі знань 07 «Управління та адміністрування» за спеціальністю 073 «Менеджмент»; науково-педагогічних працівників закладів вищої освіти, які займаються дослідженням проблем іншомовної комунікації, представлення результатів наукових досліджень, а також для практичних працівників системи освіти, які цікавляться або залучені в наукову діяльність.

Метою посібника є надати майбутньому доктору філософії вичерпну, систематизовану інформацію про правила іншомовної комунікації в науковій діяльності; ознайомити з техніками презентації та допомогти у висвітленні власних наробок іноземною мовою.

Завдання для аспірантів: вільно читати оригінальну літературу іноземною мовою у відповідній галузі знань; оформляти отриману з іноземних джерел інформацію у вигляді перекладу або резюме; робити повідомлення і доповіді іноземною мовою на теми, пов'язані з науковою роботою здобувача ступеня доктора філософії, вести бесіду за фахом.

У результаті вивчення навчальної дисципліни здобувач ступеня доктора філософії повинен знати: основні фонетичні, лексичні і граматичні явища іноземної мови, що дозволяють використовувати її як засіб фахової та особистісної комунікації; найбільш уживану лексику за фахом. Здобувач повинен вміти: розуміти і використовувати мовний матеріал в усних і письмових видах мовленнєвої діяльності англійською мовою; використовувати на практиці набуті навчальні вміння, в тому числі певні прийоми розумової праці.

У результаті здобувач ступеня доктора філософії повинен володіти: навичками практичного аналізу логіки міркувань англійською мовою; навичками критичного сприйняття інформації англійською мовою. Визначальним фактором у досягненні встановленого рівня того чи іншого виду мовної комунікації є вимога професійної спрямованості практичного володіння іноземною мовою.

Автори висловлюють щиру подяку рецензентам і редактору за уважне прочитання рукопису посібника, зроблені цінні зауваження і пропозиції щодо його видання.

Частина 1.

AGRARIAN SCIENCE

TEMA 1.1. AGRICULTURE AND ITS BRANCHES

Навчальні цілі: формувати комунікаційні компетентності з тематики сутності та основних характеристик сільськогосподарської науки, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

1.1.1. AGRICULTURE

Agriculture helps to meet the basic needs of human and their civilization by providing food, clothing, shelters, medicine and recreation. Hence, agriculture is the most important enterprise in the world. It is a productive unit where the free gifts of nature namely land, light, air, temperature and rain water etc., are integrated into single primary unit indispensable for human beings. Secondary productive units namely animals including livestock, birds and insects, feed on these primary units and provide concentrated products such as meat, milk, wool, eggs, honey, silk and lac. Agriculture provides food, feed, fibre, fuel, furniture, raw materials and materials for and from factories; provides a free fare and fresh environment, abundant food for driving out famine; favours friendship by eliminating fights. Satisfactory agricultural production brings peace, prosperity, harmony, health and wealth to individuals of a nation by driving away distrust, discord and anarchy. It helps to elevate the community and leads to a better social, cultural, political and economical life. Agricultural development is multidirectional having galloping speed and rapid spread with respect to time and space. Farmers started using improved cultural practices and agricultural inputs in intensive cropping systems to enhance the production potential per unit land, time and input. It provided suitable environment to all these improved genotypes to foster and manifest their yield potential in newer areas and seasons. Agriculture consists of growing plants and rearing animals in order to yield, produce and thus it helps to maintain a biological equilibrium in nature.

1. What is agriculture?
2. Is agriculture a business sphere? Why?
3. What does agriculture provide?
4. What improved cultural practices do you know?

1.1.2. AGRICULTURE AS ART, SCIENCE AND BUSINESS OF CROP PRODUCTION

Agriculture is defined as the art, the science and the business of producing crops and the livestock for economic purposes.

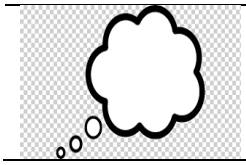
As an art, it embraces knowledge of the way to perform the operations of the farm in a skillful manner. The skill is categorized as:

1. *Physical skill*. It involves the ability and capacity to carry out the operation in an efficient way for e.g., handling of farm implements, animals etc., sowing of seeds, fertilizer and pesticides application etc.

2. *Mental skill*. The farmer is able to take a decision based on experience, such as: i) time and method of ploughing, ii) selection of crop and cropping system to suit soil and climate, iii) adopting improved farm practices etc.

As a science. It utilizes all modern technologies developed on scientific principles such as crop improvement/breeding, crop production, crop protection, economics etc., to maximize the yield and profit. For example, new crops and varieties developed by hybridization, transgenic crop varieties resistant to pests and diseases, hybrids in each crop, high fertilizer responsive varieties, water management, herbicides to control weeds, use of bio-control agents to combat pest and diseases etc.

As a business. As long as agriculture is the way of life of the rural population, production is ultimately bound to consumption. But agriculture as a business aims at maximum net return through the management of land, labour, water and capital, employing the knowledge of various sciences for production of food, feed, fibre and fuel. In recent years, agriculture is commercialized to run as a business through mechanization.



1. Prove that agriculture is an art.
2. Prove that agriculture is a science.
3. Prove that agriculture is a business.

1.1.3. BRANCHES OF AGRICULTURE

Agriculture has 3 main spheres:

Geoponic (Cultivation in earth-soil),

Aeroponic (cultivation in air).

Hydroponic (cultivation in water).

Agriculture is the branch of science encompassing the applied aspects of basic sciences. The applied aspects of agricultural science consist of study of field crops and their management (**Arviculture**) including soil management.

CROP PRODUCTION GROUP
Crop production. It deals with the production of various crops, which includes food crops, fodder crops, fibre crops, sugar, oil seeds, etc. It includes agronomy, soil science, entomology, pathology, microbiology, etc. The aim is to have better food production and how to control the diseases. **Horticulture.** Horticulture branch of agriculture deals with the production of flowers, fruits, vegetables, ornamental plants, spices, condiments (includes narcotic crops-opium, etc., which has medicinal value) and beverages. **Agricultural Engineering**. It is an important component for crop production and horticulture particularly to provide tools and implements. It is aiming to produce modified tools to facilitate proper animal husbandry and crop production tools, implements and machinery in animal production.
ANIMAL MANAGEMENT
Forestry. It deals with production of large scale cultivation of perennial trees for supplying wood, timber, rubber, etc. and also raw materials for industries. **Animal Husbandry**. The animals being produced, maintained, etc. Maintenance of various types of livestock for direct energy (work energy). Husbandry is common for both crop and animals. The objective is to get maximum output by feeding, rearing, etc. The arrangement of crops is done to get minimum requirement of light or air. This arrangement is called geometry. Husbandry is for direct and indirect energy.
ALLIED AGRICULTURE BRANCHES
Fishery Science. It is for marine fish and inland fishes including shrimps and prawns. **Home Science**. Home Science is application and utilization of agricultural produces in a better manner. When utilization is enhanced production is also enhanced. e.g., a crop once in use in south was found that it had many uses now.

On integration, all the seven branches, first three are grouped as for crop production group and next two for animal management and last two as allied agriculture branches. Broadly in practice, agriculture is grouped in four major categories.

A. Crop Improvement	Plant breeding and genetics Bio-technology
B. Crop Management	Agronomy Soil Science and Agricultural Chemistry Seed technology Agricultural Microbiology Crop-Physiology Agricultural Engineering Environmental Sciences Agricultural Meteorology

C. Crop Protection	Agricultural Entomology Plant Pathology Nematology
D. Social Sciences	Agricultural Extension Agricultural Economics
E. Allied Disciplines	Agricultural Statistics English Mathematics Bio-Chemistry etc.

1.1.4. SCIENTIFIC AGRICULTURE

A primitive form of agriculture in which people working with the crudest of tools, cut down a part of the forest, burnt the underneath growth and started new garden sites. After few years, when these plots lost their fertility or became heavily infested with weeds or soil-borne pests, they shifted to a new site. This is also known as *assartage system* (cultivating crops till the land is completely worn-out) contrary to the *fallow system*. Fallow system means land is allowed for a resting period without any crop.

Subsidiary Farming. Rudimentary system of settled farming, which includes cultivation, gathering and hunting. People in groups started settling down near a stream or river as permanent village sites and started cultivating in the same land more continuously, however the tools, crops and cropping methods were primitive.

Subsistence Farming. Advanced form of primitive agriculture i.e., agriculture is considered as a way of life based on the principle of "Grow it and eat it" instead of growing crops on a commercial basis. Hence, it is referred as raising the crops only for family needs.

Mixed Farming. It is the farming comprising of crop and animal components. Field crop-grass husbandry (same field was used both for cropping and later grazing) was common. It is a stage changing from food gathering to food growing.

Advanced Farming. Advanced farming practices include selection of crops and varieties, seed selection, green manuring with legumes, crop rotation, use of animal and crop refuse as manures, irrigation, pasture management, rearing of milch animals, bullocks, sheep and goat for wool and meat, rearing of birds by stall feeding etc.

Scientific Agriculture (19th Century). During 18th century, modern agriculture was started with crop sequence, organic recycling, introduction of exotic crops and animals, use of farm implements in agriculture etc. During 19th century, research and development (R&D) in fundamental and basic sciences were brought under applied aspects of agriculture. Agriculture took the shape of a teaching science. Laboratories, farms, research stations, research centres, institutes for research, teaching and extension (training and demonstration) were developed. Books, journals, popular and scientific articles, literatures were introduced. New media, and audio-visual aids were developed to disseminate new research findings and information to the rural masses.

Present Day Agriculture (21st Century). Today agriculture is not merely production oriented but is becoming a business consisting of various enterprises like livestock (dairy), poultry, fishery, piggery, sericulture, apiary, plantation cropping etc. Now, a lot of developments on hydrological, mechanical, chemical, genetical and technological aspects of agriculture are in progress. Governments are apportioning a greater share of national budget for agricultural development. The farmers are being supplied with agricultural inputs on subsidy. Policies for preserving, processing, pricing, marketing, distributing, consuming, exporting and importing are strengthening. Agro-based industries and crafts are developing. Agricultural planning, programming and execution are in progress.

?	1. What are the stages of agriculture development? 2. What are the characteristics of present day agriculture? 3. What areas do modern Ukrainian scientistists research in agriculture?

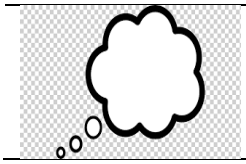
1.1.5. AGRICULTURE IN UKRAINE ECONOMY

Ukraine has always been known as an agrarian country.

Ukraine agriculture has been evolving since it achieved independence in 1991, following the breakup of the Soviet Union. State and collective farms were officially dismantled in 2000. Farm property was divided among the farm workers in the form of land shares and the newest shareholders leased their land back to newly-formed private agricultural associations. The sudden loss of State agricultural subsidies had an enormous effect on every aspect of Ukrainian agriculture. The contraction in livestock inventories that had begun in the late 1980's continued and intensified. Fertilizer use fell by 85 percent over a ten-year period, and grain production by 50 percent. Farms were forced to cope with fleets of aging, inefficient machinery because no funds were available for capital investment. At the same time, however, the emergence from the Soviet-style command economy enabled farmers to make increasingly market-based decisions regarding crop selection and management, which contributed to increased efficiency in both the livestock and crop-production sectors. Difficulty in obtaining credit, especially large, long-term loans, remains a significant problem for many farms.

Ukraine has rich natural potential: 70% of Ukrainian territory consists of arable land, and 66% of this is covered with the most fertile soils in the world (called "chornozem", or black earth) and profits from favourable climatic conditions for planting.

Despite favourable natural conditions, Ukraine has not been able to capitalize on its potential advantages in the agricultural sector.



What would you recommend to improve Ukrainian agriculture?

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What is agriculture?
2. Is agriculture art, science or business?
3. What is the difference between agriculture as art and agriculture as science?
4. What are the branches of agriculture?
5. What branch is your sphere of scientific interest?
6. What stages of agriculture are there?
7. What are the strategies to develop Ukrainian agriculture?

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TEMA 1.2. RECENT FINDINGS IN AGRARIAN SCIENCE

Навчальні цілі: формувати комунікаційні компетентності з тематики останніх досягнень агрономічної науки, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

1.2.1. AGRONOMY

Agronomy is the art and underlying science in production and improvement of field crops with the efficient use of soil fertility, water, labourer and other factors related to crop production. Agronomy is the field of study and practice of ways and means of production of food, feed and fibre crops.

Agronomy is defined as “a branch of agricultural science which deals with principles and practices of field crop production and management of soil for higher productivity”.

Among all the branches of agriculture, agronomy occupies a pivotal position and is regarded as the mother branch or primary branch. Like agriculture, agronomy is an integrated and applied aspect of different disciplines of pure sciences.

Agronomy has three clear branches namely,

i) Crop Science,
ii) Soil Science,
iii) Environmental Science that deals only with applied aspects.

Soil-Crop-Environmental relationship. Agronomy is a synthesis of several disciplines like crop science, which includes plant breeding, crop physiology and biochemistry etc., and soil science, which includes soil fertilizers, manures etc., and environmental science which includes meteorology and crop ecology.

1.2.2. BASIC PRINCIPLES OF AGRONOMY

• Planning, programming and executing measures for maximum utilization of land, labourer, capital and other factors of production.

• Choice of crop varieties adaptable to the particular agro-climate, land situation, soil fertility, season and method of cultivation and befitting to the cropping system.

• Proper field management by tillage, preparing field channels and bunds for irrigation and drainage, checking soil erosion, leveling and adopting other suitable land improvement practices.

• Adoption of multiple cropping and also mixed or intercropping to ensure harvest even under adverse environmental conditions.

• Timely application of proper and balanced nutrients to the crop and improvement of soil fertility and productivity. Correction of ill-effects of soil reactions and conditions and increasing soil organic matter through the application of

green manure, farm yard manure, organic wastes, bio fertilizers and profitable recycling of organic wastes;

• Choice of quality seed or seed material and maintenance of requisite plant density per unit area with healthy and uniform seedlings;

• Proper water management with respect to crop, soil and environment through conservation and utilization of soil moisture as well as by utilizing water that is available in excess, and scheduling irrigation at critical stages of crop growth.

• Adoption of adequate, need-based, timely and exacting plant protection measures against weeds, insect-pests, pathogens, as well as climatic hazards and correction of deficiencies and disorders;

• Adoption of suitable and appropriate management practices including intercultural operations to get maximum benefit from inputs dearer and difficult to get, low-monetary and non-monetary inputs;

• Adoption of suitable method and time of harvesting of crop to reduce field loss and to release land for succeeding crop(s) and efficient utilization of residual moisture, plant nutrients and other management practices;

• Adoption of suitable post-harvest technologies.

1.2.3. AGRONOMY AS A SCIENCE

Agronomy is a science that helps to feed the world. We can call the Agronomy as backbone of all agricultural sciences, because the management of soil and water, with a view to achieving the production potential of high yielding varieties, in green revolution, is exclusively an agronomic domain. It has the capacity to reach the poorer section of the society to bring out the desired results. Agronomists can be able to synthesise production practices from several fields of specialization.

The problem of global food security remains unsolved. The increase in population means a growing demand for food in the world, whereas the essential factors in food production such as cultivated land and fresh water are decreasing continuously. Current trends on world agriculture show that it is imperative to find a scientific and rational way to develop it, a way that can not only steadily increase the output but also ensure long term sustainable use of resources in the process of promoting agricultural development.

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What kind of soil is there in your country?
2. Why is good soil important?
3. Where do farmers get water?
4. How do water shortages hurt farmers?
5. What agricultural products of Ukraine are popular in the world?

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ТЕМА 1.3. RECENT FINDINGS IN CROPS AND CROP PRODUCTION

Навчальні цілі: формувати комунікаційні компетентності з тематики рослинництва, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

1.3.1. CROPS AND CROP PRODUCTION

When plants of the same kind are cultivated at one place on a large scale, it is called *a crop*. For example, crop of wheat means that all the plants grown in a field are that of wheat.

The climatic conditions like temperature, humidity and rainfall vary from one region to another. Accordingly, there is a rich variety of crops grown in different parts of the world.

In general, crop is an organism grown or harvested for obtaining yield. Agronomically, crop is a plant cultivated for economic purpose.

1.3.2. CLASSIFICATION OF CROPS

Classification is done to generalize similar crop plants as a class for attaining better understanding of them. Field crops are classified in the following ways.

- According to range of cultivation
- According to the place of origin
- Botanical classification
- Commercial classification
- Economic/Agricultural/Agrarian classification
- Seasonal classification
- Classification based on ontogeny
- According to cultural requirement
- According to important uses

Range of Cultivation

(a) Garden crop - Grown on a small scale in gardens. e.g., onion.
(b) Plantation crop - Grown on a large scale in estates and perennial in nature. e.g., tea, coffee, cacao.
(c) Field crop - Grown on a vast scale under field condition. They are mostly seasonal such as rice, wheat, cotton etc.

Place of Origin

(a) Native - Crops grown within the geographical limits of their origin.
(b) Exotic or Introduced - Crops introduced from other countries, such as tobacco, potato, jute, maize, etc.

Botanical/Taxonomical Classification According to systematic botany plants are classified as order, family etc. Similarly crop plants are grouped into families.

(a) Poaceae (Graminae): Cereals, millets and grasses
(b) Papilionaceae (Legumes): Pulses, legume fodders, vegetables, groundnut, berseem, green manures etc.
(c) Cruciferae: Mustard, radish cabbage, cauliflower etc.
(d) Cucurbitaceae: All gourds, cucumber, pumpkin etc.
(e) Malvaceae: Cotton, lady's finger, Roselle etc.
(f) Solanaceae: Potato, tomato, tobacco, chillies
(g) Tiliaceae: Jute
(h) Asteraceae (Compositae): Sunflower, safflower, niger
(i) Chenopodiaceae: Spinach, sugar beet
(j) Pedeliaceae: Sesame
(k) Euphorbiaceae: Castor, tapioca
(l) Convolvulaceae: Sweet potato
(m) Umbelliferae: Coriander, cumin, carrot, anise
(n) Liliaceae: Onion, garlic
(o) Zingiberaceae: Ginger, turmeric

Commercial Classification. Based on the plant products which come into the commercial field.

(a) Food crops: Rice, wheat, green gram, soybean, groundnut, etc.
(b) Food crops/Forage crops: All fodders, oats, sorghum, maize, napier grass, stylo, Lucerne etc.
(c) Industrial/Commercial crops: Cotton, sugarcane, sugar beet, tobacco, jute, etc.
(d) Food adjuvunts: Turmeric, garlic, cumin, etc.

Economic/Agrarian/Agricultural Classification. This classification is based on use of crop plants and their products. This is an important classification as for as agronomy is concerned (Agronomic classification).

(a) Cereals - They are cultivated grasses grown for their edible starchy grains (one seeded fruit– caryopsis). Larger grains used as staple food are cereals–rice, wheat, maize, barley, oats etc.
(b) Millets - Small grained cereals, which form the staple food in drier regions of the developing countries, are called millets.
(c) Oil seeds - Crops that yield seeds rich in fatty acids, are used to extract vegetable oils. e.g., groundnut or peanut, sesamum or gingelly, sunflower, castor, linseed or flax, niger, safflower, mustard and cotton.
(d) Pulses - Seeds of leguminous plants used as food. They produce dal rich in protein. e.g., red gram, black gram, green gram, cowpea, bengal gram, horse gram,

dew gram, soybean, peas or garden pea and garden-bean.
(e) Feed/Forage - It refers to vegetative matter, fresh or preserved, utilized as feed for animals. It includes hay, silage, pasturage and fodder. e.g., bajra napier grass, guinea grass, fodder-sorghum, fodder-maize, lucerne, desmanthus, etc.
(f) Fibre crops - Plants grown for their fibre yield. There are different kinds of fibre. They are: (i) seed fibre–cotton, (ii) stem fibre-jute, mesta, (iii) leaf fibre–agave, pineapple.
(g) Sugar and starch crops - Crops grown for production of sugar and starch. e.g., sugarcane, sugar beet, potato, sweet potato, tapioca and asparagus.
(h) Spices and condiments - Crop plants or their products used to season, flavour, taste, and add colour to the fresh or preserved food. e.g., ginger, garlic, fenugreek, cumin, turmeric, chillies, onion, coriander, anise and asafetida.
(i) Drug crops/medicinal plants - Crops used for preparation of medicines. e.g., tobacco, mint etc.
(j) Narcotics, fumitories and masticatories - Plants/products used for stimulating, numbing, drowsing or relishing effects. e.g., tobacco, ganja, opium poppy.
(k) Beverages - Products of crops used for preparation of mild, agreeable and stimulating drinking. e.g., tea, coffee, cocoa

Seasonal Classification. Crops are grouped under the seasons in which their major field duration falls.

According to Ontogeny. It is a classification based on the life cycle of a plant.

(a) Annual crops - Crop plants that complete life cycle within a season or year. They produce seed and die within the season. e.g., wheat, rice, maize, mustard.
(b) Biennial crops - Plants that have life span of two consecutive seasons or years.
(c) Perennial crops - They live for three or more years. They may be seed bearing or non-seed bearing. e.g., sugarcane, napier grass. In general perennial crops occupy land for more than 30 months.

According to Cultural Requirement of Crops. Certain group of plants is alike in cultural requirements due to their similar agro-botanical or morpho agronomical characters.

According to suitability of toposequence:

(i) Crops grown on upland - Levelled elevated land with drain all around or unbunded levelled land with drains or drops. Crops that cannot tolerant water stagnation come under this group. e.g., red gram, groundnut, maize, sorghum, cotton, sesamum, napier etc. Crops that require sufficient soil moisture but cannot tolerate water stagnation. e.g., Potato, sugarcane, upland rice, ragi, wheat, black gram.
(ii) Crops grown on lowland - These lands are provided with dykes or bunds all around to stagnate water. Crops that require abundant supply of water and can withstand prolonged water logged conditions. e.g., rice, daincha, Para grass and jute.

According to source of water

(i) Irrigated crops - The crop cultivation primarily depends upon the irrigation water for a part/ entire growth period of the crop.
(ii) Rainfed crops - The crop cultivation entirely depends upon the rainfall received. Crop varieties depend upon the season and the rainfall pattern.

According to moisture availability the soil

(i) Wet lands - The soil moisture is allowed to occupy both macro and microspores. Anaerobic field condition prevails here. Crops suitable are those crops, which tolerate water stagnation. e.g., green manures like sesbania group, grasses etc.
(ii) Dry lands - The soil moisture is allowed only on to microspores. Macro pores are filled with air. Magnitude of soil moisture varies according to the crop. Crops like maize, highly sensitive to excess moisture and drought, crops tolerant to drought and temporary stagnation, sorghum are cultivated in this type of field condition.

According to the suitability of the textural groups of soils

(i) Crops suitable to sandy loam (light) soils - Sorghum, bajra, green gram, sunflower, potato, onion, carrot etc.
(ii) Crops suitable to silty loam (medium) soils - Jute, sugarcane, maize, cotton, mustard, tobacco, bengal gram, red gram, cowpea, etc.
(iii) Crop suitable to clay loam (heavy) soils - Rice, wheat, barley, linseed, lentil, para grass, guinea grass, marvel grass etc.

According to tolerance to problem soils

(i) Tolerant to acidic soils - Wet rice, potato, mustard.
(ii) Tolerant to saline soils - Chillies, cucurbits, wheat, cluster beans etc.
(iii) Tolerant to alkali/sodic soils - Barley, cotton, sunflower, maize, etc.
(iv) Tolerant to waterlogged soils - Wet rice
(v) Crops tolerant to soil erosion - Marvel grass, groundnut, black gram, rice bean, moth bean, and horse gram.

According to tillage requirement

(i) Arable crops - Require preparatory tillage. e.g., potato, tobacco, rice, maize.
(ii) Non-arable crops – may not require preparatory cultivation/tillage. e.g., para grass.

According to the depth of root system

(i) Shallow rooted crops – Rice, potato, and onion.
(ii) Moderately deep rooted – Wheat, groundnut, castor, and tobacco.
(iii) Deep rooted – Maize, cotton, and sorghum.
(iv) Very deep rooted – Sugarcane, safflower, lucerne, and red gram.

According to the tolerance to hazardous weather condition

(i) Frost tolerant – Sugar beet, beet root.
(ii) Cold tolerant – Potato, cabbage, and mustard.
(iii) Drought tolerant – Bajra, jowar, barley, safflower, castor.

According to method of sowing/planting

(i) Direct seeded crop - Where the seeds are sown directly either dry or sprouted. upland rice, wheat, jowar, bajra, groundnut etc.
(ii) Planted crops - Where plant parts are planted directly. e.g., sugarcane, potato, sweet potato, napier, guinea grass.
(iii) Transplanted crops - Where seedlings are raised in the nursery, pulled out and planted in the field: rice, ragi, bajra, tobacco, bellary onion, brinjal.

According to inter-tillage requirement specially earthing up

i) Intertilled crops - Potato, sweet potato, groundnut, maize, sugarcane, and turmeric.
ii) Non-intertilled crops - Fodder sorghum, deenanath grass, para grass etc.

According to length of field duration of crops

(i) Very short duration crops (upto 75 days): pulses
(ii) Short duration crops (75–100 days): sunflower, cauliflower, upland rice
(iii) Medium duration crops (100–125 days): wheat, groundnut, sesame
(iv) Long duration crops (125–150 days): mustard, tobacco, cotton
(v) Very long duration crops: above 150 days: sugarcane, red gram, castor.

According to the method of harvesting

(i) Reaping: rice, wheat,
(ii) Uprooting by pulling: bengal gram, black gram, lentil, rapeseed
(iii) Uprooting by digging: potato, sweet potato, groundnut, carrot etc.
(iv) Picking: cotton, vegetables, brinjal, bhendi, chillies
(v) Priming: tobacco
(vi) Cutting: berseem, napier, amaranthus
(vii) Grazing: stylo.

According to post harvest requirement

(i) Curing: tobacco, mustard
(ii) Stripping: jute, sunnhemp
(iii) Shelling: groundnut
(iv) Ginning: cotton
(v) Seasoning: turmeric, chillies
(vi) Grading and sorting : potato, rice, wheat, fibre crops etc.

Based on crops growing soil condition

(i) Psammophytes (Sandy soil): castor
(ii) Lithophytes (Rock surface): ferns
(iii) Chasmophytes (Rock crack): potato
(iv) Acedophytes (Acid soil): potato
(v) Basophytes (Alkali soil): rice
(vi) Calciphytes (Basic soil): asparagus
(vii) Halophytes (Saline soil): sugar beet

Based on climatic condition

(i) Tropical crop: coconut, sugarcane
(ii) Sub-tropical crop: rice, cotton
(iii) Temperate crop: wheat, barley
(iv) Polar crop: all pines, pasture grasses

According to Important Uses. Though plants are useful in many ways only certain uses are given below.

(a) Catch crops/contingent crops are those crops cultivated to catch the forth coming season. Generally, they are of very short duration, quick growing, harvestable or usable at any time of their field duration and adaptable to the season, soil and management practices. They provide feed, check weed growth, conserve soil, utilized added fertilizer and moisture. e.g., green gram, black gram, cowpea, onion.
(b) Restorative crops are those crops, which provide a good yield along with enrichment or restoration of soil fertility or amelioration of the soils e.g., legumes.
(c) Exhaustive crops are those crop plants, which on growing leave the field exhausted because of a more aggressive nature. e.g., sunflower etc.
(d) Paira crop/residual crops are those crop plants which are sown a few days or weeks before the harvest of the standing mature crops to utilize the residual moisture, without preparatory tillage, e.g., rice fallow pulses black gram, lathyrus, lentil etc.
(e) Smother crops are those crop plants which are able to smother or suppress the weed growth by providing suffocation (curtailing movement of air) and obscuration (of the incidental radiation) e.g., barley, mustard, cowpea, etc.
(f) Cover crops are those crop plants, which are able to protect the soil surface from erosion (wind, water or both) through their ground covering foliage and or root mats. e.g., sweet potato.
(g) Nurse crops: A companion crop, which nourishes the main crop by way of nitrogen fixation and or adding the organic matter into the soil. e.g., cowpea intercropped with cereals, glyricidia, tephrosia in tea.
(h) Guard/barrier crops are those crop plants, which help to protect another crop from trespassing or restrict the speed of wind and thus prevent crop damage, e.g., mesta around sugarcane; safflower around gram.
(i) Trap crops are those crop plants grown to trap soil borne harmful parasitic weeds, e.g., orabanche and striga.
(j) Augmenting crops are those sub crops sown to supplement the yield of the main

crop. e.g., Mustard or cabbage with berseem to augment the forage yield of berseem.
(k) Alley crops are those arable crops, which are grown in 'alleys' formed by trees or shrubs, established mainly to hasten soil fertility restoration, enhance soil productivity and reduce soil erosion, e.g., growing pulses in between the rows of casuarina.

1.3.3. PRINCIPLES OF PLANT DISTRIBUTION

Environmental factors are highly influential in determining the natural distribution of plants. There are eight principles of plant distribution

- Evolution
- Climatic factors like light, temperature, moisture, wind etc.
- Edaphic factors like soil, parent material, physiography
- Dispersal of flora
- Plant migrations
- Climatic variations or change
- Relative distributions of land and sea (occurrence in geological time) and it exerts a high degree of control over distribution of flora
- Biotic factors like obligate insect pollination, seed dissemination by animals and grazing by live stock directly influence the plant distribution.

1.3.4. THEORIES GOVERNING CROP ADAPTATION AND DISTRIBUTION

Theory of tolerance. Each plant or living organisms is able to thrive well in certain climatic conditions below which and above which the plant can't grow, i.e., it requires optimum climatic conditions. Temperature is one of the most common limiting factors in plant distribution. Many tropical crops such as rubber, cocoa, banana will not withstand freezing temperature (0°C). In these rubber probably has the narrowest tolerance range and banana the widest range for temperature tolerance.

Theory of avoidance. It may be accomplished through rapid completion of the life cycle, as in ephemerals, dormancy in seeds to avoid effects of the hottest and driest periods, dormancy in vegetative parts or roots of all the perennials, water accumulation in succulents and extremely deep root systems to avoid moisture deficiency.

Theory of factors replaceability. One factor that can be replaced by another or substituted by another. In particular,

- Elevation can be substituted for latitude because of its temperature effects. The climatic conditions at the latitudes of 35–45° N resembles to that of tropical regions at elevation of 4000–6000 ft.
- The angle direction of slope may be substituted for latitude. This is also a temperature adjustment, depending on the angle of exposure to solar radiation, wind etc.
- Parent materials may compensate for climate.
- Rainfall may be replaced by fog and to some extent by dew.
- Soil texture may be substituted for moisture.

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What are the main soil components?
2. How do they interact to each other?
3. What soil is regarded to be healthy and what unhealthy?
4. What crops grow well in an acid soil?
5. What can the PH tell you about the soil?

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Частина 2.

VETERINARIAN SCIENCE

TEMA 2.1. VETERINARIAN SCIENCE

Навчальні цілі: формувати комунікаційні компетентності з тематики пов'язаної з ветеринарною медициною, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

2.1.1 TETANUS

Tetanus is one of the most distressing of all equine diseases. It is painful and immensely stressful for the horse and usually results in death unless treated aggressively with antitoxin at an early stage. The bacterial spores are endemic in the soil and can enter the body through the smallest of wounds, so that unprotected horses are at serious risk of contracting the disease. The incidence of tetanus is all the more unpleasant, given that complete immunisation is very easily achieved by vaccination.

Many people are confused by the various methods of dealing with tetanus. Put simply, your veterinary surgeon can treat a horse suffering from tetanus with antitoxin, or he can prevent tetanus from developing, post-injury, by using antitoxin, and also prevent tetanus permanently by using a vaccine, generally called tetanus toxoid.

Antitoxin is produced from specially treated horses with high levels of tetanus antiserum in their blood, and is used mainly as an essential part of the treatment of tetanus (see page 200). It may also be used by your veterinary surgeon at the time of an injury to neutralize immediately any toxin that may be formed. Unfortunately, this effect does not last more than about three weeks, so antitoxin is useless to prevent the disease in the long term.

Vaccination using tetanus toxoid is a completely different procedure from the above; it takes longer to become effective, but the immunity is then long-lasting. All foals should be vaccinated by the time they are four months of age, and older horses, if not already protected, should begin a course of vaccinations immediately upon acquisition. Tetanus toxoid is used for the vaccinations: it is a deactivated form of toxin which stimulates the development of the horse's immune system to destroy tetanus bacteria when they become established in the body. The first dose alerts the

immune system; the second dose, given approximately one month later, stimulates a full response, and immunity develops gradually over the next week to ten days. This immunity is then long-lasting. A first booster is given after one year, then every two or three years according to current research recommendations.

A booster given to the pregnant mare about one month prior to foaling maximizes the immunity provided via the colostrum. The foal is then protected for about four months, when permanent vaccination can proceed. Foals born from mothers that are not vaccinated can be started much earlier, as soon as their immune system reaches maturity at two to three weeks of age.

If an unvaccinated horse is injured, vaccination alone at that time will not protect it from tetanus. Antitoxin and an initial dose of vaccine should be given, followed by a second dose of vaccine four weeks later.

Are the following statements true (T) or false (F)? Tick the correct answer.

S t a t e m e n t s	**T**	**F**
Example: Antitoxin is produced from specially treated horses with high levels of tetanus antiserum in their blood.	√	
1. If a vaccinated horse is injured, vaccination alone at that time will not protect it from tetanus.		
2. Tetanus toxoid is used for the vaccinations:		
3. Antitoxin is produced from specially treated horses with high levels of tetanus antiserum in their urine.		
4. Tetanus is one of the most distressing of all equine diseases.		

Tetanus- also known as **lockjaw** is a bacterial infection characterized by muscle spasms. In the most common type, the spasms begin in the jaw and then progress to the rest of the body. Each spasm usually lasts a few minutes. Other symptoms of tetanus may include fever, sweating, headache, trouble swallowing, and high blood pressure.

2.1.2 CONGENITAL PORTOVASCULAR ANOMALIES IN LABRADOR RETRIEVERS

Portovascular anomalies (PSS) are defined as vascular communication between the portal vein or one of the mesenteric veins and the caudal vena cava or azygous vein in small-breed dogs and patent ductus venosus in large-breed dogs.

Portovascular anomalies allow access of portal blood to the systemic circulation without first passing the liver. Congenital extrahepatic portosystemic shunt occurs in dogs very often, but intrahepatic portovascular anomalies are seen in animals rarely. Literature describes also the acquired portosystemic shunts in response to portal hypertension caused by liver fibrosis or chronic cirrhosis. That form is usually extrahepatic. The etiology of congenital portosystemic shunts is not known, but

extrahepatic PSS usually occurs in certain lines of Miniature Schnauzers, Yorkshire Terriers, Lhasa Apso and Shin Tzu. Irish Wolfhounds, Irish Setters, Retrievers, Old English Sheepdogs are predisposed to intraheptic portosystemic shunts. And that can indicate the genetic may be one of the causes of portosystemic shunts.

The first signs of PSS occur in dogs before 10 months of age. Usually affected animals are smaller and less active than other puppies. Neurological abnormalities, polyuria, polydipsia, vomiting and ptyalism are observed in sick dogs. In biochemical analysis of blood serum ALT and AP activities may be normal or slightly increased, serum albumin and urea nitrogen concentrations are decreased, mild hypoglycemia occurs and serum ammonia concentration can be elevated. Radiographically the liver may be small. To confirm the diagnosis of portosystemic shunts blood ammonia test and ultrasonography or scintigraphy or portography should be done.

?

1. What are Portovascular anomalies defined as?
2. When does the first signs of PSS occur?
3. What are affected animals usually like?

2.1.3. OTITIS EXTERNA IN DOGS

Otitis externa is an inflammation of the outer ear and ear canal. Otitis externa is commonly observed in dogs, but rarely in cats. Statistics show that it is almost 12 % of veterinary consultation. Some of the dogs breeds are more prone to otitis externa because of big, floppy ears, as Cocker Spaniel, or having a lot of hair in external canal, as Poodles.

Parasites are the most common primary causes of otitis externa. Bacteria and yeast are described as secondary factors in etiopathogenesis of otitis externa in dogs.

Signs of ear infection include shaking of the head, and scratching at or under the ear. Some animals may also paw the ear or try to rub it on the other objects to relieve pain and discomfort. The first step in diagnosis of otitis externa is the clinical examination using otoscope. Cytology is a simple method to make the early diagnosis. But only bacteriological culture and antibiogram give us the final diagnosis of the pathogen involved in otitis externa. That procedure cannot be omitted in cases of chronic and recurrence otitis externa. Samples should be taken from the horizontal part of car canal. Treatment is usually by a dual regimen of ear cleaning and ear medication. Ear cleaning should be demonstrated by a veterinarian.

The aim of cleaning is to remove any byproducts of the infection and discomfort. Ear medications are applied after cleaning and drying, and is usually in the form of ear drops or ointment applied daily or twice daily for 1 or 2 weeks.

?

1. What is Otitis Externa?
2. What are the most common primary causes of Otitis Externa?
3. What do some animals do to relieve pain?
4. What is the first step in diagnosis?
5. When are ear medications applied?

Are the following statements true (T) or false (F)? Tick the correct answer.

S t a t e m e n t s	**T**	**F**
1. Parasites are the most common primary causes of otitis externa.		
2. Bacteria and virus are described as secondary factors in etiopathogenesis of otitis externa in dogs		
3. Cytology is a complex method to make the early diagnosis		
4. Signs of ear infection include shaking of the head, and scratching at or under the ear.		
5. Some of the dogs breeds are more prone to otitis externa because of small ears.		

A veterinary technician employed in a veterinary clinic or hospital handles many of the same responsibilities that nurses and other professionals perform for physicians. Discuss the importance of a veterinary technician.

2.1.4. AGGRESSION IN CATS

Aggression directed toward people or other cats is the second most common behavioral problem reported by cat owners. Cat bites and scratches, although not usually severe, can lead to serious infections in both people and cats. Signs of aggression may consist of stalking, chasing, pouncing, scratching, biting, growling, and hissing. As in dogs, feline aggression is a complex phenomenon affected by many factors. Also as discussed under canine aggression, a functional classification system is the most useful when making a diagnosis and setting up a treatment plan.

The majority of aggressive cats are exhibiting normal and appropriate species-typical behavior. Some diseases, however, cause signs of aggression but in patterns that are not consistent with normal species-typical aggressive behavior. A good knowledge of normal feline behavior is therefore essential in order to differentiate normal behavior from aggression, which has a pathophysiologic basis. In addition, organically caused behavior changes are usually accompanied by other signs of the disease, which will be evident on a thorough physical examination.

As males reach adulthood, they often start to threaten each other over territory and mates. Sometimes these encounters lead to fighting. The aggressive interaction usually begins with a threat ritual and is accompanied by growls and loud howls. If an attack occurs it often results in only one bite, but if infection ensues it may be serious.

Aggression is also sometimes directed toward people if a cat while aggressively motivated is interfered with. Many people are scratched or bitten by their cats while trying to calm them down.

Discuss the statement:
"There is a link between animal cruelty and family violence."

Definition of terms	**Animal cruelty:** The common term used in animal anti-cruelty statutes and societies for the prevention of cruelty to animals. Although legal definitions vary by jurisdiction, several popular definitions have been disseminated. These include: any act that, by intention or by neglect, causes an animal unnecessary pain or suffering. **Animal abuse:** more wilful failing to provide care or doing something harmful. Abuse implies maltreatment occurred regardless of the intent, motivation or mental condition of the perpetrator, whereas cruelty connotes more deliberate intention. **Animal physical abuse:** the infliction of injuries or causing unnecessary pain and/or suffering. May be caused by hitting, kicking, throwing, beating, shaking, poisoning, burning, scalding, suffocation, etc.

?

1. What may signs of aggression consist of?
2. What causes signs of aggression?
3. Why is a good knowledge of normal feline behavior essential?
4. What does the aggressive interaction usually begins with?
5. When is aggression directed with?

2.1.5. VETERINARY EDUCATION IN EUROPE

I. The Liverpool University was founded in 1881 as University College, Liverpool. The University is organized into 6 faculties. The Faculty of Veterinary Science is the smallest of the faculties. The Faculty has 465 undegraduates and small numbers of taught postgraduates. The first two pre-clinical years of the programme include veterinary biology (anatomy and physiology), biochemistry, and animal husbandry. The para-clinical stage focuses on pathology, parasitic and infectious diseases, pharmacology and introduction to clinical science. Students learn to diagnose and treat different diseases and carry out laboratory analyses.

The Faculty has established strong links with the People's Dispensary for Sick Animals (PDSA). The students have at least one-week practical training in a PDSA clinic. They work as vet doctors' assistants at the surgical and other departments. Library facilities are satisfactory and complemented by materials held by the Faculty. Students report that library meets their needs. Library computers are all fully networked. This means that students can work on projects using a wide range of library materials from traditional to electronic resources. The faculty of Veterinary Science has links right around the world and attracts students from many countries.

II. The University of Veterinary Medicine, Vienna stands for a first-rate education with a high degree of practical relevance. Outstanding basic research inveterinary medicine and the natural sciences, as well as applied and clinical research, ensure

scientific progress that – in keeping with the One Health approach – benefits animals and humans. Healthy animals and safe animal-based foods are an essential prerequisite for public health. The academic offering meets international standards. Course content is conveyed in an interdisciplinary and problem-based fashion. Five University Clinics, an agricultural teaching and research farm and an on-site training centre with a practice veterinary clinic are available for clinical and hands-on training.

At the University Clinics, animal patients are cared for around the clock. The University Clinics serve as a teaching hospital for students at the University and simultaneously as a referral clinic for local veterinarians. The portals of the University Clinics are also open to animal owners for the veterinary services and procedures their pets require. Thereby, clinically and scientifically challenging cases often lead to important scientific insights, which ultimately benefit these and other animal patients.

1.When was the Liverpool University founded?
2. How many undergraduates does the Faculty of Veterinary Science have?
3. What do the first pre-clinical years include?
4. What are library facilities like?
5. What links does the Faculty of Veterinary Science have?

2.1.6. VETERINARIANS

Veterinarians are doctors who help you keep your animals healthy and help care for your animals when they are sick or hurt. Veterinarians are also scientists who research new ways to keep animals healthy. Veterinarians go to college for two to four years, and then they go to veterinary school for another four years. Veterinary technicians and veterinary technologists are nurses for animals. They work closely with veterinarians to take care of our pets and farm animals. Veterinary technicians go to college for two years, and veterinary technologists go to college for four years. The main task of the veterinary science is to develop healthy herds and to preserve the young stock. The foremost target of veterinary scientists and experts is the organization and carrying out of complex investigation on the problems which are of great importance for the development of animal husbandly. The international veterinary cooperation is a good basis for the rise of veterinary work and improvement of means of eradicating animal diseases, reduction of loss in animal husbandry and growth of animal productivity. Veterinary and Animal husbandry are closely connected with each other. Animal husbandry includes the breeding of farm animals and their use. Farm animals are highly important sources of food for man.

1.What must a veterinarian`s training include?
2.What is Animal husbandry? What science does it depend on?

Discuss the importance of the veterinarian profession

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What are my responsibilities as a Veterinarian?
2. What does Veterinary Science include?
3. What must be controlled or prevented by veterinary surgeons?
4. What must a veterinary surgeon's training include?
5. What does Preventive medicine concern?

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Частина 3.

FOOD PRODUCTS AND PROCESSING

TEMA 3.1. ANIMAL ANATOMY AND PHYSIOLOGY

Навчальні цілі: формувати комунікаційні компетентності з тематики науки анатомії та фізіології тварин, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

3.1.1. BRANCHES OF ANATOMY

Anatomy (from the Greek ἀνατομία anatomia, from ἀνατέμνειν anatemnein, to cut up, cut open), is the branch of biology that deals with the structure and organization of living things. It can be divided into animal anatomy (zootomy) and plant anatomy (phytonomy). Furthermore, anatomy can be covered either regionally or systemically, that is, studying anatomy by bodily regions such as the head and chest for the former, or studying by specific systems. For the latter, *the major body systems* include: circulatory system, digestive system, endocrine system, excretory system, immune system, integumentary system, lymphatic system, muscular system, nervous system, reproductive system, respiratory system, skeletal system.

In particular:

The **skeletal system** is the framework that gives shape to the body. The skeleton is comprised of bones and cartilage. The skeletal system protects the delicate internal organs and makes locomotion possible.

The **muscular system** is the system that makes movement and locomotion possible. Muscles form nearly half the weight of many animals such as sheep and cattle. Without muscles, other organ systems would not function such as the respiratory and circulatory systems. Locomotion would not be possible

The **nervous system** is the system that coordinates body activity. It receives and responds to stimuli. It controls activity, learning, and memory.

The **circulatory system** is the system that moves blood, digested food, oxygen, wastes, and other materials around the body of an organism. It includes the organs that move the blood. The heart moves the blood throughout the body. It goes by the lungs to gain oxygen and give off carbon dioxide acquired from cell respiration.

The **respiratory system** is the system that moves gases to and from the circulatory system. The purpose is to provide the blood with oxygen and remove carbon dioxide from the blood.

The **excretory system** is the system that rids the body of wastes from cell activity (known as metabolic wastes). The process of ridding the body of these wastes is known as excretion. Though associated with the elimination of undigested food, the excretory system is not the digestive system. The major products excreted are carbon dioxide, water, and nitrogen compounds

The **digestive system** is the system that prepares food for use by the body. Digestion is the process of breaking down food materials into molecules that the body can absorb. The system varies depending on the species of organism. Some organisms, such as cattle, have digestive systems that will handle considerable roughage. Other organisms have simple stomachs that require food with higher percentages of protein and digestible materials.

The **lymphatic system** is the system that produces and circulates lymph throughout the body. Lymph is a clear fluid that aids in circulation, excretion, and other body functions. It also helps protect the body from disease.

The **integumentary system** is the skin and outer covering of the body of an organism. It protects the internal organs, helps regulate temperature, and gives shape to the body. The integumentary system keeps disease pathogens away from the internal organs.

The **reproductive system** is the system that produces offspring and continues the existence of a species. The system varies by gender-male and female.

The **mammary system** is the system in female mammals that secretes milk as food for their babies. Male mammals have undeveloped mammary systems.

Major organ system parts are:

- skeletal—bones and cartilage;
- muscular—muscles and connective tissues;
- nervous—brain, spinal cord, and nerves;
- circulatory—heart, arteries, and veins;
- respiratory—lungs;
- excretory—kidneys, bladder, urethra, and skin;
- digestive—mouth, stomach, and intestines;
- lymphatic—lymph nodes and lymph vessels;
- integumentary—skin, hooves, claws, and other exterior parts;
- reproductive—varies by gender-testes in males; ovaries in females;
- mammary—milk glands and udder.

Major *branches of anatomy* include:

- comparative anatomy,
- histology,
- human anatomy.

Animal anatomy may include the study of the structure of different animals, when it is called **comparative anatomy** or **animal morphology**, or it may be limited to one animal only, in which case it is spoken of as **special anatomy**.

Pathological anatomy (or morbid anatomy) is the study of diseased organs, while sections of **normal anatomy**, applied to various purposes, receive special names such as medical, surgical, gynaecological, artistic and superficial anatomy.

The comparison of the anatomy of different races of humans is part of the science of **physical anthropology** or **anthropological anatomy**.

The parts of the organ systems have been identified and studied by scientists in anatomy and physiology.

Discuss the importance of anatomy in animal and veterinary sciences.

Most animals tend to have the same organ systems except that mammals have mammary systems that are not found in non-mammals. The reproductive system varies by the gender of the animal.

Anatomy is the study of the form, shape, and appearance of an animal. *Gross anatomy* deals with the features that can be seen with the unaided eye. Examples include feet, horns, tails, tongues, and teeth. *Microscopic anatomy* deals with the features that can only be seen with magnification. Examples include cells and sperm.

3.1.2. ANIMAL PHYSIOLOGY

Physiology is the study of the functions of the cells, tissues, organs, and organ systems of the living organism. Physiology includes relationships among functions by different systems of an organism, such as secretion to digestion.

Physiology (in Greek physis = nature and logos = word) is the study of the mechanical, physical, and biochemical functions of living organisms.

Physiology has traditionally been divided into plant physiology and animal physiology but the principles of physiology are universal, no matter what particular organism is being studied. For example, what is learned about the physiology of yeast cells can also apply to human cells.

Animal physiology is the study of how animals' bodies function in their environment. An understanding of the physiological problems animals face and how they solve those problems can be achieved only in an evolutionary context. Knowledge of certain aspects of the natural history, morphology, behavior, and environment of an animal is necessary to fully appreciate the importance of its physiological mechanisms.

The study of animal physiology includes topics such as:

- gas exchange,
- feeding and digestion,
- circulation,
- metabolic rate,
- water and solute regulation,
- temperature regulation,

- excretion of wastes,
- movement.

Cell - basic structure of a living organism; contains protoplasm which carries out important chemical activities
Cell specialization - differences in cells so that they can perform unique activities
Tissue - a group of cells that are alike in structure and activity
Organ - a group of tissues that work together to perform a specific function
Organ system - a collection of organs that work together to perform a function essential for the living condition

Physiology describes interactions of organism and environment. It quantifies rules for functions, linking them to physical and (bio)chemical principles.

Discuss the importance of the study of animal physiology in animal and veterinary sciences.

3.1.3. PHYSIOLOGY AS A SCIENCE

Physiology is the subdivision of biology that deals with the various functions of living organisms. This scientific branch covers a big diversity of functions, ranging from the cellular and the interaction of organ systems which maintain for the smooth running of the highly complex biological mechanisms.

The branch mainly concerned with the differences in the vital processes in different species of organisms, particularly with a view to the adaptation of the processes to the specific needs of the species, to revealing the evolutionary relationships among different species.

Animal (or mammalian) physiology is the oldest branch of this science. It dates back to at least 420 B.C. and the time of Hippocrates, the father of medicine.

Modern physiology first appeared in the seventeenth century when scientific methods of observation and experimentation were used to study the circulation of blood in the body.

In 1929, American physiologist W. B. Cannon coined the term homeostasis to describe one of the most basic concerns of physiology: The advancement of recent technological progress, ranging from the simple microscope to ultra-high-technology computerized scanning devices, contributed to the growth of physiology. Later physiologists began to investigate into the most basic life forms, like bacteria. They could also study organisms' basic molecular functions, such as the electrical potentials in cells that help control heart beat.

Like cell biology, many branches of physiology are better known by other names, including biochemistry, biophysics, functional biology and endocrinology.

Scientists also observe and investigate how certain body systems, like the circulatory, respiratory, and nervous systems, work independently and together to

maintain life. Ecological physiology, on the other hand, reveals how animals developed or evolved specific biological mechanisms to cope with a particular environment. An example is the quality of dark skin, which provides protection against harmful rays of the Sun for humans who live in tropical climates.

Cellular physiology, or cell biology, focuses on the structures and functions of the cell.

Animal physiology cannot be studied in isolation, as physiological processes are controlled by signaling molecules and responses flow down at cellular, biochemical and molecular levels.

Behavior also affects physiology of the organism. Physiology is a branch of science that explores the similarities and differences between living things and how they function.

Comparative physiology is another branch of physiology which reveals the functional processes of different living organisms. The discipline itself incorporates many divergent scientific fields, including evolution, environmental studies, and archaeology. Hence a combination of need and curiosity gave rise to comparative physiology. Physicians needed new ways to treat human patients, so animals that shared many characteristics with humans were a ripe area for research. Ultimately the practical use for comparisons flourished into an overall scientific curiosity concerning the likenesses and divergences among various animal species. Comparative physiologists study and compare a wide range of functions in organisms. Almost any part of an organism's body serves some important use, and nearly all living organisms share basic needs like food, breathing, internal temperature control, and heart sustenance. By studying the processes that drive these needs such as cell-based exchanges and blood circulation researchers can gather a vast amount of comparative information. Proper comparisons can only be achieved when the scientist understands how each organism's physical body allows it to carry out the actions essential for day-to-day living.

Another important aspect of comparative physiology is the relationship between organisms and their environment, or ecophysiology. The same physical setting may exercise very different effects on divergent organisms.

One particular area of comparative physiology has received increased attention over time: the use of phylogenic comparative methods. Scientists utilize these methods to examine potential evolutionary relationships between diverse living organisms and to document any significant changes a particular animal group may have undergone since its inception.

Researchers may study the physical resemblances between certain organisms or how certain organisms have developed similar functional parts, like lungs or gills for breathing purposes. As a result, the study may uncover common ancestors among different species and solidify an evolutionary link. Examination of fossil remains and other archaeological evidence may also help comparative physiologists understand how an animal group has changed and adapted from ancient times until the present era.

?

1. What is physiology?
2. What is animal physiology?
3. What are the main topics of the study of animal physiology?

3.1.4. THE GOALS OF BIOCHEMISTRY

Biochemistry is a science which seeks to describe the structure, organization, and functions of living matter in molecular terms. What are the chemical structures of the components of living matter? How do the interactions of these components give rise to organized super-molecular structures, cells, multi-cellular tissues, and organisms? How does living matter extract energy from its surroundings in order to remain alive? How does an organism store and transmit the information it needs to grow and to reproduce itself accurately? What chemical changes accompany the reproduction, aging, and death of cells and organisms? How are chemical reactions controlled inside living cells? These are the kinds of questions being asked by biochemists; the research for the answer is the study of the chemistry of life.

Biochemistry can be divided into three principal areas:

1) the structural chemistry of the components of living matter and the relationship of biological function to chemical structure;

2) metabolism, the totality of chemical reactions that occur in living matter;

3) the chemistry of processes and substances that store and transmit biological information. The third area is also the province of molecular genetics, a field that seeks to understand heredity and the expression of genetic information in molecular terms.

Biochemistry is an experimental science, and the remarkable recent advances in biochemistry are due in large part to the development of powerful new laboratory techniques. Biochemistry has had major impacts on medicine, agriculture, nutrition, ecology, and many other facets of life.

?

1. What is biochemistry?
2. What is the aim of biochemistry?
3. What are the common questions being asked by biochemists?
4. What are the main areas of biochemistry?

3.1.5. THE FUNDAMENTALS OF ANATOMY AND PHYSIOLOGY

Practicing the correct nature of anatomy and physiology of an organism promotes animal well-being. Animal well-being is caring for animals so that their needs are met and they do not suffer. Conditions for raising and keeping animals must be considered for their well-being.

1. Species have different environmental requirements. Animal producers are more effective in meeting these requirements when they know the unique anatomy and physiology of a species. For example, some breeds of cattle are more resistant to extreme temperatures than others. Producing a breed outside its preferred temperature range means that steps need to be taken to provide shade to protect from the heat or housing to protect from the cold.

2. The design of facilities can accommodate the unique anatomy needs of organisms. The size, shape, and form influences facility arrangement and design. For example, keeping dairy cattle housing clean requires a way to handle animal wastes, including feces and urine. Facility design can help collect and remove wastes from the area.

3. Young animals require different care than older animals. Feed for young animals should be appropriate to its digestive system and nutrient needs. For example, young animals typically require feed with a higher percentage of protein than older animals.

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What is the meaning of anatomy and physiology?
2. Why is it important to know about Anatomy and Physiology?
3. Do you agree that this study promotes animal well-being (caring for animals so that their needs are met; animals do not suffer), considers environmental needs of animals, provides facilities to meet needs, provides care based on age and condition, considers animal production capacity in selection?

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TEMA 3.2. ANIMAL NUTRITION AND BREEDING

Навчальні цілі: формувати комунікаційні компетентності з тематики харчування та розведення тварин, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

3.2.1.ANIMAL NUTRITION

An important necessity of all living organisms is to obtain energy and matter. Energy is essential to drive the metabolic activities.

The materials required for the growth and metabolism are known as nutrients.

The process by which the animal obtains these nutrients is known as nutrition.

Most of the animals are heterotrophs (hetero= different, trophic= nutrition). It means that animals depend on others for their food.

Macronutrients (carbohydrates, proteins, and lipids) are required in relatively large quantities in the diets of animals. If meeting the energy needs of the organism were the only reason for eating, carbohydrates alone would probably be a sufficient diet, but since other of life's processes require other materials (and since animals are notable among organisms for their inability to synthesize many of the materials required to sustain such processes), numerous types of macro- and micronutrients are required. Micronutrients include vitamins and minerals and are necessary but required in relatively small quantities. They have a variety of roles in the metabolism of animals. Vitamins generally serve as coenzymes for metabolism. Minerals, including “trace” minerals have various functions in the tissues. For humans living in industrialized countries, the main difficulties relating to macronutrients are excessive intake, particularly ingestion of processed carbohydrates and fats, which leads to obesity. In other regions of the world, dietary problems relative to macronutrients are often due to inadequate quantities of essential amino or fatty acids to allow for protein synthesis. Note that “essential” in this context relates to the necessity for the material in the diet, not essential for the organism (all amino acids are essential for life for all organisms). Nine are essential for most animals (histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine). Care should be exercised in diet selection: vegetarians should balance various types because plant tissues vary widely in composition. For example, bean proteins are deficient in methionine and wheat in lysine (hence, they are complementary with respect to these two essential amino acids; both should be eaten simultaneously since proteins can't be stored and it would be futile to eat one at one meal and one at the next).

Discuss the importance of animal nutrition in animal and veterinary sciences.

3.2.2.TYPES OF NUTRITION

The types of nutrition are:

Autotrophic nutrition. In this method, the organism can obtain the food from sun light: e.g. Euglena (photo synthesis) or from chemicals (chemo synthesis), e.g. Bacteria.

Heterotrophic nutrition. In this method, animals depend on other organisms for their food. It is the characteristic feature of animals.

On the basis of nature of food there are the following types:

Herbivores (Herb = plant, vore = to eat). Their food mainly consists of plant material (e.g. cow);

Carnivores (Cornis = flesh). Their food mainly consists of flesh (e.g. tiger);

Omnivores (Omni = all). Their food consists of both plant and animal materials (e.g. cockroach);

Detrivores. They mainly feed upon dead organic matter (e.g. earthworm);

Predators. They obtain the food by hunting and killing the animal (e.g. tiger, eagle).

Scavengers. They mainly feed upon other dead animals.

Insectivores. They feed on insects.

Osmotrophic. They feed on pre digested food by diffusion.

Parasitic. They depend for the food on their host.

Larvivorous. They feed upon larvas.

Sanguivorous. They feed upon blood (e.g. mosquito).

Coprophagous. Their food consists of faecal matter.

3.2.3. STEPS IN NUTRITION

The steps in nutrition are:

1. Ingestion: intaking of food.

2. Digestion: breaking of complex and large molecules into simple soluble components.

3. Absorption: entry of the digested food from the intestine into blood.

4. Assimilation: reuse of simple components into complex components in the cell. This process occurs according to the necessity of the cell.

5. Egestion: this is the final step. The elimination of undigested food as faeces is known as egestion.

1. What is nutrition?
2. What are macronutrients and micronutrients?
3. What does “essential” mean in animal nutrition?
4. What are the essential amino acids?
5. What are the roles of minerals and vitamins in animal nutrition?

3.2.4. ANIMAL GENETICS AND BREEDING

The science of animal breeding is defined as the application of the principles of genetics and biometry to improve the efficiency of production in farm animals. These principles were applied to change animal populations thousands of years before the sciences of genetics and biometry were formally established.

The practice of animal breeding dates back to the Neolithic period (approximately 7000 BC), when people attempted to domesticate wild species such as reindeer, goats, hogs and dogs. Domestication was performed through controlled mating and reproduction of captive animals which were selected and mated based on their behavior and temperament. Judging from cave paintings that have survived, selection was also applied to some qualitative traits such as coat color and the absence or presence of horns.

Without written records, there is no certain knowledge of the evolution of animal breeding practices, but written documents dating back more than 4000 years indicate that humans appreciated the significance of family resemblance in mating systems, recognized the dangers of intense inbreeding, and used castration to prevent the reproduction of undesirable males. Progress in the performance of domesticated animals through these selection practices was very slow; improvements were mainly due to animals adapting better to their environments.

Robert Bakewell, who was an English animal breeder of the 18th century, is considered the founder of systematized animal breeding. He was the first to emphasize the importance of accurate breeding records, introduced the concept of progeny testing to evaluate the genetic potentials of young sires, and applied inbreeding to stabilize desired qualitative traits. He also promoted concepts such as “like begets like”, “prepotency is associated with inbreeding” and “breed the best to the best”. Bakewell and his contemporaries in Europe pioneered the development of diverse breeds of beef cattle, dairy cattle, sheep, hogs and horses.

Most livestock breeds with pedigree herd books and breed associations were established between the late 18th century and the second half of the 19th century. Color, conformation, geographical origin and some production characteristics were the main factors that differentiated these breeds.

Wide geographical redistribution of animal populations was also an important factor in the formation of new breeds, as invading armies, migrating people and traders transported livestock to new lands.

Animal breeding as a modern science belongs to the 20th century. Numerous geneticists and biometricians have made significant contributions to the development of this science.

1. What is the science of animal breeding?
2. What are the milestones in the history of animal breeding?
3. How were wild animals domesticated?
4. What were the main factors in the formation of new breeds?
5. What does inbreeding mean?

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. Which macronutrients and micronutrients do you know?
2. What does inbreeding mean?
3. What do herbivores mean?
4. What group of animals do farm animals belong?
5. What animals are ruminants?

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Тема 3.3. SCIENCE OF AQUACULTURE

Навчальні цілі: формувати комунікаційні компетентності з тематики аквакультури, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

3.3.1. AQUACULTURE

Aquaculture is the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. People have been farming fish for thousands of years. The Chinese raised fish in ponds some 3,000 years ago and the Romans farmed oysters in shallow, coastal bays. Today, aquaculture has become big business in Asia, Latin America, North America and Europe. Smaller-scale activities, raising fish in village ponds, also take place in many African countries.

These enterprises - whether in large ponds, in sea cages or in tiny backyard ponds - hold much promise for meeting increasing food demands. In fact, with most capture fisheries in decline, aquaculture is the best way to maintain and increase supplies of saltwater and freshwater fish.

Over half of all freshwater fish production comes from aquaculture.

The industry is overwhelmingly concentrated in the developing world, which accounts for 85 percent of output by volume and 71 percent by value. Exports of high-value species such as shrimp, prawns and salmon earn much-needed foreign exchange currency for these countries.

Fish farming may increasingly be the only way for some poor communities, who rely on fish and shellfish for the bulk of their protein intake, to maintain a healthy diet.

In spite of this promise, aquaculture projects are vulnerable to disease and environmental problems.

Nutrient and organic over-enrichment, the accumulation of toxic chemicals, microbial contamination, siltation and sedimentation all jeopardize expansion.

Where aquaculture results in the degradation of coastal mangroves, the breeding grounds of many wild species, it poses a major threat to biological diversity.

Better selection of production sites to safeguard the environment and sound management techniques can overcome most of these problems.

Fish provides 17 percent of the world's animal protein; in some countries the figure is as high as 50 percent. With the fish harvest from the wild now dangerously overstretched, we may have to depend increasingly upon aquaculture to meet demand for fish in the future.

Discuss the importance of aquaculture to both the world economy and Ukraine's economy.

3.3.2. THE IMPORTANCE OF AQUACULTURE

The world's oceans and rivers are fast approaching the limits of fish and shellfish production that can be harvested on a continual basis.

In addition to the demand for seafood, there is a growing interest in sportfishing. Many public fisheries for recreational angling have had to reduce creel limits (number of fish legally allowed to be caught per day) or have imposed seasons for catching specific species of fish.

Some states have had to close fisheries completely. More people are interested in fishing than nature can support. Consequently, numerous government, state and federal agencies produce fish in hatcheries to stock public waters for sportfishing, thereby developing what is known as a put-grow-and-take fishery where small fish are stocked and allowed to grow, and then are harvested by hook and line.

The lakes or rivers where fish are stocked either do not have the individual species, or the systems cannot support adequate reproduction to meet the demand of sportfishermen.

Through aquaculture, the angler could be provided with a recreational outlet that may not have been available otherwise.

Aquaculture efforts can also be used to save or restore an endangered or threatened species. These are special situations where, for various reasons, fish cannot reproduce in sufficient numbers, or the progeny do not survive well enough to maintain themselves as a population.

?

1. What do you think aquaculture means?
2. In your area, how many people have fish ponds?
3. Do people in your area construct fish ponds by machine, or by hand?
4. What are the comparative costs of each method?
5. What advantages do farmers gain by having a fish pond?
6. What are some of the problems?
7. Why will aquaculture become an increasingly important agricultural activity in the future?

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. In which parts of the world is aquaculture a very profitable business?
2. What about Ukraine?
3. What are the main benefits and constraints of aquaculture in Ukraine?

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Частина 4.

MANAGEMENT SCIENCE

TEMA 4.1. PRINCIPLES OF MANAGEMENT

Навчальні цілі: формувати комунікаційні компетентності з тематики менеджменту, його застосування у сфері сільськогосподарської науки, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

4.1.1.MANAGEMENT

All organizations – business, political, cultural or social are involved in management because it is the management which helps and directs the various efforts towards a definite purpose.

1. Management as a Process. As a process, management refers to a series of inter-related functions. It is the process by which management creates, operates and directs organization through systematic, coordinated and co-operated human efforts. As a process, management consists of three aspects:

1. Management is a *social process*. Management is concerned with developing relationship among people. It is the duty of management to make interaction between people.

2. Management is an *integrating process*. Management brings together human physical and financial resources to achieve organizational purpose.

3. Management is a *continuous process*. It is a never ending process. It is concerned with constantly identifying the problems and solving them by taking adequate steps. It is an on-going process.

2. Management as a Discipline. Management is connected to study of principles and practices of basic administration. It specifies certain code of conduct to be followed by the manager and also various methods for managing resources efficiently.

3. Management as a Group. Management is a group of persons who perform the task of managing an organization (firm, enterprise, etc.). Management includes all managers from chief executive to the first-line managers (lower-level managers). But in common practice, management includes only top management i.e. Chief Executive, Chairman, General Manager, Board of Directors etc. They make

important decisions, enjoy the authorities to use resources to accomplish organizational objectives and also responsibility.

Management as a group may be looked upon in 2 different ways:

- All managers taken together.
- Only the top management.

There are 3 types of managers

1. Patrimonial/Family Manager.
2. Professional Managers.
3. Political Managers/Civil Servants.

4. Management as a Science. Science is characterized by following main features:

- Universally acceptance principles.
- Experimentation and observation
- Cause and effect relationship

5. Management as an Art. An art may be defined as personalized application of general theoretical principles for achieving best possible results. Art has the following characters:

- Practical knowledge
- Personal skill
- Creativity
- Perfection through practice
- Goal-oriented

Management as both Science and Art	management combines features of both science as well as art. It is considered as a science because it has certain knowledge which contains certain universal truth. It is called an art because managing requires certain skills. Science provides the knowledge and art deals with the application of knowledge and skills.

6. Management as a Profession. A profession may be defined as an occupation that requires specialized knowledge.

The elements of a profession are:

1. Specialized knowledge.
2. Formal education and training. For example, MBA may be preferred but not necessary.
3. Social obligations. Professionals are motivated by the desire to serve the society.
4. Code of Conduct. A code of conduct contains certain rules and regulations, norms of honesty, integrity and special ethics.
5. Representative Association.

7. Management as an Activity. Like various other activities performed by human beings such as writing, playing, eating, cooking etc, management is also an activity because a manager is one who accomplishes the objectives by directing the efforts of others. Management as an activity includes:

1. *Informational activities*. In the functioning of business enterprise, the manager constantly has to receive and give information orally or in written. A communication link has to be maintained with subordinates as well as superiors for effective functioning of an organization (firm, enterprise etc.).

2. *Decisional activities*. Practically all types of managerial activities are based on one or the other types of decisions. Therefore, managers are continuously involved in decisions of different kinds.

3. *Inter-personal activities*. Management involves achieving goals through people. Therefore, managers have to interact with superiors as well as the subordinates.

1. What is management?
2. Which definition do you prefer and why do you like it?
3. Why management is a science?

4.1.2. MANAGERIAL FUNCTIONS/ACTIVITIES

'**POSDCORB**' P stands for Planning,
O for Organizing,
S for Staffing,
D for Directing,
Co for Co-ordination,
R for Reporting
B for Budgeting.

Managerial functions (activities) represent probably the most typical way of the classification of the managers' job. The managing work is divided into the individual functions (activities).

Perhaps the oldest classification of the functions of management as follows:

1. Planning is one of key managerial functions and therefore applies to all fields and aspects of an organization: economics and finance, Informatics, quality management, human resources, logistics and transportation, organizational management, marketing, services, production. It is formulation of Objectives, Policies, Procedure, Rules, Programmes and Budgets. A plan is a future course of actions. It is an exercise in problem solving and decision making. Planning is determination of courses of action to achieve desired goals. Thus, planning is a systematic thinking about ways and means for accomplishment of pre-determined goals. Planning is necessary to ensure proper utilization of human and non-human resources.

2. Organizing is one of key managerial activities (functions). It means organizing, creating order and system. It includes organizing people, other resources, processes, services, structures and systems within the organization.

Organizing as a process involves:

- Identification of activities.
- Classification of grouping of activities.
- Assignment of duties.

- Delegation of authority and creation of responsibility.
- Coordinating authority and responsibility relationships.

3. Staffing. The main purpose of staffing is to put right man on right job. Managerial function of staffing involves: proper and effective selection, appraisal and development of personnel. Staffing involves:

Manpower (робоча сила) Planning (estimating man power in terms of searching, choose the person and giving the right place).

Recruitment, Selection and Placement.

Training and Development.

Remuneration.

Performance Appraisal.

Promotions and Transfer.

4. Directing means an act of guiding, overseeing and leading people; motivation, leadership, decision making. Direction has following elements: Supervision, Motivation, Leadership, Communication.

Supervision implies overseeing the work of subordinates by their superiors. It is the act of watching and directing work and workers.

Motivation means inspiring, stimulating or encouraging the subordinates to work. Positive, negative, monetary, non-monetary incentives may be used for this purpose.

Leadership may be defined as a process by which manager guides and influences the work of subordinates in desired direction.

Communications is the process of passing information, experience, opinion etc. from one person to another. It is a bridge of understanding.

5. Control is one of basic managerial functions. It brings the necessary feedback to the management system and allows the plans, organizational structure, organizational architecture, social networks, processes, quality management, etc. to be adjusted.

Controlling has following steps:

a. Establishment of standard performance.
b. Measurement of actual performance.
c. Comparison of actual performance with the standards.
d. Corrective action.

6. Coordination is one of the key managerial functions and thus applies to all aspects of the organization. Coordination is synchronizing and unifying the actions of a group of people.

4.1.3. THE LEVELS OF MANAGEMENT

Vocabulary

supervisors, foreman, section officers, superintendent etc. - *начальники, бригадир, офіцери відділів, начальник*

to communicate - *повідомляти*

The levels of management can be classified in three broad categories:

1. **Top level / Administrative level**
2. **Middle level / Executory**
3. **Low level / Supervisory / Operative / First-line managers**

Managers at all these levels perform different functions.

1. Top Level of Management

It consists of board of directors, chief executive or managing director. The top management manages goals and policies for an organisation. It devotes more time on planning and coordinating functions.

The role of the top management can be as follows:

a. Top management defines the objectives and policies of the organisation.

b. It develops necessary instructions for preparation of department budgets, procedures, schedules etc.

c. It prepares strategic plans and policies for the organisation.

d. It appoints the executive for middle level i.e. departmental managers.

e. It controls and coordinates the activities of all the departments.

f. It is also responsible for maintaining a contact with the outside world.

g. It provides guidance and direction.

2. Middle Level of Management

The departmental managers constitute middle level. They are responsible to the top management for the functioning of their department. They devote more time to organizational and directional functions. Their role can be as -

a. They execute the plans of the organization in accordance with the policies and directives of the top management.

b. They make plans for the sub-units of the organization.

c. They participate in employment and training of lower level management.

d. They explain policies from top level management to lower level.

e. They are responsible for coordinating the activities within the division or department.

f. They also send important reports and other important data to top level management.

g. They evaluate performance of junior managers.

h. They are also responsible for inspiring lower level managers towards better performance.

3. Lower Level of Management

Lower level is also known as operative level of management. It consists of supervisors, foreman, section officers, superintendent etc. Their activities include -

a. Assigning of jobs and tasks to various workers.

b. They guide and instruct workers for day to day activities.

c. They are responsible for the quality as well as quantity of production.

d. They are also responsible for maintaining good relation in the organization.

e. They communicate workers' problems, suggestions, and recommendations etc to the higher level and higher level goals and objectives to the workers.

f. They supervise and guide the subordinates.

g. They are responsible for providing training to the workers.

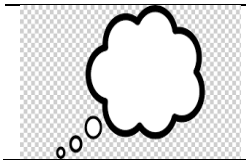
h. They arrange necessary materials, machines, tools etc. for getting the things done.

i. They prepare periodical reports about the performance of the workers.

j. They ensure discipline in the organisation.

k. They motivate workers.

l. They are the image builders of the organisation because they are in direct contact with the workers.



A manager of what level would you like to be? Why?

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What is management? Write the definition of management.
2. Why management is a process?
3. Why management is an activity?
4. What are the managerial functions?
5. What does Planning mean?
6. What does Organizing as a process involve?
7. What are the objectives of management?
8. What are the levels of management?

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ТЕМА 4.2. MANAGEMENT SKILLS

Навчальні цілі: формувати комунікаційні компетентності з тематики менеджерських навичок, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

4.2.1. BASIC TYPES OF MANAGEMENT SKILLS

Good management skills are vital for any organization to succeed and achieve its goals and objectives. A manager with good management skills is able to achieve the company's mission and vision or business goals from internal and external sources.

Management and leadership skills are often used interchangeably as they both involve planning, decision-making, problem-solving, communication, delegation, and time-management. Good managers are almost always good leaders as well. In addition to leading, a manager also ensures the efficient functioning of the organization.

Management skills are important for various positions and at different levels of a company, from top leadership to intermediate supervisors to first-level managers.

According to American social and organizational psychologist Robert Katz, the three basic types of management skills include:

1. Technical Skills. Technical skills are skills that give the managers the ability and the knowledge to use a variety of techniques to achieve their objectives. These skills involve operating machines and software, production tools, and pieces of equipment and also the skills needed for sales of products and services.

2. Conceptual Skills. These skills connected with the knowledge and ability for abstract thinking and formulating ideas. The manager is able to see an entire concept, analyze and diagnose a problem, and find creative solutions.

3. Human or Interpersonal Skills. The human or the interpersonal skills are the skills that present the managers' ability to interact, work or relate effectively with people. These skills help the managers to make use of human potential in the company and motivate the employees for better results.

There is a wide range of skills that management should possess to run an organization effectively and efficiently:

1. Planning. Planning is a vital aspect within an organization. Planning is one's ability to organize activities within the limits of the available resources such as time, money, and labor. It is also the process of formulating a set of actions or one or more strategies to achieve goals or objectives with the available resources. The planning process includes: identifying goals, developing strategies, and outlining the tasks and schedules on how to achieve the goals. Without a good plan, little can be achieved.

2. Communication. Communication can determine how well information is shared throughout a team, ensuring that the group acts as a unified workforce. Communication involves the flow of information within the organization, whether formal or informal, verbal or written, vertical or horizontal. A manager with good communication skills can relate well with the employees and be able to achieve the company's goals and objectives easily.

3. Decision-making. Managers make numerous decisions. Making decisions is a key component in a manager's success. A manager must be accountable for every decision and take responsibility for the results of the decisions. A good manager needs great decision-making skills.

4. Delegation. Delegation is the act of passing on work-related tasks and/or authorities to other employees or subordinates. A manager with good delegation skills is able to achieve optimal results and accomplish the productivity results.

5. Problem-solving. Problem-solving in management involves identifying a certain problem or situation and then finding the best way to handle the problem and get the best solution.

6. Motivating. There are numerous motivation tactics that managers can use, and choosing the right ones can depend on characteristics such as company and team culture, team personalities, and more. There are two primary types of motivation that a manager can use. These are intrinsic and extrinsic motivation.

So, management skills are a collection of abilities that include things such as business planning, decision-making, problem-solving, communication, delegation, and time management. Management skills are essential to run an organization well and achieve desired business objectives.

?

1. What is the most important managerial skill?
2. Why do you think so?
3. What managerial skills do you have?
4. What managerial skills are important for a modern manager in the agricultural area?

4.2.2. HUMAN RESOURCE MANAGEMENT

The principal component of an organization is its human resource or 'people at work'. Human resource has a paramount importance in the success of any organization because most of the problems in an organization are human and social rather than physical, technical or economical ones.

Since every organization is made up of people acquiring their services, developing their skills, motivating them to high level of performance and ensuring that they continue to maintain their commitment to the organization are essential to achieve organizational objectives. This is true regardless of the type of organization, government, business, education, health, recreation or social action.

Human resource management is primarily concerned with the management of people within organizations, focusing on policies and systems. There are two different definitions of HRM.

The first definition of HRM is that "It is the process of managing people in organizations in a structured and thorough manner". This covers the fields of staffing (hiring people), retention of people, payment, performance management, change management and retirement.

The second definition of HRM is "The management of people in organizations from a macro perspective, i.e. managing people in the form of a collective relationship between management and employees". This approach focuses on the objectives and outcomes of the HRM functions. It means that the HR function in contemporary organizations is concerned with the notions of people enabling, people development and a focus on making the "employment relationship" fulfilling for both the management and employees.

HRM *is the process of managing people* of an organization with a human approach. Human resources approach enables the manager to view the people as an important resource. It is the approach through which organization can utilize the manpower not only for the benefits of the organization but for the growth, development and self satisfaction of the concerned people.

HRM *is a system that focuses on human resources development* on one hand *and effective management of people* on the other hand.

HRM takes into account the employees' capacity, potentially, talents, achievement, motivation, skill, commitment, great abilities, and so on. So, that their personalities are recognized as valuable human beings.

In the organizations the HR departments are responsible for overseeing employee-benefits design, employee recruitment, training and development, performance appraisal, and reward management, such as managing pay and benefit systems.

?

1. What is HRM (Human Resource Management)?
2. What are the functions of HRM?
3. Which are the global factors impacting human resource management?
4. What are the macro-environmental factors influencing human resource management?
5. What micro-environmental factors affect human resource management?
6. What are the responsibilities of a HR department in an organization?

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What is the role of communication in business activity?
2. What are the most important managerial skills?
3. What is the best way to develop managerial skills?
4. What are the functions of Human Resource Management (HRM)?

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Тема 4.3. BUSINESS PLAN

Навчальні цілі: формувати комунікаційні компетентності з тематики сутності та основ формування бізнес-плану у сфері сільського господарства, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

4.3.1. BUSINESS PLAN OUTLINE. COVER SHEET

Business Plan Outline
Cover Sheet:

Business Name,
Address,
Phone Number,
Principals Executive Summary or Statement of Purpose
Table of Contents

4.3.2. BUSINESS PLAN OUTLINE. SECTION ONE

Section One:

A. Description of Business

Basic Questions: 1) What general type of business is this? 2) What is the status of the business? Start-up, expansion or take-over? 3) What is the business form? Sole Proprietorship, Partnership, Corporation or Limited Liability Company? 4) What are your products? 5) Who are (will be) your customers?

B. Products/Services

Basic Questions: 1) What products/services are you (will you be) selling? 2) What are the features and benefits of what you sell? 3) What Position do you have (or want to have) in the market? 4) How do your products/services differ from the competitors? 5) What makes your products unique and desirable? 6) Why do (will) customers buy from you?

C. Market Analysis

Questions for Existing Businesses:
1) Who are your current customers? (List largest customers or categories.)
2) What do they buy from you?
3) Why do they buy from you? (Quality, Price, Reputation, etc.?)

Basic Questions:
1) Who are the purchasers of your products or type of products? (Geographic, Demographic and Psychographic characteristics)
2) What is the size of the market? Is it growing?
3) What is (will be) your share? How will your share change over time?
4) What is the industry outlook?
5) Are there segments of users who are under-served by competition?
6) Do any of these under-served segments present opportunities?

D. Marketing Plan

Product Strategies
1) How will products be packaged?
2) How broad will your product line be?
3) What new products will you introduce?
4) What Position or Image will you try to develop or reinforce?

Pricing Strategies
1) What will be your pricing strategies? (For example: Premium, Every Day Low Price, Frequent Sale Prices, Meet Competitor Price, etc.)
2) How will you compare with competition and how will they respond?
3) Why will customers pay your price?
4) What will be your credit policies?
5) Is there anything about your business which insulates you from price competition?
6) Can you add value and compete on issues other than price?

Promotional Strategies
1) Who are your Target Markets?
2) How will you reach your Target Markets? (What Media will you use?)
3) How will you motivate them to buy? (What Message will you stress?)
4) What is the cost and timetable for implementation of the marketing plan?

E. Location

Basic Questions:
1) What is the business address?
2) Is it owned or leased? If leased, what are the terms?
3) Are renovations or modifications needed, and what are the costs?
4) Describe the property and the surrounding area.
5) Why is this a good location for your business?

F. Competition

Basic Questions:
1) Who are (will be) your largest competitors? List them.
2) How will your operation be better (and worse) than your competitors?
3) How are competitors doing? What are their sales and profits?
4) (If Start-Up) How will competition respond to your market entry?

G. Management and Operations

Basic Questions:
1) What is the business management experience of the management team?
2) What are the functional areas of the business?
3) Who will be responsible for each functional area?
4) Who reports to whom?
5) What will salaries be?
6) What management resources outside the company are available?
7) How will your products/services be produced? (Describe manufacturing processes, proprietary technology and key supplier relationships.)

H. Personnel

Basic Questions:
1) What are the personnel needs now? In the future?
2) What skills must they have? What training will you provide?
3) Are the people you need available?
4) What is their compensation? What fringe benefits will be provided?

I. Application and Effect of Loan or Investment

Basic Questions:
1) What is the total investment required?
2) How will the loan or investment be used?
3) How will the loan or investment make the business more profitable?
4) When will the loan be repaid?
5) If you are seeking equity (selling part of the business to an investor): - What percent of the company are you willing to give up? - What rate of return is possible for the investor? (Note: If your business plan will be presented to private investors, seek legal counsel to be sure you are in compliance with securities laws.)

4.3.3. BUSINESS PLAN OUTLINE. SECTION TWO

Section Two:

Financial Data

A. Projected Financial Statements - Income Statements - Cash Flow Statements -Balance Sheets - Assumptions to Projected Financial Statements

B. Break Even Analysis

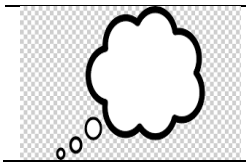
C. Sources and Uses of Funds

4.3.4. BUSINESS PLAN OUTLINE. SECTION THREE

Section Three:

Supporting Documents

Historical financial statements, tax returns, resumes, reference letters, personal financial statements, facilities diagrams, letters of intent, purchase orders, contracts, etc.



Why is it important to make a business plan?

4.3.5.THE STARTUP

When many of the veterinary mentors graduate, the traditional path is to work for a couple of years and then create a startup. This remains a valid path. Let us speak about the positives and negatives from experience. Let's begin by reviewing five advantages of a startup.

1. You need a business plan. Skipping or skimping on a business plan is easy when you're buying an existing practice. You more than likely need one to get financing. When done right, a business plan will lay out concrete steps for success.
2. You pick the location. You'll want to practice where the patient need and client demand warrant a new clinic. Some veterinarians choose a certain area because that's where they want to live. In addition to studying the demographics, consider simple things like street visibility and parking.
3. Build what you want. One of the fun but time-consuming aspects of doing a startup is that you can lay it out as you want — a veterinary architect comes in handy — with the main limitations being money and space.
4. Practice the way you want. With a startup, the only limitations to how you practice are your knowledge, team and client demand.
5. Get a clean start. Unlike buying an existing hospital, there is no staff culture to adjust, no bad reputation to mend and no outdated equipment to replace.

Now, here are some hurdles if you opt for a startup.

1. Financing can be difficult to find.
2. You might not start as soon as you'd like. You're setting yourself up for frustration if you don't set a realistic timeline.
3. Initial income is absent.
4. It's all on you. Depending on the size and type of startup, you might wear more hats than you ever thought possible — CEO (Chief Executive Officer), medical director, manager, receptionist. The list goes on. No one can do all these jobs well.

4.3.6. DEVELOPMENT OF A SHORT EXECUTIVE SUMMARY OF THE BUSINESS PLAN

Brief and formal explanation of what your agricultural company/firm is	
The name of your company	
The mission statement	
The description of the industry (what you produce, what services you provide)	
The description of the market environment	
An explanation of your uniqueness	
An explanation of your competitive advantages	
The financial potential	
The risks	
The core team	
The capital that is requested	

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What is a business plan?
2. What is described in the Part “Personnel” of the Business Plan?
3. What topics are important nowdays in the sphere of agriculture management?
4. What is to be done to improve the agriculture management in Ukraine?

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Частина 5.

FOREIGN LANGUAGE COMMUNICATION IN AGRARIAN SCIENCE

TEMA 5.1. ACADEMIC PAPER

Навчальні цілі: формувати комунікаційні компетентності з тематики академічного письма (наукового твору), вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

5.1.1. THE PURPOSE OF ACADEMIC WRITING

Writers should be clear why they are writing. The most common reasons for writing include:

- to report on a piece of research the writer has conducted;
- to answer a question, the writer has been given or chosen;
- to discuss a subject of common interest and give the writer's view;
- to synthesise research done by others on a topic.

In all cases it is useful to bear in mind the likely readers of your work. How can you explain your ideas to them effectively? Although there is no fixed standard of academic writing, it is clearly different from the written style of newspapers or

novels. Similarly, it is generally agreed that academic writing attempts to be accurate and objective. What are its other features?

Factors to consider a target journal

Factors to consider

– aims and scope
– publishing frequency
– impact factor
– target audience
– open access or subscriber
– prestige
– cost
– publication type

Which factor is most important to you?

1. Evaluating significance: *importance*

Specific interest only or of interest to many

- Affect many (*e.g.* new tool)

- Support for (or contradiction of) an existing theory

- Substantially improve our understanding of a phenomenon or provide a new technology or disease treatment?

2. Evaluating significance: *novelty*

How *new* are my results compared with those already published?

3. Evaluating significance: *relevance*

Are my findings of relevance only to a specific geographical region or ethnic population or do they have implications for other regions and populations?

High impact factor journals may consider specific findings if they are the first of their kind or of international significance.

4. Evaluating significance: *appeal*

Is my work in an area of 'popular appeal'? E.g. is it likely to be reported in mainstream or lay scientific media.

5.1.2. THE TYPES OF ARTICLES

The most common types of articles are:

- Evidence synthesis articles (such as systematic review articles)
- Original research articles
- Discussion articles
- Short reports
- Case studies
- Opinion pieces

Four broad categories of scholarly journal articles are as follows:

- *research* (reporting original research based on systematic data collection and analysis);

- *review* (critically reviewing literature or an entire study);

- *methodological* (discussing an innovative research method, design, or paradigm);

- *theoretical* (presenting an original theory or assessing existing theories).

The typical types of papers that can be generated from a dissertation and their corresponding chapters are:

a) critical reviews of the literature;
b) methodological innovations;
c) specific findings or results;
d) implications for policy, practice, and/or research;
e) experience conducting research.

Usually, no more than three or four articles are from a dissertation.

5.1.3. THE STRUCTURE OF AN ARTICLE

Scientific writing follows a rigid structure. Most disciplines use the format of:

- title,
- authors,
- abstract,
- keywords,
- introduction,
- methods,
- results,
- discussion,
- acknowledgments,
- references,
- supplementary material.

Introduction
- background to the subject
- reasons for carrying out the work
- review of other research in the area

Methods
- how you did your research
- description of the tools/materials used

Results
- what you discovered
- comments on likely accuracy of results

Discussion
- of your main findings
- comments on the effectiveness of your research

Conclusion
- summary of your work
- suggestions for further research

5.1.4. FORMAT OF A QUALITATIVE RESEARCH ARTICLE

Abstract
Introduction (Including Purpose of Paper)
Literature Review
Methods (Design - Setting strategy - Data-collection techniques – Analysis)
Results
Discussion (including interpretation or implications of results)
Conclusion
References

General format of a journal article is the following:

Font. The recommended fonts are Book Antiqua or Times New Roman. Font size in the text must be 12. A larger font (14) can be used for headings.

Spacing. The recommended line spacing is 1.5. Longer quotations should be single-spaced and separated from the text.

Margins. The Master's thesis is printed and bound for examination. When preparing the final draft of the Master's thesis, make sure that the settings are set for 2-sided printing. Under page layout, choose 'Mirrored' Margins and set the 'Inside' margin at 4 cm. The other margins (top, bottom, outside) should be set at 2 cm. In research papers and theses that are not bound, use 2.5 cm margins on all sides.

Paragraphs. Paragraphs are the basic building blocks of academic writing. Well-structured paragraphs help the reader understand the topic more easily by dividing up the argument into convenient sections.

Paragraphs can be divided either by leaving a blank line between paragraphs, or by indenting the first line of a new paragraph by five spaces.

If the paragraph follows a new section heading, the first line is not indented.

Page numbering. Page numbering should be visible from the first page of the introduction. Previous pages such as the abstract and contents are counted but are not given visible page numbers. The title page is not counted.

Page numbering continues until the end of the document, including the bibliography and appendices.

Place the page number at the centre on the top of the page.

Highlighting. For highlighting or emphasis, use *italics*.

Bold print. can also be used for clarity if necessary (for instance if you use a lot of linguistic examples that require italics).

Footnotes. Endnotes and footnotes should be used sparingly. If you do use notes, they should be placed at the bottom of the page using smaller font size (10) and single-spacing.

5.1.5. THE TITLE

The title clearly describes contents.

There are different types of title:

- *descriptive* titles, which describe what the paper is about (e.g. 'Investigating the role of academic conferences on shaping the research agenda');

- *declarative* titles, which make a statement about the results presented in the paper (e.g. 'Academic conferences shape the short-term research agenda');

- *interrogative* titles, which pose a question (e.g. 'Do academic conferences shape the research agenda?');

- *compound* titles, which may combine several of the above (e.g. 'Do academic conferences shape the research agenda? An empirical investigation').

5.1.6. AN ABSTRACT

An abstract is short synopsis that describes a larger work. The abstract is the only part of the paper that is published online and in most conference proceedings.

Also, when you submit your paper to a journal, potential reviewers only see the abstract when invited by an editor to review the manuscript.

The abstract should include one or two lines briefly describing the topic, scope, purpose, results, and conclusion of your work.

The abstract section of your research paper should include the following:

- Topic
- Purpose
- Scope
- Results
- Conclusion

5.1.7. THE INTRODUCTION

Introduction explains the hypothesis.

The biggest single mistake authors make in their papers is to include in the introduction a question they don't answer in the paper.

The introduction serves the purpose of leading the reader from a general subject area to a particular field of research.

Three phases of an introduction can be:

1 *Establish a territory*: bring out the importance of the subject and/or make general statements about the subject and/or present an overview on current research on the subject.

2 *Establish a niche:* oppose an existing assumption or reveal a research gap or formulate a research question or problem or continue a tradition.

3 *Occupy the niche:* sketch the intent of the own work and/or outline important characteristics of the own work; outline important results; and give a brief outlook on the structure of the paper.

The introduction section of your research paper should include the following:

- General introduction
- Problem definition
- Gaps in the literature
- Problems solution
- Study motivation
- Aims and objectives
- Significance and advantages of your work

There is no standard pattern for an introduction, since much depends on the type of research you are conducting and the length of your work, but a common framework is:

- definition of key terms, if needed.
- relevant background information.
- review of work by other writers on the topic.
- purpose or aim of the paper.
- your methods and the results you found.
- any limitations you imposed.
- the organisation of your work.

Here are the sentence descriptions of the Introduction (as a sample):

In *Sentence 1* the writer establishes the importance of this research topic.

In *Sentence 2* the writer provides general background information.

In *Sentence 3* the writer does the same as in Sentences 1 and 2, but in a more specific/detailed way.

In *Sentence 4* the writer describes the general problem area or the current research focus of the field.

In *Sentence 5* the writer provides a transition between the general problem area and the literature review.

In *Sentence 6* the writer provides a brief overview of key research projects in this area.

In *Sentence 7* the writer describes a gap in the research.

In *Sentence 8* the writer describes the paper itself.

In *Sentence 9* the writer gives details about the methodology reported in the paper.

In *Sentence 10* the writer announces the findings.

Academic Phrases for Writing Introduction Section of a Research Paper

General introduction	Research on __ has a long tradition For decades, one of the most popular ideas in __ literature is the idea that __ Recent theoretical developments have revealed that __ A common strategy used to study __ is to __ This research constitutes a relatively new area which has emerged from __ These approaches have been influential in the field because of _ In the past several decades, __ have played an important role in__ There are growing appeals for __ This is the field of study that deals with __ Most of the theories of __ are however focused on explaining __ There are three major theoretical and conceptual frameworks for _ The field has gradually broadened as __ This field of study is sometimes referred as __ This has been widely adopted in the field of __ This thesis considers the field of __ as the main subject of its study One of the major topics to be investigated in this field is __ This field is maturing, with a wealth of well-understood methods and algorithms __ This field closely follows the paradigm of __ The field has met with great success in many problems __ This is not particularly new and has been used for many years in the field of __ Widely considered to be a good way to __ This has been widely adopted in the field of __ This is more widely used at the time of __ This phenomenon has been widely observed A common technique is to __ This is a technique common in __ There are several common kinds of __
Problem definition	This seems to be a common problem in __ The main problem is that __ There is a further problem with __ One primary problem with __ is that __ The foremost problems are the facts that __ This makes up for the problem of __ This seems to be a common problem in __ This is a complex problem and to simplify it requires __ A challenging problem which arises in this domain is __ These problems are difficult to handle __ This is typically a complex problem __ A well-known problem with __ is that it does not take into account the ___

	One of the problems is that it considers only the __ The key problem with this technique is __ It is usually an ill-posed problem in the case of __ This problem is well-posed and does not require to impose __ This appears as a more straightforward problem compared to the__ This turns out to be even more problematic because __ The problem with such an implementation is that __ This poses some problems when carrying out the __ This problem has attracted more attention in the field of __ This is a basic chicken-and-egg problem because __ Unfortunately, this approach results in problems related to __ These constraints make the problem difficult to __ Most of the research in this field is aimed at solving this problem. This remains an open problem in the area. This problem has received substantial interest. These examples highlight the problem that __ The main practical problem that confronts us is __
Gaps in literature	There is no previous research using __ approach. As far as we know, no previous research has investigated __ There has been less previous evidence for __ Other studies have failed to __ To our knowledge, no study has yielded __ No study to date has examined __ Only a few studies have shown __ However, __ has rarely been studied directly. Moreover, few studies have focussed on __ In particular no study, to our knowledge, has considered __
Problems solution	One way to overcome these problems is to __ Many alternative methods are available for solving these problems. In order to rectify the problem of __ A solution to this problem is proposed in __ One approach to solve this problem involves the use of __ An alternative approach to the problem is __ This can be applied to solve these problems. A number of works have shown that this problem can be overcome by using __ A large number of alternative approaches have been developed over the last few decades to __ To overcome this problem, in the next section we demonstrate __ One way to overcome this problem is to __ To overcome this problem, some approaches have been made __ One way of recovering from this problem could be to __ This has been proposed to surmount the problems caused by __ A different approach to the traditional problem is given in __ A whole range of different approaches to the problem are

	available. These techniques have potential to solve contemporary problems in __ We should tailor specific solutions to specific problems __ The standard solution to the problem is based on __ The solution proposed here addresses only the problem of __ There are techniques that have been developed to solve this problem __ This problem is usually overcome by __ There have been several attempts to solve the problem __ There exist many methods for dealing with this problem __ Broadly speaking, the problem can be addressed by __ One of the simplest ways of tackling this problem is __ This problem has been largely studied and many viable solutions have been found. In general, this problem can be tackled in two different ways. Other approaches have been shown to cope with the problem more efficiently. We will review the main approaches to solve this problem. Recently, a more general solution has been proposed for this problem. Both these works provide a solution to the problem. Recent methods focus on overcoming the problems by proposing different schemes for __ This strategy is not uncommon in this kind of problems. We can apply our algorithm to solve this difficult problem. This is how the problem can be tackled __ We have developed this generic method to solve a variety of problems. We will now demonstrate our method on some specific problems. Here we solve several problems simultaneously. We have undergone a rethinking of the problem by __ A possible solution to the problem at hand is __ It is clear that the problem could be easily tackled by __
Study motivation	It is of interest to know whether __ still hold true. It would be of special interest to__ We therefore analyzed __ and investigated whether __ For this study, it was of interest to investigate __ We investigated whether __ can be partly explained by __ To examine the impact of __, we tested __ We have investigated the effect of __ We characterize different aspects of __ One way to investigate __ was to __ A new approach is therefore needed for __ To illuminate this uncharted area, we examined __

Aims and objectives	The aim is to develop more sophisticated methods for __ The aim of this work is to develop __ The aims in this chapter are twofold: First __, Second __ For our first goal, we focus on two problems __ The aim here is to investigate __ The overall goal of this work was to __ This paper aims to develop an overarching framework to __ The aim of the experiment is to compare __ The ultimate goal is to produce a __ The overall goal of this thesis was to pursue __ After defining the problem, we explain the goals of the thesis. With this aim in mind, in this paper we present a new method for__ Our research aims at finding a solution for this challenging problem of __ There is no overall goal, apart from __ We examine some previous work and propose a new method for __ There are too many simultaneous goals making it difficult to __ One of the major aims of this work was to create __ The main objective is to investigate methods for improving __ The objective is to devise and implement a system for __ The objectives were partially met by developing a method to __ The objective is to demonstrate the feasibility of __ One of the objectives is to improve the __
Significance and advantages of your work	This thesis documents several key contributions made to the fields of __ This thesis has made a number of significant contributions to the field of __ The contributions made here have wide applicability. The contributions made should be of wide interest. The first main contribution proposed in this field is a __ The contributions of this work are presented as follows: __ The main achievements, including contributions to the field can be summarised as follows: __ We summarize the main contributions of this thesis. The key contribution of this work is the solution it provides __ It has numerous advantages as explained here __ It has significant benefits in terms of __ There is a clear advantage in following the methods of __ This has particular advantages over other __ All of these advantages make it particularly valuable in __ One of the primary benefits of this algorithm is __ This gives a significant advantage because __ These point out the advantages and practicability of __ One of the key benefits of the algorithm is __

	The main advantage compared to previous method is __ The paper presents some practical advantages. The main advantage is the simplified pattern. One practical advantage of the method is that it can be used in __ In comparison with other techniques, this method has the advantage of __ The most important advantage of this method is that it can perform very well in __ The benefit of using the __ is expected to __ The main advantage is that we are able to __ To give some idea of the benefits of this method __ The additional advantage of using this method is that it results in__ This is an important advantage of this algorithm __ These are the main advantages of this method.

The introduction answers three important questions for the reader:

1. What is this?
2. Why should I read it?
3. What do you want me to think about / consider doing / react to?

5.1.8. LITERATURE REVIEWS

The literature review should clearly demonstrate that the author has a good knowledge of the research area. Literature review typically occupies one or two passages in the introduction section. A well-written literature review should provide a critical appraisal of previous studies related to the current research area rather than a simple summary of prior works.

In most papers a summary of relevant and recent authorities on the subject is included in the introduction. Only a minority have a separate section headed ‘The Literature’ or ‘Literature Review’, although this is standard in dissertations. In all cases it is usually necessary to show that you are familiar with the main sources, so that your writing can build on these.

The literature review section of your research paper should include the following:

- Previous literature
- Limitations of previous research
- Research questions
- Research to be explored

Academic Phrases, Sentences and Vocabulary

Previous literature	The literature review shows that __ Previous research showed __ Valuable contributions have been made by __ A series of recent studies has indicated that __ Several theories have been proposed to __, some focusing on __, others on __ There have been numerous studies to investigate __ This has been used in several studies to assess __ Previous studies have shown __ Several studies suggest that __ This has also been explored in prior studies by __ Prior research suggests that __ Previous studies have emphasized __ The majority of prior research has applied __ Most early studies as well as current work focus on __ For instance, the following studies were conducted on __ Studies of __are well documented, it is also well acknowledged that __ A number of authors have recognized __ Some authors have also suggested that __ Some authors have driven the further development of __ This has been discussed by a great number of authors in literature. For example, research has provided evidence for __ The authors bring some information about the background of the problem, __ As has been previously reported in the literature, __ A large number of existing studies in the broader literature have examined __ The literature review shows that __ There exists a considerable body of literature on __ In short, the literature strongly suggests that __ Over time, an extensive literature has developed on __ This section presents a review of recent literature on __ This paper begins with a short review of the literature regarding __ Several methods are reported in the literature to address this issue. There is a wide choice of __ available in the literature. This section reviews the literature related to __ It was reported in literature that __ A recent study by __ concluded that __ In the light of reported __ it is conceivable that __ The method introduced by __ has the advantage that __ One method employed by __ is __ A more comprehensive description can be found in __ For example, recent research suggests that __

	This was successfully established as described by __ The author employed a __ methodology which prescribes the use of __
Limitations of previous research	A number of questions regarding __ remain to be addressed. A closer look to the literature on __, however, reveals a number of gaps and shortcomings. This question has previously never been addressed because__ Most studies have relied on __ Previous studies by __ cannot be considered as conclusive because __ Previous studies have almost exclusively focused on __ This has been previously assessed only to a very limited extent because __ In the present studies __ were constrained to __ In previous studies were limited to __ Although results appear consistent with prior research, they appear inconsistent with __ These are previously unstudied because __ As far as we know, no previous research has investigated __ Moreover, although research has illuminated __ no study to date has examined __ Despite decades of research, this continues to be debated among __ This section points out some of the problems encountered in the extant research. Although there are many studies, the research in __ remains limited. However, the existing research has many problems in representing __ The literature on __ is less consistent Historically, there has been a great deal of confusion in the literature regarding __ This approach remains briefly addressed in the literature. These are rarely analyzed in the literature as __ There are key questions and notions that are still not discussed in the literature __ This is not clearly presented in the literature because __ This paper addresses the need for __, so far lacking in the scientific literature. To fill this literature gap, this paper identifies __ Only a few works in literature demonstrate __ Although studies have been conducted by many authors, this problem is still insufficiently explored. To our knowledge, no prior studies have examined __ However, the existing research has many problems in __ Therefore, important issue in the literature is __

	However, we argue that previous literature suffers from certain weaknesses: __ Previous research can only be considered a first step towards a more profound understanding of __ The previous studies reveal that __ are usually the most problematic to __
Research questions	More specific research questions will be introduced and investigated in __ A further question is whether __ Finally, another promising line of research would be __ The study addresses several further questions on __ Some of the interesting questions in this context are __ In order to address the questions outlined above, we report here __ These questions are of central interest as much recent research in __ Furthermore, __ is arguably an important question to be addressed. The question now is how __ can be used to explain __ Study addresses the research question __ In order to properly address this question, we __ An important question associated with __ is __ A critical open question is whether __ A still unsolved question is whether __ This remains an open question as __ This question has previously never been addressed because __ This study offers a test of __ research question Study addresses the research question __ Even in general __ research strategies is needed to explain __ The researcher should be interested here in __ Many questions remain unanswered __ There are some potentially open questions about the validity of __ The question that then naturally arises is __ The question then becomes how best to define__ This was an important question to study as __ More specific research questions will be introduced and investigated in __ A further question is whether __ Finally, another promising line of research would be __ The study addresses several further questions on __ Some of the interesting questions in this context are __ In order to address the questions outlined above, we report here __ These questions are of central interest as much recent research in __ Furthermore, __ is arguably an important question to be addressed. The question now is how __ can be used to explain __ Study addresses the research question __

	In order to properly address this question, we __ An important question associated with __ is __ A critical open question is whether __ A still unsolved question is whether __ This remains an open question as __ This question has previously never been addressed because __ This study offers a test of __ research question Study addresses the research question __ The researcher should be interested here in __ Many questions remain unanswered __ There are some potentially open questions about the validity of __ The question that then naturally arises is __ The question then becomes how best to define__ This was an important question to study as __
Research to be explored	A more systematic and theoretical analysis is required for __ As the authors note earlier, more work is necessary to__ Additional studies to understand more completely the key tenets of __ are required. The unexpected findings signal the need for additional studies to understand more about __ This paper addresses __, so far lacking in the scientific literature. A new approach is therefore needed for __ One of the tough challenges for all researchers in this domain is __

5.1.9. METHODS

The methods section of your research paper should include the following:

- Experimental setup
- Data collection
- Data analysis
- Statistical testing
- Assumptions
- Remit of the experiment

Academic Phrases, Sentences and Vocabulary

Experimental setup	This experimental design was employed because __ In the course of the experiment, __ played an important role. The experiments were performed with __ This was experimentally investigated by __ Most experiments have been carried out with __ The main focus of the experiments was to calculate __ Prior to each experiment __ The experiments are completely based on __ In our preliminary experiments we estimated that __

	In this experiment, we introduced a __ Methods were based on previous experiments __ This proceeds in two stages: __ After a series of experiments, it was found that __ Therefore, in this experiment we define goals as __ In this experiment, we introduced a __ We consider the setup generic, however, __ This was designed to acquire approximately __ These were designed in such a way that __ This experimental design was employed because __ This was specifically designed for __ This was designed to acquire approximately __
Data collection	There were __ participants in this sample. We performed additional data collection with __ For this study, we analyzed the data collected from __ The data are less clear-cut than __ Data were collected and maintained by __ For this purpose, we employ survey data collected from __ The application employs data obtained from __ The analyzed data included: __ The procedures of handling the data followed the suggestions of __ Subsequently, __ were then used to elicit further data. The experimental data on __ is very scarce. The data in this work consists of __ Survey data were collected from __ This study used different data collection methods such as __ The quality can be enhanced by providing additional data for__ Such data are prone to __ We utilize secondary data from __ The data was divided into __ Participants in the first data collection were __ The sample was heterogeneous with respect to __ The sample size in this study was not considered large enough for__ The sample of respondents included __ The researchers pooled samples to __ The sample strategy was the same as for__
Data analysis	However, there are trends in our data to suggest that __ The trend values were then subjected to __ We analysed data as a function of __ We used an established technique, namely __, to analyse __ This showed a judgement error of __ To investigate this statistically, we calculated __ A __ test was used to determine the significance of data Our data show that there is __ Our data suggest that __ which may be based partly on __

	Data also revealed a significant __ Our data also address the __ Data were analyzed and correlated with __ The data are presented in Table __ However, according to our data __ We undertake the empirical analysis using data collected in __ The data is analyzed from different points of view such as __ The data reveals significant differences in __ Thus, the data supports the premise that __ Results provide a good fit to the data __ We compared the results with the original data in ways __ The evaluation of the data is shown in __ We explicitly accounted for __ Missing values were replaced using __ This analysis was confined to __ The evaluation of the data presented in this work leads to __
Statistical testing	We explored these effects statistically by __ Statistical analyses was performed by using the __ applying a significance level of __ The results were statistically significant when compared using __ This was normally distributed throughout the study population. This distribution resulted in __ Significant differences in the __ remained. This was the only parameter that had a statistically significant correlation with __ We used __ statistics to report __ This had a statistically significant impact on __ The correlation between __ and __ is positive and statistically significant at __ We calculate __ statistic to test the null hypothesis that __ As shown in Table __ are statistically significant at all levels. We can clearly see that the estimated values are positive and statistically significant at __ This revealed no statistical differences on __ The test for __ found no significant differences. Our results show a statistically significant improvement in __ All differences in performance were statistically significant in __ The method achieves a statistically significant improvement compared to __ In order to obtain statistically representative __ it is required to __ To investigate this statistically, we calculated __ Descriptive statistics were calculated for all variables used in the study The significance testing was based on __ All statistical analyses were performed using __

Assumptions	Such a potentially unrealistic assumption arises from the fact that __ Based on these assumptions, hypotheses were developed: __ Based on these assumptions, __ have been treated as __ This is based on assumptions that __ These assumptions are generally accepted these days__ The fundamental assumptions of the models are: __ This assumption is supported by the fact that __ Under certain assumptions, __ These assumptions result in __ This assumption might be addressed in future studies by __ This compilation of research assumptions should result in __ These assumptions have been disproved by __ According to __ assumption, the study reports faithfully __ Such a potentially unrealistic assumption arises from the fact that __ Based on these assumptions, hypotheses were developed: __ Based on these assumptions, __ have been treated as __ This is based on assumptions that __ These assumptions are generally accepted these days__ The fundamental assumptions of the models are: __ This assumption is supported by the fact that __ Under certain assumptions, __ can be construed as __ These assumptions result in __ This assumption might be addressed in future studies by __ This compilation of research assumptions should result in __ These assumptions have been disproved by __ According to __ assumption, the study reports faithfully __
Remit of the experiment	For the current work, it is sufficient to point out that __ Because we were interested in __, we considered only __ This was sufficient to __ This is sufficiently generic to be adapted to other __ This is generally sufficient to produce good results. Still, results might be sufficient, especially in __ This was not possible due to insufficient observations. After a series of experiments __ was considered as sufficient. It has been proven that __ must be sufficient to __ This was not sensitive enough to __ This study cannot be considered large enough for __ This is simpler and usually sufficient to __ It turns out that it is sufficiently accurate for __ There is in fact sufficient information present in __ This is considered sufficiently unique for __ This is enough to get a sufficiently accurate solution.

5.1.10. GROUPS OF RESEARCH METHODS

A.

1. **The empirical-analytical group** of research methods approaches the study of sciences. This type of research focuses on objective knowledge, research questions that can be answered yes or no, and operational definitions. This approach is focused on explanation.

2. **The interpretative group of methods is focused on understanding phenomenon in a comprehensive, holistic way** (why, how, or by what means people do what they do).

B.

1. Qualitative. This type of research methods involves describing in detail specific situation using research tools like interviews, surveys, and observations. Some common methods include focus groups (group discussions), individual interviews, and participation/observations.

2. Quantitative. This type of research methods requires data involving numerical and statistical explanations. Quantitative research is used to quantify the problem by way of generating numerical data or data that can be transformed into usable statistics: quantitative data collection, face-to-face interviews, telephone interviews, online polls, and systematic observations.

5.1.11. "RESULTS" SECTION

The purpose of a Results section is to present the key results of your research. Results and discussions can either be combined into one section or organized as separate sections depending on the requirements of the journal to which you are submitting your research paper.

5.1.12. "DISCUSSION" SECTION OF THE ARTICLE

"Discussion" section is an evaluation of both the benefits and disadvantages of the topic.

Discussion discusses the implications of the findings.

Generally, this part includes the following:

- A presentation of background information as well as recapitulation of the research aims of the study.
- A brief summary of the results.
- A comparison of results with previously published studies.
- Conclusions or hypotheses drawn from the results, with summary of evidence for each conclusion.
- Proposed follow-up research questions and outlook on further work.

The language of Discussion. The following vocabulary for the benefits and disadvantages of the topic can be used:

Benefits	Disadvantages
benefit	drawback
advantage	disadvantage
a positive aspect	a negative feature
pro (informal)	con (informal)
plus (informal)	minus (informal)
one major advantage is . . .	a serious drawback is

When discussing common ideas avoid personal phrases such as *In my opinion* or *Personally, I think . . .*

Use impersonal phrases instead such as:

It is generally accepted that…

It is widely agreed that …

Most people appear ….

It is probable that …

The evidence suggests that…

These phrases suggest a minority viewpoint:

It can be argued that …

One view is that…

When you are supporting your opinions with sources use phrases such as:

According to Jason (2018)…

Bornar (2017) claims that…..

The "Results and Discussion" section of your research paper should include the following:

- Findings
- Comparison with prior studies
- Limitations of your work
- Casual arguments
- Speculations
- Deductive arguments

Academic Phrases, Sentences and Vocabulary

Findings	From the short review above, key findings emerge: __ We describe the results of __, which show __ This suggests that __ We showed that __ Our findings on __ at least hint that __ This is an important finding in the understanding of the __ The present study confirmed the findings about __ Another promising finding was that __ Our results demonstrated that __ This result highlights that little is known about the __ A further novel finding is that __

	Together, the present findings confirm __ The implications of these findings are discussed in __ The results demonstrate two things. First, __. Second, __ The results of the experiment found clear support for the __ This analysis found evidence for __ Planned comparisons revealed that __ Our results cast a new light on __ This section summarises the findings and contributions made. It performs well, giving good results. This gives clearly better results than __ The results confirm that this a good choice for __ From the results, it is clear that __ In this section, we will illustrate some experimental results. This delivers significantly better results due to __ The result now provides evidence to __ It leads to good results, even if the improvement is negligible. This yields increasingly good results on data. The result of this analysis is then compared with the __ The applicability of these new results are then tested on __ This is important to correctly interpret the results. The results are substantially better than __ The results lead to similar conclusion where __ Superior results are seen for __ From these results it is clear that __ Extensive results carried out show that this method improves __ We obtain good results with this simple method. However, even better results are achieved when using our algorithm. It is worth discussing these interesting facts revealed by the results of __ Overall, our method was the one that obtained the most robust results. Slightly superior results are achieved with our algorithm. The result is equal to or better than a result that is currently accepted.
Comparison with prior studies	The results demonstrated in this chapter match state of the art methods. Here we compare the results of the proposed method with those of the traditional methods. These results go beyond previous reports, showing that __ In line with previous studies __ This result ties well with previous studies wherein __ Contrary to the findings of __ we did not find __ They have demonstrated that __ Others have shown that __ improves __ By comparing the results from __, we hope to determine __

	However, in line with the ideas of __, it can be concluded that __ When comparing our results to those of older studies, it must be pointed out that __ We have verified that using __ produces similar results Overall these findings are in accordance with findings reported by __ Even though we did not replicate the previously reported __, our results suggest that __ A similar conclusion was reached by __ This is consistent with what has been found in previous __ A similar pattern of results was obtained in __ The findings are directly in line with previous findings These basic findings are consistent with research showing that __ Other results were broadly in line with __
Limitations of your work	Because of the lack of __ we decided to not investigate __ One concern about the findings of __ was that __ Because of this potential limitation, we treat __ The limitations of the present studies naturally include __ Regarding the limitations of __, it could be argued that __ Another limitation of this __ This limitation is apparent in many __ Another limitation in __ involves the issue of __ The main limitation is the lack of __ One limitation is found in this case. One limitation of these methods however is that they __ It presents some limitations such as __ Although widely accepted, it suffers from some limitations due to __ An apparent limitation of the method is __ There are several limitations to this approach. One limitation of our implementation is that it is __ A major source of limitation is due to __ The approach utilised suffers from the limitation that __ The limitations are becoming clear __ It suffers from the same limitations associated with a __
Casual arguments	A popular explanation of __ is that __ It is by now generally accepted that __ A popular explanation is that __ As it is not generally agreed that __ These are very small and difficult to observe. It is important to highlight the fact that __ It is notable that __ An important question associated with __ is __ This did not impair the __ This is important because there is __ This implies that __ is associated with __

	This is indicative for lack of __ This will not be biased by __ There were also some important differences in __ It is interesting to note that, __ It is unlikely that __ This may alter or improve aspects of __ In contrast, this makes it possible to __ This is particularly important when investigating __ This has been used to successfully account for __ This introduces a possible confound in __ This was included to verify that __
Speculations	However, we acknowledge that there are considerable discussions among researchers as to __ We speculate that this might be due to __ There are reasons to doubt this explanation of __ It remains unclear to which degree __ are attributed to __ However, __ does seem to improve __ This does seem to depend on __ It is important to note, that the present evidence relies on __ The results show that __ does not seem to impact the __ However, the extent to which it is possible to __ is unknown Alternatively, it could simply mean that __ It is difficult to explain such results within the context of __ It is unclear whether this is suitable for __ This appears to be a case of __ From this standpoint, __ can be considered as __ To date, __remain unknown Under certain assumptions, this can be construed as __ Because of this potential limitation, we treat __ In addition, several questions remain unanswered. At this stage of understanding, we believe__ Therefore, it remains unclear whether __ This may explain why __
Deductive arguments	A difference between these __ can only be attributable to __ Nonetheless, we believe that it is well justified to __ This may raise concerns about __ which can be addressed by __ As discussed, this is due to the fact that __ Results demonstrate that this is not necessarily true. These findings support the notion that __ is not influenced by __ This may be the reason why we did not find __ In order to test whether this is equivalent across __, we __ Therefore, __ can be considered to be equivalent for __

5.1.13. THE BODY OF A PAPER

The body of a paper reports on the actual research done to answer the research question or problem identified in the introduction. Often, the body has several sections and subsections.

Some examples are given below.

- In *empirical papers*, the paper body describes the material and data used for the study, the methodologies applied to answer the research questions and the results obtained.

- *Case study papers* describe the application of existing methods, theory or tools.

- *Methodology papers* describe a novel method which may be intended for use in research or practical settings (or both).

- *Theory papers* describe principles, concepts or models on which work in the field (empirical, experience, methodology) is based.

Generally, the body of a paper answers two questions, namely *how* was the research question addressed (materials, methods) and *what* was found (results).

The two central elements that structure the body of the text are

- **sections**

- **paragraphs** (the introduction and conclusion are also structured in paragraphs)

What is in a Section? Sections structure your argument into major points or the major pieces of evidence you are citing.

The section structure helps you to focus on different aspects of the text.

What is in a Paragraph? One paragraph = one idea

5.1.14. THE CONCLUSION OF THE RESEARCH PAPER

Conclusions tend to be shorter and more diverse than introductions. Some articles may have a ‘summary’ or ‘concluding remarks’. But the papers should generally have a final section that summarises the arguments and makes it clear to the reader that the original question has been answered.

There are some things you need to do in your conclusion:

- Summarize your argument.

- Similarly, do not repeat step by step “what you have done” and in which part of the paper you have done it. Rather state *what you have shown in your analysis*.

Things you may also do in your conclusion include:

- Pointing towards larger issues that have been opened up with your analysis.

- Stating how your analysis reflects upon the whole text (when discussing longer texts).

- Reflecting upon questions you could not solve.

The conclusion section of your research paper should include the following:

- Overall summary
- Further research

Academic Phrases, Sentences and Vocabulary

Overall summary	The paper concludes by arguing __ On this basis, we conclude that __ The authors concluded that __ is not confined to __ This allows the conclusion that __ The findings of this study can be understood as __ This may be considered a promising aspect of __ This may be considered a further validation of __ Remaining issues are subject of __ In summary, this paper argued that __ This aspect of the research suggested that __ In conclusion, __ seems to improve __ In summary, this paper argued that __ In conclusion, it would appear that __ The analysis leads to the following conclusions: __ It is difficult to arrive at any conclusions with regard to __ The main conclusion that can be drawn is that __ The present findings confirm __ As we have argued elsewhere __ may be considered a promising aspect of __ Ideally, these findings should be replicated in a study where __ By using __ we tested the hypothesis that __ In conclusion, __ seems to improve __ Our findings indicate that __ This is an important finding in the understanding of the __ More generally, these basic findings are consistent with research showing that __ In addition, these findings provide additional information about __ Despite the limitations these are valuable in light of __ Overall, our results demonstrate a strong effect of __ Nevertheless, we found __ To our knowledge, this is the first report of __ Our results on __ are broadly consistent with __ The broad implication of the present research is that __ This conclusion follows from the fact that __ Collectively, our results appear consistent with __ Importantly, our results provide evidence for __ Results provide a basis for __ This experiment adds to a growing corpus of research showing __ Our data indicate that __; a result that casts a new light on __ These findings provide a potential mechanism for __ We have shown that __ Our data suggest that we still have a long way to go to __

Future work	Future research should consider the potential effects of __ more carefully, for example __ This assumption might be addressed in future studies. Future research on __ might extend the explanations of __ This is very much the key component in future attempts to overcome __ In future work, investigating __ might prove important. This is desirable for future work. Future investigations are necessary to validate the kinds of conclusions that can be drawn from this study. Future studies could fruitfully explore this issue further by __ Future research is needed to delimitate __ It will be important that future research investigate __ It is a question of future research to investigate __ We believe that apart from looking for __, future research should look for __ Regardless, future research could continue to explore __ This is an issue for future research to explore. Future studies could investigate the association between __ Future studies should aim to replicate results in a larger __ Future research should be devoted to the development of __ This may constitute the object of future studies. Future research could examine __ Interesting research questions for future research that can be derived from __ In future research, more research is needed to apply and test __ This is an interesting topic for future work. Future research should further develop and confirm these initial findings by __ Future research should certainly further test whether __ As also recommended above, future research should __ Future research should examine strategically __ Future research might apply __ In addition, __ might prove an important area for future research. A number of recommendations for future research are given. Therefore, future research should be conducted in more realistic settings to __ Further research on __ issue is warranted. Looking forward, further attempts could prove quite beneficial to the literature. Further research is needed to confirm this novel finding. These result warrant further investigation via __ This provides a good starting point for discussion and further research. Further studies should investigate __ The possibility of __ warrants further investigation.

5.1.15. ACKNOWLEDGMENTS

Acknowledgments is a brief statement acknowledging the efforts of any participants or consultants who are not included as authors of the manuscript. There is no standard way to write acknowledgements. This section allows you to thank all the people who helped you with the project. You can take either formal or informal tone; you won't be penalized. State all of the funding sources for the work.

Academic Phrases, Sentences and Vocabulary

Thank/Support	The authors gratefully acknowledge the financial support of __ The authors acknowledge the infrastructure and support of __ The authors would like to thank __ The work was supported by the __ The authors very much appreciate the support by the __ The authors appreciate the unknown referee's valuable and profound comments. The authors wish to express their thanks for the financial support of __ This material is based upon work supported by the __ The financial support of the __ is also gratefully acknowledged. Funding for the present work was provided by __ The opinions of the authors expressed herein do not necessarily state or reflect those of __ Part of this work was carried out within the financial support from __ The authors would like to thank the reviewer for the constructive feedback. This research was supported by __ Partial support for the work was provided by __ The authors sincerely acknowledge the __ Authors also acknowledge the __ for the support in __ The authors thank __ for discussions on __

The Sample of the Acknowledgments

FOR EXAMPLE 	This project is what I wanted to do and enjoyed doing. I would like to take this opportunity to express my immense gratitude to all those people who have given their invaluable support and assistance. First of all, I am profoundly indebted to my supervisor, Dr. Lynn McAlpine, whose support, encouragement, and patience made the completion of my doctorate possible. She is not only a supervisor but also a mentor, who has been very much willing to share her own academic experiences and career decisions whenever I ask. I have learned so much from her throughout the years and I can never thank her enough. I would like to extend my sincere gratitude to my advisory committee members, Drs. Anthony Par and Cynthia Weston, for their patience,

	understanding, and insightful feedback. I wrote them three times asking for extensions for sending them a draft and they always responded with understanding, consolation, and encouragement. I thank them for taking pressure off the shoulders of a worried student! This dissertation would not have been completed without the help of the coordinators and supporting staff in the three departments where I carried out the study, who showed their support for the project. My special thanks are reserved for the participants in the project, who kindly allowed me to observe their defenses and shared their feelings and thoughts. This research had been financially supported by my supervisor Dr. Lynn McAlpine's research grants and a doctoral fellowship of my own. Many thanks go to my family. I owe a lot to my husband. I thank him for his understanding of me spending weekends and holidays writing instead of staying with him and for listening to and consoling me whenever I felt overwhelmed and frustrated. Special thanks go to my younger brother and his wife, who, both holding a PhD, have been encouraging me by sharing their doctoral experiences. I am also grateful to my dad and older sister for their love and support. I thank Pierre-Philippe Poirier for translating the abstract into French. Notwithstanding all of the above support, any errors are solely my own. This thesis is dedicated to the memory of my beloved mother.

5.1.16. APPENDIX

You can place supplementary materials in the appendix and refer to them in the main text. There is no limit on what you can place in the appendix section. This can include figures, tables, costs, budget, maps, etc. Anything that is essential for the paper but might potentially interrupt the flow of the paper goes in the appendix.

Academic Phrases, Sentences and Vocabulary

Appendix	For interested readers a detailed description is presented in the Appendix __ Further description is available in the Appendix or from the author__ Complete data is available in __ Supplementary data associated with this article can be found, in the online version, at __ The full colour images can be found in the on-line version, at __

5.1.17. EDITORIAL SYSTEM AND PEER REVIEW

Peer review has two key functions:

- to act as a filter by ensuring only good research is published to determine the validity, significance and originality of the work;

- to improve the quality of research submitted for publication by giving reviewers the opportunity to suggest improvements.

Some journal editors will ask authors to provide the names of possible reviewers.

A reviewer checks:

- concise summary of the work in abstract;
- language;
- flow of materials (organizations/presentation of paper);
- appropriate number of tables and figures;
- references/tables/figures are not cited properly/mismatch;
- introduction (length, objectives and novelty);
- clarity of expressions throughout of the paper;
- latest related work/comparing with others work;
- clear photograph/quality of graph;
- any contradictory statement;
- flawed methodology.

There are different types of peer review:

Single blind - names are hidden from author.

Double blind - both reviewer and author remain anonymous.

Open Reviewer and author are known to each other.

Reviewers will then make a recommendation to the editor:

- to accept,
- accept with revisions
- decline the article.

Review process may take from 1 week to 3 years. Some journals editors assess submission and provide decisions if no new contributions.

5.1.18. THE REASONS FOR REJECTION OF A PAPER

The reasons for rejection.

- There is insufficient new, interesting and significant information in the paper.
- The paper was inappropriately targeted.
- The paper's English is too poor to be understood by an international readership.
- Will probably not be cited.
- The paper is too commercial.
- Objectives not clear.
- Local issues with insufficient interest for an international audience.
- The discussion was badly argued (major mistakes).
- The entire paper is badly structured.

- The conclusion was wrong.
- Lack of history on the topic (no proper literature review).
- Too few references.
- The paper was good, but just not good enough.

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What types of articles do you know?
2. What is the structure of an article?
3. What is the format of Qualitative Research Articles?
4. What are the types of the title?
5. What is to be in the introduction?
6. What are the groups of Research Methods?
7. What is there in the “Discussion” section of the article?
8. What is the body of a paper?
9. What does the conclusion of the article reveal?
10. What is “Acknowledgments”?
11. What do you know about editorial system and peer review?
12. What are the common reasons for rejection a paper?

РЕКОМЕНДОВАНА ЛІТЕРАТУРА

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ТЕМА 5.2. PAPER PRESENTATION

Навчальні цілі: формувати комунікаційні компетентності з тематики презентації наукових напрацювань, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції.

Зміст

5.2.1. COMMUNICATION IN SCIENCE

Communication is essential for scientific research. Science is a public knowledge and the aim of a scientist is to create, criticise and thus contribute to the progress of ideas. This aim is generally achieved through scientific publications and conferences. Articles in regular scientific journals carry from one research worker to another various discovery, deductions, speculations and observations which are of common interest. Generally scientific papers are derivative and depend on previous research. References to other research are reflected in citations. A scientist relies on the citations to show the place of his investigation in the whole scientific structure.

Another opportunity to share and exchange opinions and information is national and international conferences and symposia. They play an important role in coordinating scientific research.

Usually scientific gatherings are sponsored by the central scientific organizations. An organizational committee is set up which decides where and when a conference should be held. Invitations are sent out to organizations interested in the topics discussed, together with the requests to submit applications and abstracts of papers. After receiving all necessary materials, the committee publishes a programme of the events.

At the conference the participants present their papers and listen to the reports read by others on the latest developments and the state of the art in their field. Papers on general topics are read before all the participants, those dealing with specific problems are presented at group meetings and plenary sessions held in subject areas under the chairmanship of distinguished scientists. After the hearings the discussions follow. Scientists can discuss a given problem with other experts in their field, argue with their scientific opponents, find out the details of some experimental procedures. The materials of conferences and symposia are usually published to allow others to keep abreast of the achievements in science.

Another type of scientific meeting are a laboratory or work-group seminar, colloquium or workshop. The members of the staff and guestspeakers make reviews

of the developments in their field and report the progress of their research. The speakers expect thorough discussion and criticism, advice and help of their colleagues. Such personal exchange of views is very essential for any scientist.

Vocabulary

Conference — meeting for discussion, exchange of views.

Symposium — a conference at which a particular topic is discussed by speakers.

Forum – a meeting where ideas and views on a particular issue can be exchanged; a place for open discussion.

Event — an item in a programme of a scientific gathering; a programme includes, such events as plenary sessions, section meetings, seminars, workshops, roundtable talks, etc.; a social programme includes such events as dinners, reception excursions, tours, etc.

Seminar — a discussion group on any particular subject.

Colloquium — a meeting for discussion.

Workshop — a seminar emphasising exchange of ideas and practical methods.

5.2.2. ORGANISING CONFERENCES AND MEETINGS

Preparations for congresses, conferences and symposia involving wide participation and open discussion, are normally in the hands of an Organising Committee. First an advance notice and invitation is sent to prospective participants including an outline programme, details of congress fees, transport and accommodation. Those who want to attend a scientific conference or symposium are requested by the Organising Committee to register, usually by filling in an official application form, and if they wish to make contributions, they are also asked to submit their abstracts in one of the international conference languages, English, Russian, French or German. If intending participants wish to put on a demonstration they should notify the organizers of the title, the facilities required and a short description plus one table or figure. If they wish their abstracts to be published they have to send them in by a fixed date.

Tips on conference planning

1. Plan in advance
2. Set a time scale
3. Plan the ideal size of your conference
4. Set a budget
5. Choose your speakers
6. Choose the location
7. Talk to the venue (a place where events of a specific type are held)
8. Choose your suppliers
9. Focus on visitor experience
10. Take a look at our conference offering

5.2.3. ACTUAL CONDUCT OF CONFERENCES AND MEETINGS

Before a conference or meeting can actually begin a *chairman (or chairperson) or a president* must be elected, who then officially opens the function. First he (or she) makes the official *opening speech*. Then he reads the *agenda* and explains in *outline* the work to be done by the *session*. He recalls the *minutes* of the last meeting, which he signs as correct if the meeting approves them. If anyone has an objection to the order of business he can put forward a motion to amend it, which has to be voted upon. The agenda is only amended if the motion is carried by a majority.

The programme of a scientific conference or symposium normally follows a set pattern.

Mornings	In the mornings papers are read or lectures delivered by experts.
Afternoons	Afternoons are generally for discussions and/or working groups, for which time limits will be set.
Evenings	Social events such as welcome or farewell parties, theatre performances or concerts are usually held in the evenings.

During some conferences, excursions and ladies' programmes are also arranged.

At the conclusion of a scientific, cultural or political conference or meeting the participants may decide to pass a *resolution* or issue a *statement*. In this case a motion should be put forward and voted upon.

The final duty of the chairman is to call upon a member to propose a vote of thanks to the organisers, contributors, sponsors and participants as well as to the focal authority for providing hospitality.

After the last speech the chairman or president declares the congress, conference or meeting closed.

5.2.4. A PAPER PROPOSAL

Instructors may ask you to hand in **a paper proposal as a basis for discussing your ideas**. A paper proposal should usually be **one page** long and contain your working title, the texts you would like to work on, your research question and thesis, a preliminary structure, and a preliminary annotated list of works cited.

The basic purposes of all paper proposals are to convince the publishers/conference organisers that:

a) the paper project has clear objectives;

b) the paper project is worth doing (it is significant/important in some sense and will make an original contribution to knowledge/understanding in the field);

c) the proposed methods are suitable and feasible;

d) there is a well thought through plan for achieving the paper objectives in the available timeframe.

Description/Justification for your topic

Why did you choose this topic?

How is your topic relevant to this course? What themes or issues from the course will be central to your research?

What is your Research Question?

Thesis Statement: Your Answer to the Research Question

Preview your argument:

Clarify what steps you will take to address your topic.

Connect your theory to your examples.

Make sure that these steps will logically support the claim you make in your thesis statement.

Provide a preliminary list of sources

Focus on scholarly (peer-reviewed) sources.

For each source, explain how it contributes to your paper.

List any interviews you've done/plan to do.

5.2.5. A CONFERENCE PAPER

Tips for delivering conference papers

1. Practice your presentation for friends, in front of the mirror, or on videotape.
2. Familiarize yourself with the environment of the room in which you will speak (size of the room, quality of microphone, podium, height of the lectern, etc.).
3. Make sure all the equipment works and that you know how to use it (recording equipment, projector, microphone, etc.).
4. Make sure your visual aids are clear. The content of visual aids should support your points, not confuse the audience. If your visual aid presents several columns of data, use a piece of paper to cover the columns you have yet to discuss. Use large type on all visual aids.

5. Be relaxed, but maintain good posture. Stand up straight and hold your head up straight. Breathe quietly and deeply.
6. Use your voice. Don't forget the importance of pauses. Don't be afraid of silence. Silence can be extremely effective and is certainly preferable to filler words such as "uh", "you know", and "like".
7. Use your hands sparingly.
8. Maintain eye contact with both sides of the room. Whether you are reading, speaking from notes, or talking, it is important to look at your audience. If it is difficult for you to look directly at people, then look at their foreheads or just above their heads.
9. Adjust the microphone to the proper position before you begin to speak.
10. Speak slowly and clearly. Most people have a tendency to speak too fast when speaking in public.
11. Do not go over your time limit. Practicing your presentation should eliminate this problem. If, however, the "question and answer" session extends beyond the time limit, it is your responsibility to end the discussion as quickly as possible.

5.2.6. TYPES OF CONFERENCE PRESENTATIONS

Presentation types differ among disciplines. For example, those in the humanities typically read their papers aloud at conferences, while social scientists give summary presentations of longer works.

Paper with Respondent. In this type of presentation, a speaker gives a thirty-minute paper. A respondent then gives a fifteen-minute response to the paper. The speaker subsequently gives a fifteen-minute reply to the response.

Panel Presentation. Panel sessions include 3-4 speakers, each of whom talks for 15-20 minutes. Panels may also have a discussant who comments on the papers/presentations individually and as a group.

Roundtable. A roundtable features five or more speakers, each of whom talks for 5-10 minutes.

Workshop. These sessions can vary in length from 90 minutes to one full day. Workshop presenters give short statements before involving the audience in some type of activity.

Poster - Poster Talk - Poster Presentation - Poster Discussion. All of these involve a visual presentation of ideas. Some presenters choose to display a 3- to 8-page paper that explains their project; others may post their hypothesis and an outline of their findings. The most eye-catching posters exhibit charts, graphs, photographs, or artwork. Posters can be displayed for the length of the conference or for a single day. Poster talks give the audience a chance to question the poster creator at a specified time. Poster presentations feature 4-6 posters on a single theme displayed at a specific time. Each poster creator gives a short talk on his or her project. Poster discussions also include 4-6 posters on a single theme displayed at a specific time. Conference participants circulate around the room, questioning and collecting handouts from presenters. This type of presentation can also be called an interactive exhibit

5.2.7. COLLABORATION WITH COLLEAGUES

Collaborating with colleagues who have publication experience and expertise can be advantageous to the research novice.

Rather than rush to submit a manuscript, the inexperienced scholar should ask a colleague to review it first. A colleague can cast a critical eye on the manuscript with a view to assessing its quality and its relevance to the readers of a particular journal. Tenured members of a university faculty or published researchers in an organization can offer support as early reviewers of the manuscript and can explain the dynamics of the manuscript review and publication processes. Their critique and feedback can shorten the time between submission and actual publication.

Collaborating with colleagues does not have to be limited to those on a college campus or in single organization; it can extend to those participating in professional associations and conferences held elsewhere. Members of such organizations may have garnered experience in publishing parts of their dissertation as articles for peer-reviewed journals.

Experienced authors can play the role of publication advisors or mentors. They can nurture the scholarly skills of would-be authors and bolster their confidence as

they turn in their manuscripts for journal editors' consideration. Support and guidance provided by experienced authors can make a difference in preparing beginners for successful scholarly publishing.

Collaboration can extend into the area of co-authorship of papers. However, this can lead to disagreements and become rather contentious, particularly in situations where a dissertation advisor expects to be named as a co-author, and even the senior (first) author, on papers generated from the dissertation.

5.2.8. THE FORMAT OF AN ORAL PRESENTATION

A. Describe essential aspects of the research.

– Explain the research problem and its importance.

– Explain the research setting (a map is usually necessary!)

– Explain what you did and why.

– Explain the results.

– Conclude.

B. You may only be able to present a small portion of your research.

C. Sometimes you only have time to provide one or two illustrations of your findings

D. In professional meetings devote 5 minutes to questions/discussion.

E. Don't be afraid to allow time for discussion!

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. What is your research problem?
2. Why is this problem important?
3. How does your dissertation fit into the context of other research?
4. How did you investigate the research problem?
5. What are your findings?
6. What do these findings tell you about?
7. What do you conclude?

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TEMA 5.3. FINDINGS OF MY RESEARCH

Навчальні цілі: формувати комунікаційні компетентності з тематики власного дослідження, вдосконалювати лексико-граматичні навички, розвивати презентаційні компетенції

Зміст:

5.3.1. Authors' rights
5.3.2. Key author responsibilities
5.3.3. Reporting standards
5.3.4. Helpful phrases for a presentation
5.3.5. The tips for delivering research papers
5.3.6. How to be an active participant in meetings
5.3.7. The list of phrases to help you make a professional presentation in English
5.3.8. Common English phrases used in meetings and presentations.

5.3.1. AUTHORS' RIGHTS

As a journal author, you retain rights which include:

- *Teaching*: Authors may make print or electronic copies of the article for use in classroom teaching or for his or her personal use.
- *Educational material*: An article can be made available to the author's institution or company e-course packs or company training.
- *Scholarly sharing*: Copies of the article can be shared with research colleagues.
- *Meetings and conferences*: Articles can be presented and copies made for attendees.
- *Further works*: Articles can be used in compilations, expanded to book form or used in theses or dissertations.
- *Patent and trademark rights*: The right to use the article for any inventions disclosed or products identified.
- *Websites*: Authors may post a pre-print version of the article online on websites and a revised version on institutional or personal websites, incorporating a link to the Digital Object Identifier (DOI) of the article.

5.3.2. KEY AUTHOR RESPONSIBILITIES

The term "author" applies to any individual who makes a substantial contribution to a work product. Authorship refers to the listing of contributors to the work product.

To qualify as an author, an individual must make a substantial contribution to the work product that fulfills the following criteria:

1. Made a substantial intellectual contribution to the work product. An individual may make a substantial intellectual contribution in several different ways, including:

a. Conception and design (e.g., formulation of hypotheses, refining research ideas, development of study objectives; or the definition of experimental, statistical, modeling, or analytical approaches);

b. Acquisition of data or development of models (e.g., non-routine fieldwork, such as adapting or developing new techniques or equipment necessary to collect essential data; non-routine lab work such as development of new methods or significant modification to existing methods essential to the research; literature searches; theoretical calculations; and development and application of modeling specific to the project);

c. Analysis and interpretation of data.

2. Wrote or provided editorial revisions to the work product containing critical intellectual content.

3. Approved the final version to be published and agreed to be accountable for all aspects of the work product.

Any individual who has met these criteria, independent of their rank, status, or affiliation, should be named as an author.

Authorship:

Report only real, unfabricated data.

Originality.

Declare any conflicts of interest.

Submit to one journal at a time.

Avoid:

Fabrication: making up research data.

Falsification: manipulation of existing research data.

Plagiarism: previous work taken and passed off as one's own.

5.3.3. REPORTING STANDARDS

Authors of original research should present an accurate account of the work performed as well as an objective discussion of its significance.

- *Data access and retention*: Authors may be asked to provide the raw data in connection with an article for editorial review, and should be prepared to provide public access to such data.

- *Originality and plagiarism*: Authors should ensure that they have written entirely original works, and if the authors have used the work and/or words of others, that this has been appropriately cited or quoted.

- *Multiple publication*: Authors should not publish articles describing essentially the same research in more than one journal or primary publication.

- *Acknowledgment of sources*: Proper acknowledgment of the work of others must always be given.

- *Permissions*: Authors are responsible for seeking (and paying) for permission to use third-party material.

- *Authorship of the article*: This should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported study. All those who have made significant contributions should be listed as

co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors.

- *Conflicts of interest*: Authors should disclose in their article any financial or other substantive conflict of interest that might be construed to influence the results or interpretation of their article.

5.3.4. HELPFUL PHRASES FOR A PRESENTATION

Try these helpful phrases for a presentation:

Introduce yourself and keep it loose and breezy (informal and light) — it will put everyone at ease.

- "Welcome everybody, my name is [your name] and I am the PhD student of…"
- "Hi, I'm [your name] and I'm the the PhD student of…"
- "Good morning/afternoon/evening ladies and gentlemen, I'm [your name]."
- "Hi everyone, I'm [your name]. I'm going to keep this brief, as I know you're all busy people. I'm going to make this quick for you…"

Introducing the Topic of Your Presentation

After you've introduced yourself, it is time to introduce your topic of presentation.

- "Today I'm here to talk to you about…"
- "I'm delighted to be here today to tell you about…"
- "Today I would like to outline our plans for…"

This gives your audience a map, or an idea of what you will be talking about. Here are some phrases that will provide **structure** for your presentation, making your message neater and more organized.

- "Firstly I'll talk about…" or "I'll start with some general information on…"
- "Then I will look at…" or "then we'll go over…"
- "And finally we'll look at…" or "To conclude we'll touch on…"
- "I will be glad to answer any questions that you may have at the end of this presentation."

Try to look up from your notes as often as possible so you can engage and interest your audience and relax. Try to have fun. People are generally forgiving if you make a few mistakes.

Ending Your Presentation. This is a very simple part. Once you have given your presentation and are ready to finish, use these phrases.

- "Well, that brings me to the end of my presentation, thanks so much for listening."
- "It was a real pleasure being here today. Goodbye and thank you".
- "Well that's it from me. Thanks a lot".

5.3.5. THE TIPS FOR DELIVERING CONFERENCE PAPERS

1. Practice your presentation for friends, in front of the mirror, or on videotape.

2. Familiarize yourself with the environment of the room in which you will speak (size of the room, quality of microphone, podium, height of the lectern, etc.).

3. Make sure all the equipment works and that you know how to use it (projector, microphone, etc.).

4. Make sure your visual aids are clear. The content of visual aids should support your points, not confuse the audience. If your visual aid presents several columns of data, use a piece of paper to cover the columns you have yet to discuss. Use large type on all visual aids.

5. Be relaxed, but maintain good posture. Stand up straight and hold your head up straight. Breathe quietly and deeply.

6. Use your voice for projection and inflection. Don't forget the importance of pauses. Don't be afraid of silence. Silence can be extremely effective and is certainly preferable to filler words such as "uh", "you know", and "like".

7. Use your hands sparingly. Too much use of the hands and repetitive motions are distractive.

8. Maintain eye contact with both sides of the room. Whether you are reading, speaking from notes, or talking extemporaneously, it is important to look at your audience. If it is difficult for you to look directly at people, then look at their foreheads or just above their heads.

9. Adjust the microphone to the proper position before you begin to speak. Be conscious of where the microphone is, but do not lean into the microphone.

10. Speak slowly and clearly. Most people have a tendency to speak too fast when speaking in public.

11. Do not go over your time limit. Practicing your presentation should eliminate this problem. If, however, the "question and answer" session extends beyond the time limit, it is your responsibility to end the discussion as quickly as possible.

5.3.6. HOW TO BE AN ACTIVE PARTICIPANT IN MEETINGS

You will, at some point, be asked to take part in a meeting at your workplace. It is a good idea in meetings to speak as clearly as possible and to be firm (strong). Remember though, "firm" does not mean "rude" or "pushy".

It can be easy to seem pushy if you don't add the all-important "please" and "thank you" to your phrases. Meetings are all about listening and letting people know you understand what is being talked about. Try these phrases when you are in a meeting (or participating in a conference meeting).

First, you can use these phrases if you accidentally speak over somebody or stop them from saying something.

- "Sorry, I interrupted you. You were saying…?"
- "Please go on…"
- "After you…"

If you are not sure what somebody said, **use these phrases to clarify:**

- "I'm sorry, but could you speak up a little?"
- "I didn't quite hear that, sorry, can you say that again?"
- "I didn't catch that last bit. Can you say it again please?"

Signal phrases for when you have a question.

• "Am I to understand that…"
• "Sorry, but just to clarify…"
• "So, what we're saying is…"

Agreeing with people.

• "That's an excellent point [person's name], I totally agree with you on that."
• "Okay, I think we are all on the same page here…"
• "Yes, I get what you're saying…"

Disagreeing with people.

Hopefully you won't need these too often! Remember to be polite but firm.

• "I'm sorry but I think you may have that slightly wrong…"
• "From our perspective, it's a little different. Let me explain."
• "Well, yes and no—can I tell you how we see it?"

5.3.7. THE LIST OF PHRASES TO HELP YOU MAKE A PROFESSIONAL PRESENTATION IN ENGLISH

Good presenters always use language (sometimes single words, sometimes phrases) which shows where they are in their presentation. These 'signposts' make it easier for the audience to:

- follow the structure of the presentation;
- understand the speaker more easily;
- get an idea of the length and content of the presentation.

The sentences and phrases below follow the logical progression of a well-balanced presentation.

Welcoming

- *Good morning and welcome to* [name of organisation, name of conference hall, hotel, etc.].
- *Thank you all very much for coming today.*
- *I hope you all had a pleasant journey here today.*

Introducing yourself

- *My name is ____ and I am responsible for….*
- *My name is _____ from* [name of organisation], *where I am responsible for ….*
- *Let me introduce myself; my name is _____ and I am responsible for...*

Introducing your presentation

- *The purpose of today's presentation is to ….*
- *The purpose of my presentation today is to ….*
- *In today's presentation I'd like to ...show you ... / explain to you how ….*
- In today's presentation I'm hoping to … give you an update on… / give you an overview of ….
- *In today's presentation I'm planning to ... look at .... / explain ….*

You can also outline your presentation to give the audience a clear overview of what they can expect:

- *In today's presentation I'm hoping to cover three points:*
- *firstly, ..., after that we will look at ..., and finally I'll ....*
- *In today's presentation I'd like to cover three points:*
- *firstly, ..., secondly ..., and finally ....*

Explaining that there will be time for questions at the end

- *If you have any questions you'd like to ask, please leave them until the end, when I'll be happy to answer them.*
- *If there are any questions you'd like to ask, please leave them until the end, when I'll do my best to answer them.*

Starting the presentation

- *To begin with ... .*
- *To start with ... .*
- *Let's start/begin by looking at ... .*
- *I'd like to start by looking at ... .*
- *Let's start with / start by looking at ... .*

Closing a section of the presentation

- *So, that concludes* [title of the section] *... .*
- *So, that's an overview of ... .*
- *I think that just about covers ... .*

Beginning a new section of the presentation

- *Now let's move on to ... .*
- *Now let's take a look at ... .*
- *Now I'd like to move on to ... .*
- *Next I'd like to take a look at ... .*
- *Moving on to the next part, I'd like to ... .*
- *Moving on to the next section, let's take a look at ... .*

Concluding and summarising the presentation

- *Well, that brings us to the end of the final section. Now, I'd like to summarise by ... .*
- *That brings us to the end of the final section. Now, if I can just summarise the main points again.*
- *That concludes my presentation. Now, if I can just summarise the main points.*
- *That's an overview of ... . Now, just to summarise, let's quickly look at the main points again.*

Finishing and thanking

- *Thank you for your attention.*
- *That brings the presentation to an end.*
- *That brings us to the end of my presentation.*
- *Finally, I'd like to finish by thanking you (all) for your attention.*
- *Finally, I'd like to end by thanking you (all) for coming today.*
- *I'd like to thank you (all) for your attention and interest.*

Inviting questions

- *If anyone has any questions, I'll be pleased to answer them.*
- *If anyone has any questions, I'll do my best to answer them.*
- *If anyone has any questions, please feel free to ask them now.*
- *If anyone has any questions, please feel free to ask them and I'll do my best to answer.*

Referring to a previous point made

- *As I mentioned earlier … .*
- As we saw earlier … .
- *You may recall that we said … .*
- *You may recall that I explained … .*

Dealing with (difficult) questions

- *I'll come back to that question later if I may.*
- *I'll* / *We'll* come back to that question later in my presentation.
- I'll / We'll look at that point in more detail later on.
- *Perhaps we can* look at that point *at the end / a little later.*

5.3.8. COMMON ENGLISH PHRASES USED IN MEETINGS AND PRESENTATIONS

Getting someone's attention

Excuse me.
May I have a word?
If I may... I think...
Excuse me for interrupting.
Can I come in here? (This doesn't mean you're asking to enter a room; it is something we say when we want to interrupt someone).

Giving opinions

I'm positive that...
I feel that....
In my opinion...
The way I see things..
If you ask me..., I tend to think that...

Asking for opinions

Do you think that..
Mrs/Ms/Mr X can we get your input ?
How do you feel about...?
What do you think of ...?
Do you have something you would like to add?

Commenting

That's interesting.
I never thought about it that way before
I get your point.
I see what you mean.

Agreeing

I totally agree with you.

Exactly!
Good point!
That’s just the way I feel.
I have to agree with ...

Disagreeing

Unfortunately, I see it differently.
Up to a point I agree with you, but...
I'm afraid, I can't agree

Giving advice and making suggestions

Let’s...
We should ...
Why don't we ...
How/What about ....
I suggest/recommend that ...

Clarifying

Let me spell it out...
Have I made that clear?
Do you see what I’m getting at?
Let me put it another way..
I’d just like to repeat that....

Requesting information

Please, could you...
I’d like you to...
Would you mind...
I wonder if you could...

Asking for repetition

I’m afraid I didn’t quite catch that. Could you repeat what you just said?
I missed that. Could you say it again please?
Could you run that past me again?

Asking for clarification

I don’t quite follow you.
What exactly do you mean?
Could you explain to me how that’s going to work?
I can’t see what you're getting at. Could we have some more details, please?
Am I correct in thinking that ...?

? ЗАВДАННЯ ДЛЯ САМОКОНТРОЛЮ

1. Why did you decide to write dissertation thesis?
2. Have your intentions changed since you started?
3. Since when have you been working on your dissertation thesis?

4. Have you started to write yet? If so, when?
5. How much have you written so far?
6. If not, what has kept you from starting to write?

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ДОДАТКИ

СЛОВА ТА ВИРАЗИ З ПРЕЗЕНТАЦІЇ НАУКОВОГО ДОСЛІДЖЕННЯ

Language of Academic Writing

Adjective	**Noun**	**Verb**
achievable	achievement	achieve
acquired	acquisition	acquire
analytical	analysis	analyse
contributory	contribution/ contributor	contribute
creative	creation	create
definitive	definition	define
derived	derivation	derive
distributive	distribution/ distributor	distribute
emphatic	emphasis	emphasise
evaluative	evaluation	evaluate
hypothetical	hypothesis	hypothesise
indicative	indication/ indicator	indicate
interpretative	interpretation	interpret
invested	investment	invest
predictive	prediction/ predictor	predict
reliable	reliability	rely
responsive	response	respond
significant	significance	signify
synthetic	synthesis	synthesise
variable	variation/ variable	vary

ПЕРЕЛІК „ФАЛЬШИВИХ ДРУЗІВ ПЕРЕКЛАДАЧА”

control, *n*	регулювання, керування, (рідко) контроль
control, *v*	регулювати, керувати, (рідко) контролювати
conversion, *n*	перехід (з одного стану в інший), змінення, перерахунок, тех. перетворення, переробка, трансформація, мет. переплавлення
convert, *v*	перетворювати, переробляти, мет. переплавляти
correct, *adj*	правильний, вірний
correspondence, *n*	відповідність, відношення, аналогія
correspondent, *adj*	відповідний
critical, *adj*	критичний, важливий, вирішальний, відповідальний, ризикований, небезпечний
criticism, *n*	критичний розгляд, аналіз, критична стаття
data, *n*	дані, факти, цифри, інформація
decade, *n*	десятиріччя
defect, *n*	дефект, несправність, ушкодження, пошкодження, недолік, вада
definite, *adj* *cf*. definitive	певний
definitive, *adj* *cf*. definite	остаточний
dependable, *adj* *cf*. dependent	надійний
dependent, *adj* *cf*. dependable	залежний
design, *n*	проект, план, креслюнок, конструкція, конструювання
design, *v*	проектувати, конструювати
designer, *n*	конструктор, проектувальник, кресляр
diagram, *n*	діаграма, графік, малюнок, схема, креслюнок
direction, *n*	напрямок
directions, *n* *cf*. direction	pl. інструкція, правила користування
discuss, *v*	обговорювати
discussion, *n*	дискусія, обговорення
distance, *n*	відстань
division, *n*	ділення, класифікація
dramatic, *adj*	вражаючий, хвилюючий, захоплюючий, чудовий, ефективний, разючий, різкий, несподіваний
dynamics, *n*	динаміка, теоретична механіка
dynamo, *n*	ел. генератор, (рідко) динамо-машина
effect, *n* *cf*. affect	ефект, дія, вплив, наслідок, результат

effect, *v* *cf.* affect	виконувати, здійснювати
effective, *adj* *cf.* efficient	ефективний, результативний, дієвий, тех. корисний
efficient, *adj* *cf.* effective	дієвий, ефективний, доцільний, раціональний, тех. продуктивний, з високим ККД
elasticity, *n*	тех. пружність
element, *n*	елемент, тех. секція, хім. проста речовина
especially, *adv* *cf.* specially	особливо, головним чином
instrument, *n*	знаряддя, прилад, агрегат
integrated, *adj*	комплексний
intelligence, *n*	розум, кмітливість, інтелект; розумовий
intelligent, *adj*	розумний, кмітливий
jacket, *n*	кожух, оболонка, сорочка
limit, *n*	обмеження, тех. допуск, граничний розмір, інтервал значень
limit, *v*	обмежувати
liquidize, *v*	перетворювати на рідину
list, *n*	список, перелік
machine, *n*	машина, верстат, механізм
machine, *v*	піддавати механічній обробці, обробляти на верстаті
machinery, *n*	механізм, механічне обладнання
magnesium, *n* cf. manganese	магній
major, *adj*	головний, основний
manganese, *n* cf. magnesium	марганець
temporary, *adj* cf. temporal	тимчасовий
terminal, *n*	обч. термінал, ел. клема, зажим, ввід, вивід
test, *n*	випробування, перевірка, хім. аналіз, реактив
test, *v*	випробовувати, перевіряти, проводити дослід
texture, *n*	структура, будова
theory, *n*	теорія, теоретичні основи, принципи, припущення
thermal, *adj*	тепловий
thesis, *n*	теза, дисертація
tolerance, *n*	тех. допуск
ton(ne), *n*	брит. довга тонна (1016 кг), ам. коротка тонна (907,2 кг), метрична тонна (1000 кг)
total, *adj*	сумарний, повний, цілковитий

Reading of different symbols

m^2 - square meter
m^3 - cubic meter
m/s – meter per second
m/s^2 - meter per second squared
s^{-2} - second to the minus 2nd power
rad/s – radian per second
Hz – hertz
kg/m^3 - kilogram per cubic meter
m^3- meter to the third power
kg ·m / s – kilogram-meter per second
kg ·m^2 / s – kilogram-squared meter per second
N/m^3 - newton per cubic meter
Pa – pascal
J – joule
W – watt
Kg/(s· m ·Pa) – kilogram per second meter pascal
% - per cent
‰ – parts per thousand (промилле)
ppm – parts per million (миллионная доля)
$tf \cdot s^2/m^3$ - tonne-force-squared second per meter to the 3d power
kg/(h· m · mm H2O) – kilogram per hour-meter-millimeter of water
g / (h· m · mm Hg) – gram per hour-meter-millimeter of mercury
kcal /kg – kilocalorie per kilogram

Латинські терміни, які зустрічаються в науково-технічній літературі

ab init (abinitio) – з початку	**seg. (sequens) –** наступний
ad fin (ad finitum**) –** до кінця	**sv (sub voce) –** під цим заголовком
ad inf (ad infinitum**) –** до безкінечності	**us, ut sup. (ut supra) –** як зазначено вище
ad int (ad interim**) –** тим часом	**v (versus) -** проти
ad hoc – для даного випадку	**vid. (vide) –** дивися
ad libitum - необов'язково	**v** (volume) – том
e.g (exempli gratia**) –** наприклад	**viz** (videlicet) - а саме
et al. (at alii) – та інші	**vo (verso) –** з іншої сторони
etc. (et cetera) – і так далі	**vs (versus) –** проти
fig. – малюнок	**contra –** проти
i.e. (id est) **–** тобто	**de factor –** фактично
ib., ibid (ibidem) **–** там же	**in toto –** повністю
id. (idem) – теж видання	**l. c. (locus citatus) –** цитоване місце
in loc. cit. (in loco citato) – у цитованій праці	**pro et contra –** за і проти
iq. (idem qiod) – теж саме	**verbatim –** дослівно, буквально
lb (libra) – фунт	**vice versa –** навпаки
lc (loco citato**) –** цитоване місце	**in brevi –**коротко, лаконічно
NB (nota bene) – зауважте	**eo ipso –** внаслідок цього
PS (post scriptum) – післяслів	**ergo –**отже
sc (scilicet) – а саме	**ex parte –** неповно, однобічно

Academic adjectives

Absolute, abstract, acceptable, accessible, active, actual, acute, additional, adequate, alternative, apparent, applicable, appropriate, available, average, basic, central, certain, clear, common, competitive, complete, complex, comprehensive, considerable, consistent, conventional, correct, crucial, detailed, different, difficult, distinct, dominant, early, effective, equal, equivalent, essential, excessive, experimental, explicit, extensive, extreme, favourable, final, fixed, following, formal, frequent, fundamental, general, high, human, ideal, identical, immediate, important, incomplete, independent, indirect, individual, influential, inherent, initial, interesting, internal, large, leading, likely, limited, logical, main, major, male, maximum, mental, minimal, minor, misleading, modern, natural, necessary, negative, normal, obvious, original, overall, parallel, partial, particular, permanent, physical, positive, possible, potential, practical, primary, prime, principal, productive, profound, prominent, radical, random, rapid, rational, real, realistic, recent, related, relevant, responsible, restricted, scientific, secondary, selective, separate, significant, similar, simple, social, special, specific, stable, standard, strict, substantial, successful, successive, sufficient, suitable, surprising, symbolic, systematic, theoretical, traditional, typical, unique, unlike, unlikely, unsuccessful, useful, valid, valuable, varied, various, visual, vital, widespread.

The most common verbs used in academic writing

Analyze assess approach assume contract create define derive distribute establish estimate function identify indicate interpret involve legislate occur process require respond achieve administer affect assist categorize conclude conduct construct consume evaluate focus invest maintain obtain participate perceive purchase regulate restrict seek select survey transfer alternate compensate consent constrain contribute coordinate deduct demonstrate document emphasize exclude fund illustrate imply interact justify link locate publish react rely remove validate specify access attribute commit communicate contrast emerge grant implement impose integrate investigate occupy predict promote resolve retain adjust alter amend challenge compound consult contact decline enable enforce entitle evolve expand expose facilitate generate modify monitor orientate pursue stabilize substitute target acknowledge allocate assign cooperate exceed inhibit precede reveal adapt advocate aid channel classify comprehend comprise confirm convert differentiate eliminate insert intervene isolate prioritize

Vocabulary to Speak on the Scientific Research

the dissertation is written under the supervision (of smb.) – кандидатська дисертація написана під керівництвом ...;

initial (long-term) study – попереднє (тривале) дослідження;

subsequent work – наступні пошуки;

research (in) – дослідження;

“state of the art” – стан дослідженості проблеми;

current economic thought – сучасна економічна думка;

working assumption – робоча гіпотеза;

basic concepts – основні поняття;

hypothesis – гіпотеза;

on this theory (account) – згідно із цією теорією (описом);

summary – резюме;

practical application of findings (results) – практичне використання результатів дослідження;

theoretical importance – теоретичне значення;

practical value – практичне значення;

in terms of – в термінах;

variety of issues in the area – галузі дослідження;

major areas of current research – основні сфери сучасних досліджень;

previous work (studies) – попередні дослідження;

vast topic – велика тема дослідження;

related area of research – суміжна галузь дослідження;

relatively neglected area – відносно невивчена галузь;

current research topic – актуальна тема дослідження;

recent work in this field – найновіші дослідження в цій галузі;

growth of interest (to) – зростання інтересу (до);

areas of clarity and unclarity – вивчені та невивчені галузі;

least understood (studied topic) – найменш вивчена тема;

main task – основне завдання;

minor (major) issue – другорядна (основна) проблема;

controversial topic – спірна тема;

object of investigation – об’єкт дослідження;

knotty problem – заплутана проблема;

ordering (structure, organisation) of the report – структура (організація) доповіді;

preface – передмова;

introduction – вступ;

(sub)title – (під)заголовок;

(remaining) chapters – інші розділи;

supplement – додаток;

at the beginning (end) of the chapter – на початку (в кінці) розділу;

general (overall, provisional) conclusions – загальні (остаточні, попередні) висновки;

core of the research – основна ідея доповіді;

frame of reference – вихідні положення;

with a particular focus (on) – приділяючи особливу увагу;

thread of argument – хід міркувань;

range of facts for which the theory proposes to account – набір фактів, які теорія має намір пояснити;

valid (extended, elaborate, perverse, convincing, ingenious, pointless, unfamiliar, irrelevant) arguments – обґрунтовані (докладні, охайні, невірні, прості, безглузді, невідомі, недоречні) аргументи;

ample justification for an extensive critique – достатні підстави для ретельного критичного розбору;

refutation of the theory – спростування теорії;

in the absence of a substantial amount of empirical evidence – враховуючи відсутність достатньої кількості емпіричних доказів;

substantial disagreement – суттєві розбіжності;

preferable solution – рішення, якому віддають перевагу;

valuable contribution – цінний внесок;

intricate first pace at – перша нелегка спроба розв'язання;

informative (well-designed) presentation – насичений інформацією (продуманий) виклад;

thoughtful analysis – продуманий аналіз;

analysis of hitherto unexamined of poorly-known area – аналіз ще не дослідженої або мало дослідженої галузі;

number of problems which received specific analysis in – ряд проблем, які були спеціально досліджені в ...;

demerit (drawback, shortcoming) – вада (помилок);

grave deficiency – серйозний недолік;

faulty analysis – помилковий аналіз;

failure to account (for) – нездатність пояснити;

major reference work (on) – основний довідковий посібник з ...;

date of publication – рік видання;

literature on the issue – література з проблеми ...;

bibliographical errors – помилки в бібліографічному описі;

copious bibliography – ретельно виконаний бібліографічний опис;

technical – вузькоспеціальний;

tentative (preliminary) – експериментальний;

available in the literature – який є в науковій літературі;

central to the work – основне в дослідженні;

interdisciplinary – міждисциплінарний;

thoughtful – продуманий;

preferable (to) – має більше переваг, ніж ...;

dubious – сумнівний;

out-of-place (inappropriate) – недоречний;

applicable in practice – застосований на практиці;

briefly – стисло;

fragmentary – фрагментарно, уривками;
tendentiously – тенденційно;
understandably – зі зрозумілих причин;
conversely – навпаки;
apart from – крім;
in detail – докладно;
in a somewhat different vein – трохи по-іншому;
in a more traditional view – згідно з більш традиційною точкою зору;
on a global scale – взагалі;
search (through) – обстежувати;
attempt to evaluate – намагатися оцінити;
limit oneself – обмежитися;
orient (toward) – орієнтувати на ...;
justify – обґрунтовувати;
summarise – резюмувати;
survey – робити огляд;
focus (on) – зосереджуватися (на);
take up a problem – звернутися до проблеми;
account (for) – пояснити;
elaborate – ретельно розробити;
argue (for) – виступати (за);
ascribe (to) – приписувати;
restrict oneself to – обмежитися;
disregard – ігнорувати;
note in passing – помітити попутно;
to bridge the gap (between) – зв'язати, прокласти місток між;
allocate more space (to) – відвести більше місця;
come under criticism – підлягати критиці;
provide an argument (against) – висунути аргумент (проти);
receive brief treatment – стисло розглядатися;
be contradictory (with) – знаходитися в протиріччі;
be in line (with) – перебувати у відповідності (з);
give argumentation in favour – навести аргумент на користь;
produce supporting evidence – навести докази на користь;
agree in principle (with) – погоджуватись у принципі (з);
quibble with some arguments – не погоджуватись з деякими аргументами;
go into various questions – порушувати деякі питання;
justify the choice – обґрунтовувати вибір;
be aware of the limitations of this methodology – усвідомлювати недоліки цієї методології;
demonstrate how this view is superior (to) – показати, чим ця точка зору краще (за);
reveal the true nature – виявити справжню суть;
go beyond – виходити за межі;
account in the reasonable way – знайти прийнятне пояснення;

mirror the state of the art in a given field with a panoramic clarity – відображати сучасний стан проблеми дослідження повно і ясно;

give a cursory description – дати короткий опис;

cover a wide range of issues – охоплювати широке коло проблем;

keep a happy balance – вдало поєднувати;

neglect previous work – ігнорувати попередні дослідження;

extend the work to embrace... – розширити дослідження з метою охопити ...;

explore rigorously – ретельно досліджувати;

cover a wide spectrum of problems – охопити широке коло проблем;

provide an up-to-date explication – дати сучасну трактовку;

validate smb's findings – підтвердити чиїсь результати;

report on the context of uses – вказати контексти використання;

discuss results – обговорювати результати;

comment on data from additional research – інтерпретувати дані додаткових досліджень;

reproduce in detail – докладно відтворити;

place the information in perspective – поглянути на дані в перспективі;

propose a solution – запропонувати рішення;

regard smb's work as a contribution to research (into) – розглядати чиюсь роботу як внесок у дослідження;

throw (shed) light (on) – проливати світло (на);

arrive at a deeper and more exact understanding (of) – досягти більш глибокого і точного розуміння;

open up new areas of research – відкривати нові напрями дослідження;

increase greatly our stock of knowledge (about) – суттєво розширити наші знання (про)

ТЕРМІНОЛОГІЧНИЙ СЛОВНИК
Glossary

Article – is a piece of writing that is included with other pieces of writing in a publication like a magazine, journal or newspaper.

Assessment – the means by which it is possible to judge what a learner knows, understands and can do as a result of engaging in a learning experience. Assessment can be for the purpose of identifying ways that the learner might be able to improve as well as deciding if they should receive certification for the knowledge, skills and competence that they have demonstrated.

Assessor – the person who makes assessment decisions on your assessment work.

Bibliography – the entire list of sources of information and data that you used in the development of your written assessment work. It should include sources that you read/engaged with, but did not cite in the work.

Citation – is a reference to the source of information used in a learner's research/written assessment work, for example, (FESS, 2018).

Cite – to refer to a source of information.

Critique – a detailed analysis and assessment of something, especially a literary, philosophical, or political theory.

Data – can be information, facts and statistics that are gathered for research purposes.

Figure – can be an illustration or diagram of the information found in a text.

Information – can be knowledge gained from research, investigation, study or other sources.

Literature – can be written work such as books and other writings on particular subjects that are published or leaflets or other printed materials that contain information or advice.

Mind Map – is a diagram that can be used to organise information in a visual way.

Narrative – a report (written or spoken) that is presented in a logical sequence that supports a particular viewpoint or argument.

Paraphrase – saying the same thing that another author or source says but using different words.

Parameter – is a boundary or limit to the scope of a particular activity such as a research project.

Periodical – a journal, magazine or newspaper published at regular intervals.

Plain English approach – is a way of communicating with your audience or reader so that they understand what you are saying the first time they read or hear it.

Reader – is the person who will be reading and assessing your written assessment work. These could include the tutor/teacher/trainer, external authenticator, appeals examiner and other key personnel involved in the quality assured assessment process.

Reference – mentioning or alluding to something such as the source of a piece of information.

Reference List – a list of all the sources that you have referred to within the main body of your written assessment work and these should be compiled in alphabetical order at the back of your written assessment work.

Research – an organised and systematic investigation into a topic and the study of information, materials and sources in order to know the facts and draw conclusions.

Scholarly literature – is writing completed by researchers who are experts in their fields of study.

Secondary reference – sometimes you will find a source mentioned in another text, a secondary reference is when you quote or paraphrase from that without going to the original text.

Source – the place from where the information originates.

Summarise – including the main points from a source in a brief statement.

Syntax – refers to how words and phrases are arranged in order to create well-formed sentences.

Table – is the word used to describe how a set of facts or figures can be systematically displayed in columns and rows.

Text – refers to the content of a book or other written, printed or electronically available work.

Verb – is a word that is used to describe an action, an occurrence, or a state of being. Verbs are the action words in a sentence that describe what the subject is doing.

Written assessment work – Written assessment work includes assignments, projects, essays, collection of work, presentations, etc. that a learner is submitting for assessment purposes

ПІСЛЯСЛОВО

Іншомовна комунікація у науковій діяльності надає можливість здобувачам третього освітньо-наукового рівня вищої освіти ознайомитися із: останніми здобутками в науці; академічного письма; технік презентації свого дослідження та його результатів; презентації своїх наукових досягнень.

Призначення наукової діяльності - передавати інформацію, яка досліджується, обробляється, обговорюється та аналізується. Представлення наукових здобутків повинне бути чітким, стислим, об'єктивним, зрозумілим та інформативним. Метою посібника є надання певних вказівок щодо підготовки та презентації наукової праці (статті, тез, дисертації тощо) іноземною мовою. Розвиваючи навички іншомовної комунікації, аспіранти можуть вдосконалювати належні академічні практики.

Удосконалення умінь читання іноземною мовою передбачає оволодіння видами читання з різним ступенем повноти і точності розуміння: переглядовим, ознайомчим і вивчаючим. Вміння аудіювання і говоріння розвивається у взаємодії з умінням читання. Усний та письмовий переклад з іноземної мови на рідну мову використовується як засіб оволодіння іноземною мовою, як прийом розвитку умінь і навичок читання, як найбільш ефективний спосіб контролю повноти і точності розуміння. Письмо розглядається як засіб формування лінгвістичної компетенції в ході виконання письмових вправ на граматичному і лексичному матеріалі. Формуються також комунікативні вміння письмової форми спілкування, а саме: вміння скласти план або конспект до прочитаного, викласти зміст прочитаного в письмовому вигляді (у тому числі у формі резюме, реферату та анотації), написати доповідь і повідомлення з теми кваліфікаційної праці аспіранта і т.ін.

Оволодіння всіма формами усного та письмового спілкування ведеться комплексно, в тісній єдності з оволодінням певним фонетичним, лексичним і граматичним матеріалом.

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ІНОЗЕМНА МОВА У НАУКОВІЙ ДІЯЛЬНОСТІ

Навчальний посібник

Підписано до друку 07.12.2021.
Формат 60х84/16. Папір друкарський.
Гарнітура «Times». Друк цифровий. Обл.-вид.арк. 5,9.
Тираж 100 прим. Зам. № 07/12.

Надруковано з готового оригінал-макету у видавництві
Одеського регіонального інституту державного управління
Національної академії державного управління
при Президентові України
Свідоцтво ДК № 1434
від 17 липня 2003 р.
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