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English for academic purposes

Англійська мова для академічного спілкування

Навчальний посібник

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Навчальний посібник "Англійська мова для академічного спілкування" має на меті подальший розвиток мовної, мовленнєвої та соціокультурної компетенції студентів (ступінь вищої освіти – другий (магістерський)) та формування професійної траєкторії їх розвитку в різних видах мовленнєвої діяльності. Навчальний посібник складається з трьох основних розділів, до складу яких входять по п'ять уроків. Виклад теоретичного матеріалу супроводжується практичними завданнями, що дозволяє студентам ефективно оволодіти необхідними знаннями та вміннями у сфері іншомовного ділового спілкування.

Навчальний посібник може бути використаний викладачами англійської мови в процесі викладання дисципліни «Англійська мова для академічного спілкування» для студентів-магістрантів різних спеціальностей.

ПЕРЕДМОВА

Інтеграція України до європейського освітнього простору висуває нові вимоги до іншомовної підготовки фахівців другого ступеня вищої освіти (магістерського). На сьогоднішній день сучасний науковець повинен мати в своєму арсеналі не тільки сформовані професійні компетентності, розвинену логіку, широкий науковий кругозір, науковий тип мислення, але й розвинені вміння побудови мовленнєвих стратегій у сфері професійної комунікації, а саме високий рівень професійної англомовної компетенції.

Навчальний посібник «Англійська мова для академічного спілкування» має на меті подальший розвиток мовної, мовленнєвої та соціокультурної компетенції студентів та формування їх професійної траєкторії розвитку в різних видах мовленнєвої діяльності. Навчальний посібник «Англійська мова для академічного спілкування» базується на комплексному підході до вивчення англійської мови. Він націлений на розвиток вмінь монологічного та діалогічного спілкування у науковому середовищі. Окрім того, фокус посібника – розвиток навичок читання англомовної наукової літератури, сприйняття інформації на слух. Авторами звертається увага на формування вмінь академічного письма та розширення запасу загальної та термінологічної лексики.

Навчальний посібник «Англійська мова для академічного спілкування» знайомить студентів із основними типами наукових текстів, поняттям плагіату та шляхами його запобігання, основними правилами складання бібліографії та анотованої бібліографії. Посібник скеровує студентів на написання англомовної анотації до власної магістерської роботи.

Прогнозовані результати навчання за даним посібником – розвиток загальних та професійних компетентностей, а саме здатності розуміти англомовні наукові усні та писемні повідомлення різної

тематики, імплементувати наукову англомовну термінологію у професійний контекст, як в процесі виконання рецептивних, так й продуктивних видів мовленнєвої діяльності. Окрім того, після завершення курсу студенти повинні вміти формулювати чіткі та докладні повідомлення на різноманітні наукові теми, аргументовано викладати свій погляд на наукову проблему, використовувати відповідні мовні засоби під час наукових дискусій. В процесі роботи з навчальним посібником відбувається розвиток вміння студентів інтерпретувати наукові дані у вигляді графіків, таблиць та діаграм.

Кожний розділ навчального посібника представляє собою комплекс, що містить три основні розділи, до складу яких входять по п'ять уроків. Надаються завдання для самоопрацювання, а також перелік основної та додаткової літератури. Супровід теоретичного матеріалу практичними завданнями дозволяє студентам ефективно оволодівати необхідними знаннями та вміннями. При укладанні завдань та вправ автори використовували англомовні матеріали різних стилів. Репродуктивний та продуктивний характер практичних завдань урізноманітнює процес навчання та активує різні рівні когнітивної діяльності студентів.

Автори вдячні рецензентам за цінні поради та зауваження, надані під час підготовки навчального посібника.

CONTENTS

UNIT 1.

GENERAL INFORMATION ON THE SCIENTIFIC TEXTS

Lesson 1. Types of Scientific Texts

Aim
- to raise students' awareness of what a scientific text is;
- to teach students to distinguish between different types of scientific texts;
- to practice vocabulary of the lesson.

Outcomes
As a result of learning on this lesson students should demonstrate the ability to
- identify types of the scientific texts according to their structure and style;
- single out similar features of all scientific texts;
- use vocabulary of the lesson orally and in writing.

Activity 1. Discuss the following:
- What is a scientific text?
- What types of scientific texts do you know?
- What is the difference between scientific texts and fiction literature?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

variety – розмаїтість, ряд, безліч

to achieve the results – досягати результатів

long term research project – довготривалий дослідницький проект

specific – особливий, спеціальний, конкретний, характерний, специфічний, точний

purpose – мета, намір, задум

similar structure – подібна (схожа) структура

goal – мета, завдання

8. to achieve objectivity – досягати об'єктивності

9. thesis (pl. theses) – дисертація (дисертації)

10. report – доповідь, звіт; to report – повідомляти, розповідати, описувати, доповідати

11. preliminary work – попередня (підготовча) робота

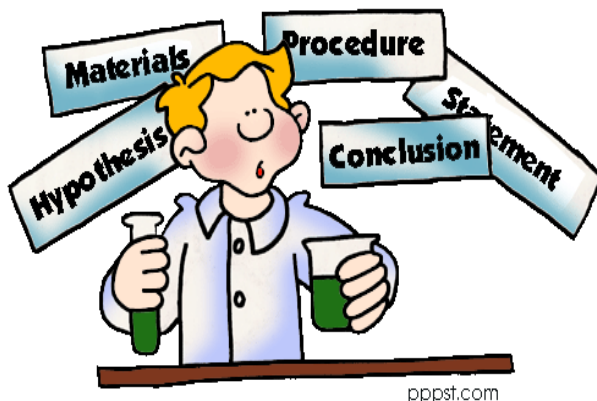12. scientific community – наукова громадськість, наукове коло

13. content – зміст, суть

14. survey paper – оглядова стаття

15. future trend – подальший напрям (тенденція)
16. research field – галузь дослідження
17. proposal – пропозиція, проект, ідея
18. topic – тема
19. to deal with – мати справу (з чим-небудь), розглядати, трактувати, обговорювати (що-небудь)
20. deep analysis – глибокий аналіз
21. accurate comparison – точне порівняння
22. position paper – довідка або доповідна записка з викладом фактичної сторони питання, доповідна записка з пропозиціями
23. research line – напрям дослідження
24. recent advance – останнє досягнення, досягнення зроблене нещодавно
25. book of proceedings – збірка матеріалів
26. relevant literature on the field – відповідна література з галузі

Types of Scientific Texts

There is a large **variety** of scientific texts: from reporting the **results achieved** during a **long term research project**, to briefly discussing on **specific** results published in a journal. Although different types of scientific texts do have specific length or **purpose**, they all have a quite **similar structure**. For instance, almost all scientific texts include a bibliography section[1], an introduction[2] or are summarized by means of the abstract[3]. Moreover, authors make use of some language conventions when writing scientific texts. Brevity[4] and clarity are the basis of scientific writing style: the **goal** in writing is to **achieve objectivity**, which is far from using language artifacts and pomposity.

There are some different kinds of scientific texts. They all have a quite similar structure. However, according to the length, there are long scientific texts (such as books or **thesis,** that will be divided into chapters and/or parts), and short scientific texts (such as papers).

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[1] bibliography section – бібліографія; бібліографічний довідник, покажчик
[2] introduction – вступ
[3] abstract – анотація
[4] brevity – стислість

•**Report.** It is usually longer than a research paper and may contain **preliminary work**. Hence, a report may be used for reference[1] in a research group or **scientific community**, but not considered for publication in form of scientific paper. However, if the **content** of the report is to be published as paper, some parts may be suppressed[2] in order to accommodate a specific length. Research projects involve the writing of long research reports in order to describe the results achieved within the research project. If reports are long, they are usually divided into chapters[3].

•**Survey paper.** It reviews and compares the work of other scientists in order to come up with **future trends** in their **research fields**. Hence, they do not include real new **proposals**, but objectively compare previous[4] ones. When there are several proposals on a **topic**, it may be interesting to compare them. The contribution sections[5] of a survey paper **deal with** the **deep analysis** of the literature surveyed. The results section must provide the reader with an **accurate comparison** between the studied proposals.

•**Position paper.** These papers are shorter than survey papers. The existing proposals are just briefly reviewed (without a methodic[6] comparison between them) and authors point out the **research lines** on the topic that scientists should follow.

•**Letter.** It is a very short paper, usually written to communicate a proposal that does not need the extension[7] of a paper. Moreover, letters may review other papers which are already published.

•**Scientific book.** It consists of a set of chapters elaborating on a specific research field. A researcher expert in a field asks for contributions to other colleagues which are researching on the same field. The researcher acts as editor of the book and selects which contributions will appear in it. The final result is a compilation[8] of the **recent advances** in the research field, and can be of utility to researchers willing to have a general

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[1] reference – посилання

[2] to suppress – вилучати

[3] chapter – розділ

[4] previous – попередній

[5] contribution section – секція, в якій йдеться про внесок інших в роботу дослідника

[6] methodic – методичний, систематичний

[7] extension of a paper – розширення обсягу до меж статті

[8] compilation – складання (збирання фактів)

picture of the topic the book focuses on. Another typical book in scientific writing is the **book of proceedings** of a conference: it is composed by all the papers presented in a conference. If only the abstracts of the contributions are to be published rather than the whole papers, the book is then a book of abstracts.

•**Ph.D. thesis.** A thesis or dissertation is a usually large and deeply-elaborated text which is mandatory for obtaining a M.Sc. or Ph.D. degree[1]. It synthesizes the work that the candidate for the degree has been developing. A M.Sc. thesis elaborates on a very specific topic and will involve the work of several months. On the contrary, the thesis for obtaining the Ph.D. is the result of a long term research (usually several years). The structures of both theses are similar to that of scientific papers. It includes an introduction, a review of the **relevant literature on the field**, a set of chapters describing the research done (since the Ph.D. involves more research than an M.Sc., the author is expected to write several chapters), a summary[2] of results, conclusions[3] and a bibliography.

Activity 3. Discuss the questions:
1. What is the goal of a scientific text?
2. What similar features do all scientific texts have?
3. What is a scientific text?
4. What is the difference between a report and a scientific research article?
5. Can a survey paper be considered as a kind of a scientific research article? Why? Why not?
6. What is a scientific book? What kind of scientific books have you read?
7. What is Master's thesis? What preliminary work do you need to conduct?
8. What kinds of scientific texts have you ever written/studied?

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[1] M.Sc. stands for Master of Science and is the first academic degree a postgraduate can earn. Ph.D. stands for Philosophy Doctor and is the highest academic degree one can earn.

[2] summary – стислий виклад, конспект; зведення

[3] conclusion – висновок

Activity 4. Translate into your mother tongue the verbs, which help the author to express his/her viewpoint. Use them in your own sentences.

To report, to discuss, to summarize, to research, to contain, to consider, to involve, to describe, to achieve, to review, to compare, to include, to deal with, to survey, to provide, to study, to point out, to follow, to publish, to elaborate on, to select, to focus on, to present, to obtain, to synthesize, to develop, to involve.
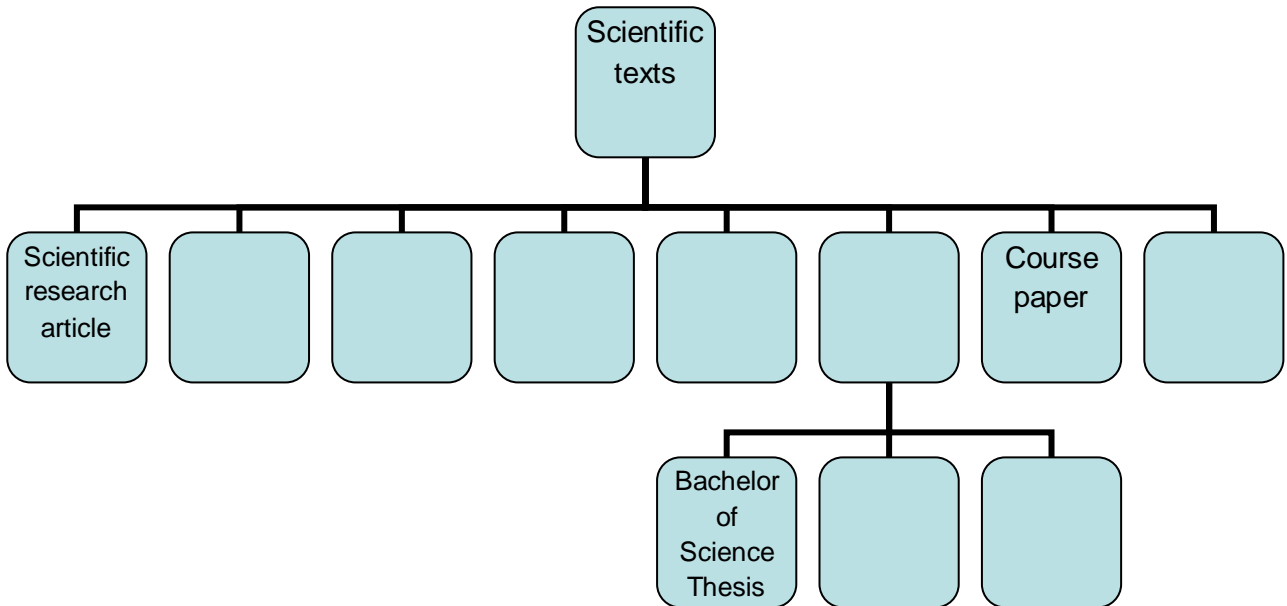
Activity 5. Skim the text in Activity 2 and complete the table with the words that are used as linking words.

Linking words	Translation
Although	хоча, незважаючи на те, що; якби навіть
For instance	Наприклад
Moreover	
However	
According to	
Hence	
In order to	
On the contrary	

Activity 6. Translate into English:

1. Магістерська робота – це довготривалий дослідницький проект, що передбачає вивчення останніх досягнень, добір відповідної літератури та глибокий аналіз досліджуваної проблеми.

2. Згідно з його звітом, авторові вдалося досягти об'єктивності та визначити подальші напрями, навіть незважаючи на те, що цей напрям дослідження є дуже специфічним.

3. Крім того дослідник доповідає, що досягнуті результати було обговорено в наукових колах та представлено в збірці матеріалів конференції.

4. У цій оглядовій статті розглядається ряд пропозицій щодо написання текстів з подібною структурою.

5. Зміст дослідження відповідає поставленим завданням.

Activity 7. Complete the scheme using the information from the text in Activity 2. Identify the missing types of scientific texts. Retell the text, using the information found.

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                          │    texts     │
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                          │ Thesis   │ │    │ │    │
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Lesson 2. Plagiarism

Aim
- to raise students' awareness of what plagiarism is;
- to develop students' understanding of how to avoid plagiarism in a scientific paper;
- to practice vocabulary of the lesson.

Outcomes
As a result of learning on this lesson students should demonstrate the ability to
- reflect on their own experience of what plagiarism is;
- identify ways of how to avoid plagiarism in a scientific paper;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss
- What is plagiarism?
- What do you know about citation?
- What do you know about copyright?
- Compare anti-plagiarism policy in Ukraine and abroad

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. to copy – копіювати, списувати
2. to borrow – запозичувати, позичати
3. to disguise – маскувати, приховувати
4. to pass off the ideas of another as one's own - видавати чужі ідеї за свої
5. to commit literary theft – здійснити літературне злодійство (крадіжку)
6. to derive from an existing source – походити з існуючого джерела
7. to steal someone else's work – вкрасти роботу когось іншого
8. intellectual property – інтелектуальна власність
9. copyright law – закон про авторське право
10. to give credit – віддати належне
11. quotation – цитата
12. to cite a source – цитувати джерело
13. to prevent – попереджувати
14. to receive a proper permission – отримати належний дозвіл
15. footage – кадр, метраж, сюжет
16. to violate the copyright – порушувати авторське право
17. legality – законність, легальність
18. to avoid – уникати
19. to confirm - підтверджувати

WHAT IS PLAGIARISM?

Many people think of plagiarism as **copying** another's work or **borrowing** someone else's original ideas. But terms like "copying" and "borrowing" can **disguise** the seriousness of the offense[1]. According to the Merriam-Webster online dictionary, to "plagiarize" means: to steal and **pass off** (the ideas or words of another) as one's own; to use (another's production) without crediting the source; **to commit literary theft**; to present as new and original an idea or product **derived from an existing source**. In other words, plagiarism is an act of fraud[2]. It involves both **stealing someone else's work** and lying about it afterward. But can words and ideas really be stolen? According to U.S. law, the answer is yes. The expression of original ideas is considered **intellectual property** and is protected by **copyright laws**, just like original inventions. Almost all forms of expression

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[1] offence – образа

[2] fraud – шахрайство, обман

fall under copyright protection as long as they are recorded in some way (such as a book or a computer file). All of the following are considered plagiarism:

- turning in someone else's work as your own;
- copying words or ideas from someone else without **giving credit;**
- failing to put **a quotation** in quotation marks;
- giving incorrect information about the source of a quotation;
- changing words but copying the sentence structure of a source without giving credit;
- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not.

Most cases of plagiarism can be avoided, however, by **citing sources**. Simply acknowledging[1] that certain material has been borrowed and providing your audience with the information necessary to find that source is usually enough **to prevent** plagiarism.

What about images, videos, and music? Using an image, video or piece of music in a work you have produced without **receiving proper permission** or providing appropriate citation is plagiarism. The following activities are very common in today's society. Despite their popularity, they still count as plagiarism: copying media (especially images) from other websites to paste[2] them into your own papers or websites; making a video using **footage** from others' videos or using copyrighted music as part of the soundtrack; performing another person's copyrighted music (i.e., playing a cover); composing a piece of music that borrows heavily from another composition.

Certainly, these media pose situations in which it can be challenging to determine whether or not the copyrights of a work are being **violated**. For example:

- A photograph or scan of a copyrighted image (for example: using a photograph of a book cover[3] to represent that book on one's website).
- Recording audio or video in which copyrighted music or video is playing in the background.

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[1] to acknowledge – визнавати, підтверджувати

[2] to paste – вставляти скопійоване

[3] book cover – обкладинка книги

- Re-creating a visual work in the same medium (for example: shooting a photograph that uses the same composition and subject matter as someone else's photograph).
- Re-creating a visual work in a different medium (for example: making a painting that closely resembles another person's photograph).
- Re-mixing or altering[1] copyrighted images, video or audio, even if done so in an original way.

The **legality** of these situations, and others, would be dependent upon the intent and context within which they are produced. The two safest approaches to take in regards to these situations is: 1) avoid them altogether or 2) confirm the works' usage permissions and cite them properly.

(Adapted from http://www.plagiarism.org/plagiarism-101/what-is-plagiarism/)

Activity 3. Answer the following questions

1. What does the verb "to plagiarize" mean?
2. How can the copyright protection policy in the USA be characterized?
3. What forms of expression are considered to be plagiarism?
4. How can the plagiarism be avoided?
5. What should you do to prevent plagiarism while working with images, videos, and music?
6. What are the safest approaches to take in regards when dealing with other people's intellectual property?
7. What are the results of plagiarism and how can they be avoided?

Activity 4. Read "6 Steps to Effective Paraphrasing", discuss in groups and present in a these steps on a poster

6 Steps to Effective Paraphrasing

One of the best ways of avoiding plagiarism is to paraphrase the information. That's why there are 6 steps to effective paraphrasing.

1. Reread the original passage until you understand its full meaning.
2. Set the original aside, and write your paraphrase on a note card.
3. At the top of the note card, write a key word or phrase to indicate the subject of your paraphrase.
4. Check your rendition[2] with the original to make sure that your version accurately expresses all the essential information in a new form.

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[1] to alter – змінювати
[2] rendition – тлумачення, переклад

5. Use quotation marks to identify any unique term[1] or phraseology you have borrowed exactly from the source.

6. Record the source (including the page) on your note card so that you can credit it easily if you decide to incorporate the material into your paper.

(Taken from https://owl.english.purdue.edu/owl/resource/619/1/)

Activity 5. Read the original passage, identify where a legitimate[2] paraphrase, an acceptable summary and a plagiarized version are

The original passage: Students frequently overuse[3] direct quotation in taking notes, and as a result they overuse quotations in the final research paper. Probably only about 10% of your final manuscript should appear as directly quoted matter. Therefore, you should strive[4] to limit the amount of exact transcribing of source materials while taking notes.

Lester, James D. Writing Research Papers. 2nd ed. (1976): 46-47.
(Taken from https://owl.english.purdue.edu/owl/resource/619/1/)

A legitimate paraphrase:	Students should take just a few notes in direct quotation from sources to help minimize the amount of quoted material in a research paper (Lester 46-47).
An acceptable summary:	Students often use too many direct quotations when they take notes, resulting in too many of them in the final research paper. In fact, probably only about 10% of the final copy should consist of directly quoted material. So it is important to limit the amount of source material copied while taking notes.
A plagiarized version:	In research papers students often quote excessively, failing to keep quoted material down to a desirable level. Since the problem usually originates during note taking, it is essential to minimize the material recorded verbatim[5] (Lester 46-47).

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[1] unique term – унікальний, оригінальний термін

[2] legitimate – законний, легітимний

[3] to overuse – зловживати

[4] to strive – докладати зусилля, намагатися

[5] verbatim – дослівний, дослівно

Activity 6. Read the extract from the article, use the following templates to introduce and explain the quotations from the article.

Templates for Introducing Quotations	Templates for Explaining Quotations
X states, "_____." As the world-famous scholar X explains it, "_____." As claimed by X, "_____." In her article _____, X suggests that "_____." In X's perspective, "_____." X concurs when she notes, "_____."	In other words, X asserts _____. In arguing this claim, X argues that _____. X is insisting that _____. What X really means is that _____. The basis of X's argument is that _____.

(These templates are derived from Gerald Graff and Cathy Birkenstein's "They Say/I Say": The Moves That Matter in Academic Writing, second edition)

Self-Regulation and Gender Within a Game-Based Learning Environment

(John L. Nietfeld, Lucy R. Shores, and Kristin F. Hoffmann)

Educational computer games are becoming increasingly popular in today's schools. Therefore, it is important that such games encourage self-regulated learning and are informed by sound instructional methods. Without rigorous[1] testing, such gaming environments will likely be dismissed as "motivational fluff[2]" rather than as advances in learning technology. Recently, the evidence for serious games and learning has been promising. One major advantage of educational gaming environments is their potential to provide a customized experience with opportunities for real-time feedback.

These models can inform that the focus is made on the learner's strategy use, metacognitive skills, and motivation. However, a focus on models of effective learning, combined with the need for customization[3], requires a parallel focus on individual differences which might influence learning outcomes. Gender is one such variable that has attracted significant attention within computer-based learning (CBL) applications. Nevertheless, there is still much to be learned about how gender influences one's ability to regulate the inquiry[4]-based environments. The goal of the current investigation was to test the pedagogical effectiveness of one

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[1] rigorous – строгий, суворий

[2] motivational fluff – мотиваційна «хмаринка»

[3] customization – настройка

[4] inquiry – запит, допитливість

game-based learning environment.

Crystal Island-Outbreak, the scholar, who researches the game-based learning environment, points to such computer games elements as being rule-based, responsive, challenging, and cumulative. From the other hand this technique is unique as it utilizes[1] a narrative-centered approach. It also encourages self-regulation and content learning. Narrative approaches present "story-centric" problem-solving activities where learners are immersed[2] in a narrative attachment to the curriculum.

(Adapted from John L. Nietfeld, Lucy R. Shores, and Kristin F. Hoffmann (2014)
Self-Regulation and Gender Within a Game-Based Learning Environment)

Activity 7. Search the Internet for an article in your field. Paraphrase it, using the phrases to introduce and explain the quotations (Activity 6). Give correct citation wherever necessary.

Lesson 3. Resources for Finding and Accessing Scientific Papers

Aim
- to raise students' awareness of what a search engine is;
- to develop students' understanding of how to find and access a scientific paper;

Outcomes
As a result of learning on this lesson students should demonstrate the ability to
- reflect on their own experience of how to search the Internet / library for literature related to their scientific research;
- identify ways of how to get free copies of scientific papers to read;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss
1. Where do you usually find scientific literature related to your scientific work?
2. What is a search engine?
3. What search engines do you usually use?
4. In what way do the search engines help the scholars?

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[1] to utilize – використовувати, утилізувати
[2] to be immersed – бути зануреним

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. to search – шукати; розшукувати; знайти, відшукати (search out)
2. academic search engine – академічна пошукова система
3. resource – ресурс
4. access – доступ; to access - мати доступ (до чого-небудь)
5. scientific adviser – науковий керівник
6. experimental method – експериментальний метод
7. peer-reviewed scientific paper – рецензована наукова стаття
8. to determine – визначати, встановлювати; вимірювати
9. relevant – доречний; обґрунтований; актуальний
10. to contain – містити
11. author – автор
12. title – заголовок, назва
13. database – база даних

Academic Search Engines: Resources for Finding Science Paper Citations

When you start your research, one of the first steps is finding and reading the scientific literature related to your science project. **Scientific advisers** are a great **resource** for recommendations about which scientific

papers are necessary for you to read and you should ask your scientific adviser, or another expert in the field, for advice[1]. But there'll also be times when your scientific adviser is busy or isn't up-to-date[2] on a particular[3] **experimental method**. Then you'll need to find papers on your own.

Sometimes putting search terms into a search engine, like Google, Yahoo, or MSN, isn't very effective. The pages you get back will be a mixture of websites, and very few will be links[4] to **peer-reviewed scientific papers**. To find scientific literature, the best thing to use is an academic search engine.

There are many different academic search engines. Some focus on one discipline only, while others have citations from different fields. There

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[1] advice – порада

[2] up-to-date – ознайомлений; такий, що крокує в ногу з часом

[3] particular – особливий; специфічний

[4] link – посилання

are free, publicly available[1] academic search engines that can be **accessed** online; some of these are listed in Table 1, below. The rest, like the ISI Web of Science, are subscription-based[2]. Universities and colleges often subscribe[3] to academic search engines. If you can't find what you need using a free search engine, you can access these resources from computers in a university or college library.

Table 1: A list of free online academic search engines for different science disciplines.

Academic Search Engine	URL	Disciplines	Help Files
Google Scholar	scholar.google.com	All	scholar.google.com/intl/en/scholar/help.html
Scirus	www.scirus.com	All	www.scirus.com/html/help/index.htm
Pubmed	www.ncbi.nlm.nih.gov/pubmed	Life sciences	www.nlm.nih.gov/bsd/disted/pubmedtutorial
IEEE Xplore	ieeexplore.ieee.org/Xplore/guesthome.jsp	Electronics, Electrical engineering, Computer science	ieeexplore.ieee.org/guide/g_oview_guidepdf.jsp
National Agricultural Library (AGRICOLA)	agricola.nal.usda.gov	Agriculture	agricola.nal.usda.gov/help/quicksearch.html
Education Resources Information Center (ERIC)	eric.ed.gov	Education	eric.ed.gov/WebHelp/ApplicationHelp.htm

Here are a few tips to help you with the academic search engines:
- Each search engine works differently, so you need to read help pages first to find out the best way to use each one.
- When you're beginning your literature search, try several different key words, both alone and in combination.
- As you read the literature, go back and try additional searches using the terms you learn while reading.

Note: The results of academic search engines come in the form of an abstract[4], which you can read **to determine** if the paper is **relevant** to your

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[1] publicly available – публічно доступний

[2] subscription-based – основані на передплаті

[3] to subscribe – підписуватися, одержувати по підписці

[4] abstract – анотація

science project, as well as a full citation (author, journal title, volume[1], page numbers, year, etc.) so that you can find a real copy of the paper. Sometimes search engines do not **contain** the full text of the paper for you to read. A few, like PubMed, give links to free online versions[2] of the paper.

There are several ways to find copies:

- **Check the library of a local college or university**.
- **Look for a free online version.** Try searching for the full title of the paper in a search engine like Google, Yahoo, or MSN. The paper may come up many times, and one of those might be a free, downloadable copy.
- **Go directly to the online homepage** of the journal in which the paper was published. Some scientific journals are "open-source[3]," meaning that their content is always free online. Others are free online.
- **Search directly for the homepage of the first or last author** of the paper and see if he or she has a PDF of the paper on his or her website.
- **Look for the paper (using the title or authors) in a science database,** like those listed below, in Table 2.

Table 2: List of databases containing free full-text scientific papers.

Database	URL	Disciplines
NASA Scientific and Technical Information (STI)	www.sti.nasa.gov/STI-public-homepage.html	Aerospace
SOA/NASA Astrophysics Data System	adswww.harvard.edu/	Astronomy, physics
arXiv	arxiv.org/	Physics, Mathematics, Computer science, Quantitative biology, Quantitative finance and statistics
CiteSeerX	citeseerx.ist.psu.edu/	Computer science
Public Library of Science (PLOS)	www.plos.org/search.php	Life sciences
High Wire Press	highwire.stanford.edu/lists/freeart.dtl	Life sciences

- **Purchase[4] a copy.**

(Taken from http://www.sciencebuddies.org/science-fair-projects/top_science-fair_finding_scientific_papers.shtml)

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[1] volume – том

[2] free online version – безкоштовна он-лайн версія

[3] open-source – такий, що має відкритий доступ

[4] purchase – купувати, придбати

Activity 3. Answer the following questions:

1. What is the first step in conducting a scientific research[1]?
2. What is the role of scientific adviser in writing a scientific paper?
3. What academic search engines do you know? Which of them are free?
4. How to work with a search engine?
5. How can you access research papers for free?
6. What are the best websites for getting access to research papers on your specialty?

Activity 4. Are the statements 1-5 true (T) or false (F)? Correct false statements

1. Now students can get information on any scientific topic through academic search engines.
2. The most trusted scientific Internet recourses are not publicly available.
3. Web of Science is a powerful online academic database for searching scientific information.
4. Many scientific journals now are Open Access, which means that they are available for free to the public
5. Most scientists usually don't they keep pdf copies of their papers on their websites.

Activity 5. Translate into English:

1. Стаття розглядає популярні академічні пошукові системи, які використовуються для пошуку і доступу до наукових он-лайн ресурсів.
2. Google Scholar є однією із широко відомих академічних баз даних для досвідчених дослідників і авторів-початківців, вона містить рецензовані наукові статті на різну тематику.
3. Вважаємо, що визначені моїм науковим керівником експериментальні методи, є доречними.
4. Назва цієї статті є короткою і актуальною.
5. GetCITED – це академічна база даних, яка пропонує різні наукові публікації: наукові статті, звіти, збірки матеріалів конференцій, дисертації та презентації.

Activity 6. Work in groups. Brainstorm pros and cons of searching for and getting a copy of a scientific research article via Internet vs. public library.

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[1] to conduct a research – проводити дослідження

Lesson 4. Bibliography. Annotated bibliography

Aim
- to raise students' awareness of what bibliography and annotated bibliography are;
- to develop students' ability to differentiate between bibliography and annotated bibliography.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to
- reflect on their own experience of compiling bibliography (annotated bibliography);
- comprise bibliography, annotated bibliography;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss
1. What is a bibliography?
2. What does it include?
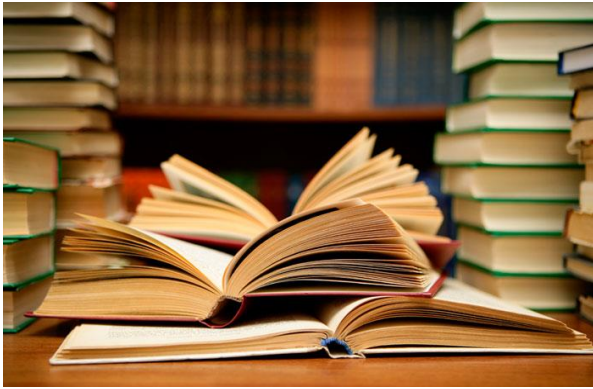3. What is the difference between bibliography and annotated bibliography?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. bibliography – бібліографія
2. annotated bibliography – анотована бібліографія
3. to include – включати, вміщувати
4. usefulness – користь
5. chapter – глава, розділ
6. to make a decision – приймати рішення
7. descriptive – описовий
8. scope – сфера, обсяг, масштаб
9. bias – прихильність, ухил
10. intended audience – цільова аудиторія
11. reference list – список джерел (літератури)
12. to be comprised of – складатися з, включати в себе

WHAT'S A BIBLIOGRAPHY?

A **bibliography** is a list of all of the sources you have used (whether referenced or not) in the process of researching your work. In general, a bibliography should **include**: the authors' names, the titles of the works, the names and locations of the companies that published your copies of the sources, the dates your copies were published, the page numbers of your sources (if they are part of multi-source volumes). An **annotated**

bibliography is the same as a bibliography with one important difference: in an annotated bibliography, the bibliographic information is followed by a brief[1] description of the content, quality, and **usefulness** of the source. An annotation is a brief description of a work such as an article, **chapter** of a book, book, Web site, or movie. An annotation attempts to give enough information **to make a decision** as to whether or not to read the complete work. Annotations may be **descriptive** or critical. An annotation should include complete bibliographic information. Some or all of the following: information to explain the authority and/or qualifications of the author. For example: Dr. William Smith, a history professor at XYZ University, based his book on twenty years of research; **scope** and main purpose of the work; any **biases** that you detect; **intended audience** and level of reading difficulty, the relationship, if any, to other works in the area of study, a summary comment, e.g., "A popular account directed at educated adults." The annotation should be about 100 to 200 words. So how is a bibliography different from a "works cited" or "**references list"**? The works cited or references list is only **comprised of** references to those items actually cited in the paper.

(Adapted from http://www.plagiarism.org/citing-sources/whats-a-bibliography)

Activity 3. Answer the following questions.

1. What is bibliography?
2. What does the bibliography include?
3. What differs annotated bibliography from bibliography?
4. Why is annotation important in the annotated bibliography?
5. What has to be included in the annotation?

Activity 4. Get acquainted with bibliography samples. Make up a bibliography of 5 articles in English in your Master's thesis field.

Books (one author)	• Hargreaves, A. (1994) *Changing Teachers, Changing Times.* London: Cassell. • Wallace, M. (1998) *Action Research for Language Teachers.* Cambridge: Cambridge University Press.

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[1] brief – короткий, стислий

Books (more than one author)	• Hutchinson, T. and A. Waters (1987) English for Specific Purposes. Cambridge: Cambridge University Press. • O'Malley, J.M., A.U. Chamot, G. Stewner-Manzanares, L. Kupper and R.P.Russo (1985) Learning strategies used by beginning and intermediate ESL students. Language Learning. 35.
Journal article	• Borg, S. (1998) Talking about grammar in the foreign language classroom. *Language Awareness*, 7/4. • Thornbury, S. (1999) Lesson art and design. *ELT Journal*, 53/1.
Article in a book	• Breen, M.P. (1989) The evolution of a teacher training programme. In R.K. Johnson (ed) The Second Language Curriculum. Cambridge: Cambridge University Press. • Freeman, D. (1990) Intervening in practice teaching. In J.C. Richards and D. Nunan (eds) Second Language Teacher Education. Cambridge: Cambridge University Press.
Revised editions	• Bolitho, R. and B. Tomlinson (1995) *Discover English*. Oxford: Heinemann. 2nd edition.
Newspaper and magazine articles	• The English language in Kenya has been described as "a language of communication with the outside world and with foreigners within the country" (*Sunday Nation*, 28 July 1974) • Professor Abdulaziz has described English in Kenya as "a language of communication with the outside world and with foreigners within the country" (*Sunday Nation*, 28 July 1974)
School Textbooks	• Soars, L. and J. Soars (1996) New Headway English Course: Intermediate. Oxford: Oxford University Press. • Black, V., M. McNorton, A. Malderez and S. Parker (1987) Fast Forward 2. Oxford: Oxford University Press.
No date	• Politzer, R.L. (undated) *Practice-Centred Teacher Training: French*. Philadelphia: Center for Curriculum Development.
No author	• Proceedings of Conference on the Methodology of Sociolinguistic Surveys. (1975) Arlington: Centre for Applied Linguistics.
Internet sources	• Library Services (1995) *Internet User Glossary* [online]. North Carolina: North Carolina State University. Available from: Gopher://dewey.lib.ncsu.edu:70/7waissrc%3A/.wais/ Internet-user-glossary. Accessed 15 Apr 1996.

Bibliography

1._____

2._____

3._____

4._____

5._____

Activity 5. Read sample annotated bibliography, match the rubrics with its corresponding parts.

Annotated bibliography	Rubrics
(1) Brown, H. Douglas (2000). Human Learning. Cognitive Variations in Language Learning. Personality Factors in *Principles of Language Learning and Teaching**. Longman**. San Francisco State University.	Citation
(2) The chapters introduce current theories of language teaching. **(3)** The chapters focus upon comparing and contrasting first and second language acquisition, age and acquisition, style and strategies.	Introduction Scope
(4) As a classroom textbook, this edition provides discussion questions and case studies for analysis.	Conclusions

Activity 6. Read carefully one of 5 articles chosen before, write an annotated bibliography.

Cite the source you are using and then write your annotation. Refer to the format used for the annotated bibliographies in the previous activities.

Article_____

Annotation_____

_____

_____

_____

_____

_____

Lesson 5. Basic Rules for Successful Writing of a Scientific Text

Aim

- to raise students' awareness of what a formal scientific writing style is;
- to develop students' understanding of how to use some basic rules for successful writing of a scientific text.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to:

- reflect on their own experience of general language and grammar points essential for scientific writing;
- use basic rules of scientific writing;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss

1. Why is the language of a scientific research paper important?
2. What is the difference between formal and informal writing styles?
3. What are the main features of English academic writing?
4. What basic rules of scientific writing do you know?

**Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?**

1. basic – основний, головний
2. feature – особливість, характерна риса; ознака, властивість
3. scientific vocabulary – наукова лексика
4. general – загальний
5. to follow – дотримуватися
6. to introduce – представляти, знайомити
7. to define – визначати, давати (точне) визначення; характеризувати;
8. it is common that – загальноприйнято, що
9. e.g. (for example) – наприклад
10. i.e. (id est) – тобто
11. etc. (et cetera) – і так далі; тощо

Basic Rules for Scientific Writing

The style of English academic writing is formal. It does not contain any conversational **features** and uses a **scientific vocabulary**. The aims of scientific writing are clarity and brevity.

1. General rules. The next rules must be **followed** in order to write a scientific text successfully:

- A scientific text must be well-structured.
- Your paper cannot be written in a few hours. Start with a draft[1] containing the main results and the main structure of the text. Then read the paper several times and correct it.
- If you are not a native English author, ask for some help from colleagues or professional translators.
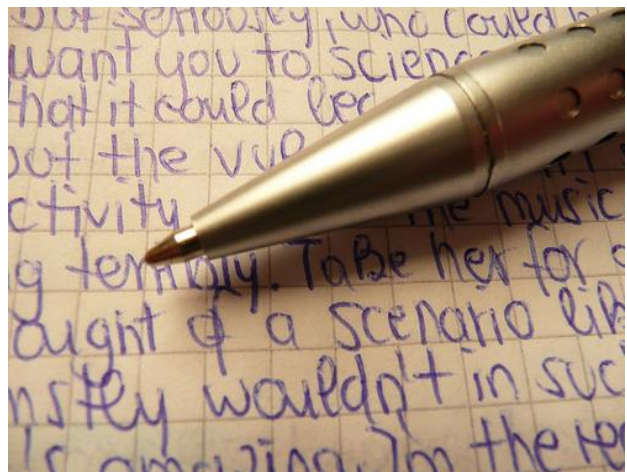
2. Language and numbers. Here are the basic rules for scientific writing:

- **Synonymy.** Using many synonyms in scientific writing is not a good practice. For example, if you are describing an electronic payment

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[1] draft – чернетка, приблизний варіант

system[1] composed of a server and a client, you should always make use of the word "client" instead of using client, user, purchaser, customer, and so on.

- **No ambiguity[2].** Scientific text should not contain ambiguities. Here we have some funny examples: 1) I know a man with a dog who has fleas[3] (Who has the fleas: the dog or the man?); 2) The robber was described as a tall man with a black moustache weighing 85 kilos (Of course, the man is assumed to weight 85 kilos).

- **Personal or impersonal style.** The same style (personal or impersonal) should be used all over the text. Compare: personal – "We have discussed a new research …" or impersonal/passive voice – "A new research has been discussed…".

- **Short sentences.** Long sentences are difficult to read. Since scientific writing must meet clarity[4], the authors should use short and clear sentences.

- **Abbreviations[5].** All the abbreviations should be **introduced** the first time you see them in the text. There is no need for **defining** the well-known abbreviations (such as DNA, AIDS, etc.). You can define an abbreviation if you use it several times during the text. For instance, if your paper deals with location-based services[6] you can define the abbreviation LBS. **It is common** that scientists use some Latin abbreviations throughout the paper. The most widely used are:

  – **e.g.** (exempli gratia), which means "for example".

  – **i.e.** (id est), which means "in other words" or "that is".

  – **etc.** (et cetera) is also one of the most popular common abbreviations.

- **Numbers.** When writing numbers, it is common to spell out numbers below 10: "In the system there are three actors: the server, the clients and the third party. The system can work with up to 15 clients at the same time".

(Adapted from: Antoni Martinez Balleste Writing Scientific Papers
http://www.deic.uab.es/material/25977-ModulScientificWriting.pdf)

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[1] electronic payment system – електронна платіжна система

[2] ambiguity – неоднозначність

[3] fleas – блохи

[4] clarity – ясність

[5] abbreviation – скорочення

[6] location-based services – послуги з встановлення місцезнаходження

Activity 3. Answer the questions on the text.
1. What kind of vocabulary does English academic writing use?
2. What are the aims of scientific writing?
3. Who can help you while writing a scientific paper in English?
4. What is ambiguity? Why does it have to be avoided?
5. What is the difference between personal and impersonal style?
6. What should the author do when using abbreviations?
7. What are the most widely used Latin abbreviations?

Activity 4. Match the vocabulary items with their definitions

1. basic	a. a typical quality or an important part of something
2. to introduce	b. to move behind someone or something and go where he, she, or it goes, to go in the same direction
3. general	c. considering the whole of something, and not just a particular part of it
4. to define	d. to say what the meaning of something, especially a word, is:
5. feature	e. forming the base of something, the starting point of something
6. to follow	f. to put something into use, operation, or a place for the first time

Activity 5. Turn long sentences of the piece of scientific writing into short ones.
1. While short sentences are preferable, the sentences should not sound too causal because a good way to get an idea of the style followed in academic writing is to get into the habit of reading scholarly literature.
2. Usually, translation softwares do not always give grammatically correct results, thus, even when using a translation software, you should use the term which you clearly understand and are sure of rather than choosing an uncommon usage.
3. One of the reasons for using long sentences is to convey a mood, to put a lot of ideas together in one, to build the picture you are drawing, but in scientific writing there is no need for this, so this sort of long-winded sentence should be avoided.

Activity 6. Search the Internet for the following abbreviations:
ICT_____

APA_____

ECTS_____

CEFR_____

TBL_____

UNIT 2

SCIENTIFIC RESEARCH ARTICLE

Lesson 1. Structure of a Scientific Research Article

Aim
- to raise students' awareness of what a scientific research article is;
- to develop students' understanding of a scientific paper's structure;
- to teach students to elaborate the importance and meaning of each article section.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to
- identify main parts of a scientific research article;
- enlarge the retelling of the text with the additional information found in the Internet;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss:
1. What is a scientific paper?
2. What is the goal of writing a scientific article?
3. What are the main features of a scientific paper?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. abstract (annotation, summary) – анотація
2. key, key words – ключовий, опорний; головний, основний, ключові слова
3. introduction – передмова, вступ,
4. conclusion – завершення, закінчення, висновок; to draw conclusions – робити висновки
5. future research lines – майбутні напрямки (перспективи) досліджень
6. references – посилання, список літератури
7. relevant – доречний, обґрунтований, актуальний, релевантний
8. subject matter – 1) зміст, тема (книги, лекції); 2) предмет (дискусії, вивчення)
9. to highlight – висувати на перший план, випинати, надавати великого значення
10. finding – знахідка, виявлення, відкриття, висновок; (pl.) отримані дані, добуті відомості
11. to conduct – вести, керувати, проводити

12. database – інформаційна база, база даних
13. thus – так, у такий спосіб, таким чином, отже, відповідно до цього
14. theoretical background – теоретичні основи
15. to indicate – указувати, показувати, позначати, означати, свідчити
16. novelty – новизна
17. to state – викладати, заявляти, формулювати, констатувати, стверджувати
18. hypothesis – гіпотеза, припущення
19. data pl. від datum – дані, факти, відомості, інформація
20. to interpret – тлумачити, інтерпретувати
21. to refer – посилатися, мати стосунок, стосуватися, згадувати
22. statement – твердження
23. outcome – результат, наслідок
24. source – джерело, документ; першоджерело

Structure of a Scientific Research Article
(Scientific Paper)

Authors may present their works in a conference or may publish them in a scientific journal. This way scientists communicate with each other
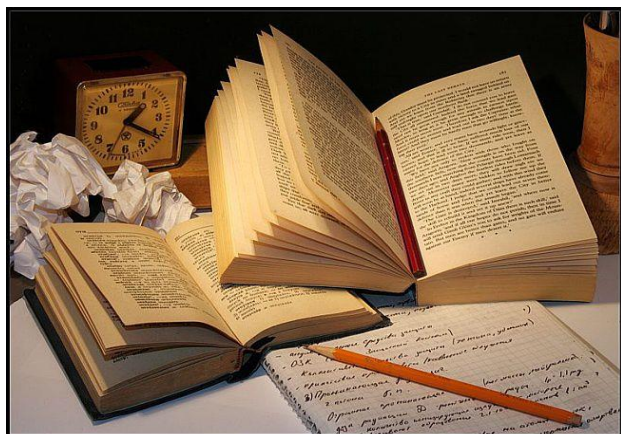
about the results of their research. Published works are usually called scientific papers.

A scientific paper or article is a scientific text with a standard structure, which goal is to describe research results[1].

All scientific papers have the same general format. They are divided into sections and each section contains specific information. Figure 1 shows a 4-pages example article with its different sections. The number and the headings[2] of sections may vary[3]. But typically, scientific papers consist of the following sections:

• Title, authors and their affiliation[4]
• Abstract (Annotation, Summary) and key words

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[1] Antoni Martinez Balleste (Writing Scientific Papers, p. 6)

[2] heading – заголовок

[3] to vary – варіювати; змінюватись

[4] affiliation – указання організації, де виконана робота (звич. у журнальних статтях)
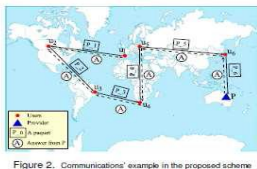
- Introduction
- Methods
- Results
- Main body

- Discussion
- Conclusion and future research lines.
- Literature cited (References)

Because scientific papers are organized in this way, a reader can quickly find a specific type of information. Let's examine each section of a scientific paper.

TITLE, authors and their affiliation. The title will help you to determine[1] if an article is interesting or **relevant** for your project. The title usually describes the **subject matter** of the article and **highlight**s the key **finding** of the research in simple language. Well-written titles give a complete description of the study that was **conducted**. The persons who did the work and wrote the paper are called the authors of a research paper.

Figure 1. Structure of the example paper.

ABSTRACT and KEY WORDS. Abstract gives you a complete, but very short summary of the paper. It contains brief information on the purpose, methods, results, and **conclusion**s of a study. Abstracts are often included in article **database**s, and are usually free to a large audience. **Thus**, they may be the most widely read sections of scientific papers. The list of keywords comes after the abstract and includes 5-7 words or word combinations.

INTRODUCTION. An introduction usually describes the **theoretical background**, **indicates** the novelty of your research and the importance to study it, **states** a specific research ques tion or aims of your study, and gives the author's hypothesis to be tested.

METHODS. The methods section shows how the authors **conducted** the experiment. The section describes both specific techniques, materials and the experimental strategy used by the scientists.

RESULTS. The results section contains the data collected during experiment. It is the heart of a scientific paper. In this section, much of the important information may be in the form of tables or graphs[1]. When

---

[1] tables or graphs – таблиці або графіки (діаграми)

reading this section, analyze the **data** in tables and figures[1] **to draw your own conclusions**.

DISCUSSION. The discussion section will explain the authors **interpret** their data and how they connect it to other work. Authors often use the discussion to describe what their work suggests and how it **refers** to other studies. Some journals combine results and discussion under one section.

COCLUSION and future research lines. The section contains final **statements** that reflect the flow[2] and **outcomes** of the article. This section is also a place where authors can suggest future research lines.

LITERATURE CITED. This section provides the **sources** cited throughout the paper. It offers information on the range of other studies cited: Does the author cite only his or her previous studies? Are both classic and modern sources influencing this work? Does the author look to the work of scientists in other disciplines?

(Adapted from: Structure of a Scientific Paper
http://biology.kenyon.edu/Bio_InfoLit/how/page2.html)

Activity 3. Discuss the questions:
1. How do the scientists make the results of their research accessible for other professionals and scientific community?
2. What sections can you find in a scientific paper?
3. What is the function of the Title section?
4. What information can be presented in the Abstract?
5. What is the place and aim of the Introduction section in a scientific article? Why is it important to describe theoretical background in this section?
6. What section deals with the experimental design and the materials used for the study?
7. What does the Results/Discussion section contain? How can a researcher present information in these sections?
8. What is the "final statement" in a scientific research article?
9. What do we use references for?
10. There may be some other parts in a scientific paper published abroad – for example, an Acknowledgements section. What is the aim of this section?

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[1] figure – цифра; число; кількісна інформація, кількісні дані
[2] flow – перебіг

Activity 4. Underline words or phrases in the text that match meanings 1-6 below.

1. an innovation, the quality of being novel, newness
2. an explanation for an observation[1], phenomenon, or scientific problem that can be tested by further research
3. main, very important, significant
4. a final product or end result of the research
5. a note in a scientific paper referring the reader to another passage or source
6. facts, statistics, or items of information

Activity 5. Translate into English:

1. Можемо дійти висновку, що предмет та наукова новизна дослідження, згадані у вступі, визначені некоректно.
2. Автор статті посилається на джерела зі списку літератури, отже, наведені ним дані свідчать про те, що дослідження є надійним (relevant). Його робота також висуває на перший план майбутні напрямки досліджень в цій галузі.
3. Ця секція статті містить гіпотезу та теоретичні основи дослідження.
4. Дослідник стверджує, що цей спосіб проведення експерименту допоможе вірно інтерпретувати ключові висновки та досягти очікуваних результатів.

Activity 6. Make an outline of the text and retell it. Search the Internet for the following issues, complete the retelling with the information found:

1. Why is it important to make the title of the article short and catchy?
2. What is the right order of writing authors' names?
3. When writing an article it is suggested to divide your introduction into three parts: one which gives an overview of the topic, second which highlights past research findings, and the third which enumerates the aims of your study along with your hypothesis. Do you agree with the following? Why?
4. Which of the following should be explained and described in detail: universally recognized techniques or novel[2] techniques (methods) used in your study? Why?

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[1] observation – спостереження, дослідження

[2] novel – новий, який раніше не існував

Lesson 2. Sections of the Scientific Article

Aim

- to raise students' awareness of a scientific article structure;
- to develop students' understanding of how to read and comprehend scientific research articles;
- to enable students to make effective notes with the help of a template when reading scientific papers.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to

- structure the article and identify its sections;
- skim a research paper and comment on the author's viewpoint;
- read a scientific article effectively and make notes using a template;
- use vocabulary of the lesson orally and in writing.

Activity 1. Complete the common phrases below using the correct verb from the box.

> to conduct, to draw, to highlight, to identify, to indicate, to refer, to interpret, to test, to describe, to list

1. _____ a research
2. _____ the data
3. _____ the sources
4. _____ the findings
5. _____ the importance
6. _____ the novelty
7. _____ to database
8. _____ a subject matter
9. _____ conclusions
10. _____ a hypothesis

Activity 2. Put the sections of the research article in their right order and title them. Identify the missing parts (3).

❖ **A** Keywords: Journal submission, scientific writing, strategies and tips

2. Abstract

❖ **B** Successful production of an article for scientific journal requires substantial effort[1]. Such an effort can be maximized by following a few simple steps when writing. By following these steps and avoiding common

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[1] to require substantial effort – вимагати значних зусиль

errors[1], success can be realized for even beginning/novice authors as they start the publication process. The purpose of this paper is to offer practical suggestions for achieving success when writing and submitting articles to The International Journal of Sports Physical Therapy and other professional journals.

3. Introduction

❖ **C** Conducting scientific research is only the beginning of scientific work. In order for the results of research to be accessible to other professionals and have a potential effect on the greater scientific community, it must be written and published. Most scientific discovery is published in peer reviewed journals.[2]

6. References

❖ **D** Nahata MC. Tips for writing and publishing an article. Ann Pharmaco. 2008;42:273, 277

2. Dixon N. Writing for publication: A guide for new authors. Int J Qual Health Care. 2001;13:417, 421

3. Cetin S, Hackam DJ. An approach to the writing of a scientific manscript. J Surg Res. 2005;128:165, 167

4. Content (виклад основного матеріалу)

❖ **E** The task of writing a scientific paper and submitting it to a journal for publication is not an easy task. Accurate and clear expression of your thoughts and research information should be the key goal of scientific writing. Remember that accuracy and clarity[3] are even more important when trying to describe complicated ideas. Avoid vague terminology[4] and too much prose. Use short rather than long sentences. Consider the use of graphic/figure representation of data and important procedures or exercises. Avoid first person language and instead write using third person language. Finally, use citations to your benefit.

1. Title,authors

❖ **F** How to Write a Scientific Article

Barbara J. Hoogenboom and Robert C. Manske

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[1] to avoid common errors – уникати поширених помилок

[2] peer reviewed journals – журнали, що рецензуються

[3] accuracy and clarity – точність і ясність

[4] vague terminology – розпливчаста термінологія

Grand Valley State University, Grand Rapids, MI, USA

5. Conclusions

❖ **G** Writing for publication can be a challenging yet satisfying work. The ability to examine, relate, and interpret the data and findings, as well as to provide a product of your research can be rewarding. A few suggestions have been offered in this paper that may help the novice or the developing writer to attempt, polish, and perfect their approach to scientific writing.

1 – F	3 –	5 –
2 – …	4 –	6 –

(Adapted from: Barbara J. Hoogenboom and Robert C. Manske How to Write a Scientific Article http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474301/)

Activity 3. Use the vocabulary items given below to make up mini-texts. Share them with a partner/in groups.

1. – to draw upon	– key	– source
– data	– conclusion	– finding
– references	– thus	– to indicate

For example: Whenever you **draw** upon the **data**, **findings** or **conclusions** contained in another paper, you must **indicate** the **source**. Any **reference** that you have cited in your paper should be listed both 1) <u>in the body of your text</u> as well as 2) <u>in a list at the end</u> of your article. **Thus**, there are two **key** styles of citing references in the <u>body of your paper</u>: Harvard and Vancouver. In the Harvard style, the name of the author surname in full and year of publication is mentioned in the text, while in the Vancouver system a number (in brackets) is given either chronologically or alphabetically as it appears in the list of **references**. A list at the end of your article (Literature cited or **References** section) includes the author('s) names, the year of publication, the title of the paper, the name of the journal which published the article, the volume number, and the pages where the article appeared in the journal.

2. – abstract	– to refer	– novelty
– outcome	– introduction	– to state
3. – statement	– relevant	– theoretical background
– to conduct	– to interpret	– future research lines
4. – hypothesis	– to highlight	– to draw conclusions
– database	– subject matter	– annotation

Activity 4. Comment on the following statements using the phrases given below:

1. I (completely/absolutely) agree with the author when he writes that … / Я (повністю/абсолютно) згоден з автором в тому, що …
2. The author is certainly correct when he writes that … / Автор, безумовно, правий, коли пише, що ...
3. I support the researcher's viewpoint in the part … / Я підтримую точку зору дослідника в тому, що …
4. To my mind … / На мою думку …
5. It seems to me that …/ Мені здається, що …
6. It is only partly true that ... / Це вірно лише частково ….
7. I don't agree with the author's ideas/thoughts … because … / Я не згоден з ідеями/ думками автора ... тому, що ...

A. The abstract is a summary of the article or study written in the 1st person allowing the readers to get a quick glance of what the contents[1] of the article include.
B. Scientists should always state the opinions upon which their facts are based.
C. Not every scientific article will have Materials, Methods, Results, or Discussion sections, especially if the article is descriptive.
D. Scientific paper focuses on a broad description of a field under study.
E. The Results section describes your data. This is also the place for discussing the implications of the results, making assumptions, or drawing conclusions.

Activity 5.

a) Discuss the questions in groups:

1. What is the most effective way to read a scientific article:
a) to read it from start to finish;
b) to skim a scientific article identifying key findings? Why?
2. What sections are most read in a scientific article? Why?

b) Study the new words from the box. Read the text given below and choose the correct alternative to complete sentences 1-4:

---

[1] contents – зміст

> to distinguish the main points – виокремлювати основні моменти
>
> less relevant subpoints – менш важливі підпункти
>
> figure – цифра, число, діаграма, малюнок
>
> to clue – повідомити про (які-небудь) події; розкрити (нові факти)
>
> comprehending – розуміння
>
> to take notes – робити нотатки
>
> to clarify thoughts – прояснити думки
>
> to create a template – створити шаблон
>
> to make comparisons – робити порівняння
>
> challenging – який потребує напруження (зусиль), який випробовує (стійкість)
>
> order – порядок, послідовність, розміщення (у певному порядку)
>
> to identify – розпізнавати, називати, встановлювати, ідентифікувати

How to Read and Comprehend Scientific Research Articles

While you are reading through the article also distinguish the authors main points. It can be difficult to distinguish between the main point and less relevant subpoints. Key places to look for main points include: the article's title, the abstract, keywords, the figure and table titles and the first sentence and last couple of sentences in the Introduction section.

Within the article some useful words to clue you in on the author's main points include: "We hypothesize that …", "We propose …", "We introduce …".

Another important part of reading and comprehending scientific articles is taking notes. Effective note-taking will save your time and help you clarify your thoughts.

Creating a template for taking notes will help you organize your research, enable you to make quick comparisons and will save your time when reading articles.

Reading scientific articles is challenging, but reading them in A, D, I, R, M order, correctly identifying the author's main points and taking effective notes will save your time and make your research easier.

1. The main parts of the article include *the title, the abstract, keywords, the figure and table titles, the first and the last sentences of the introduction / the title, the abstract, the results, final conclusions.*

2. When reading a scientific article you should pay attention to the following words: *"main idea"/"we hypothesize that"/"problem was researched in"/ "according to recent research"/ "we propose"/ "we introduce".*

3. Taking notes will help you *to comprehend the article /to make quick comparisons / to distinguish between the main point and less relevant subpoints / to save your time.*

4. Expert researchers suggest to read a scientific article in *A, I, R, D, M / A, D, I, R, M / A, T, R, M, I* order.

Activity 6. Work in groups of 3-4. Search the Internet for a scientific article on your specialty, indicate its sections, fill in a given template and comment on the author's viewpoint using the phrases from Activity 4 Lesson 2.

Source	– Author(s), title, journal, volume, issue, pages
	– If web access: url, date accessed
Main points	– General subject:
	– Specific subject:
	– Hypothesis:
	– Methodology:
	– Results:
	– Summary of key points:
Comments (critical response)	

Lesson 3. Summary

Aim

- to raise students' awareness of what a summary is;
- to develop students' understanding of how to summarize scientific research articles.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to

- identify a topic sentence in a paragraph;
- express main and supporting ideas meant by the author;
- summarize a paragraph / a scientific article;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss:

1. What is summary? What parts does it consist of?
2. Share your experience of summarizing a scientific paper in Ukrainian or Russian if you have any.
3. What is the difference between the topic and the main idea of the article?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. summary – стислий виклад прочитаного, конспект
2. to evaluate – оцінювати, давати оцінку, визначати якість, важливість
3. main idea – головна ідея
4. according to – відповідно до, згідно з
5. to claim – стверджувати, заявляти
6. to argue – обговорювати, стверджувати, заявляти, аргументувати
7. supporting details – допоміжні деталі

8. key concept – ключове поняття (ідея, загальне уявлення, концепція)
9. point – думка, позиція, точка зору, головне, суть, зміст
10. to express – виражати, висловлювати
11. to increase – збільшувати, підвищувати, підсилювати
11. topic sentence – речення, в якому формулюється тема повідомлення
12. to imply – мати на увазі, припускати

Summary

A **summary** is a shortened version of a text aimed at giving the most important information or ideas of the text. It answers the question "what does the author really want to say about the problem stated?". Summarizing is also an important studying skill[1]. A summary can be used:

- to sum up information,
- to present information concisely[2],
- to state the main or essential points without any detailed explanations,
- to refer to a body of work,
- to give examples of several points of view on one subject.

---

[1] skill – уміння

[2] concisely – стисло, коротко; виразно

A good summary satisfies the following requirements:

1. It presents information in short, cohesive[1] sentences.
2. It is written in your own words in a generally neutral manner.
3. It does not **evaluate** the source text.
4. The first sentence of a summary contains the name of the author of a summarized article, its title, and the **main idea**. Below are some phrases that you may use in the first sentence of your summary:

- **According to** Charles G. Morris in his book *Psychology, ...* (main idea)
- Charles G. Morris in *Psychology* discusses ... (main topic)
- Charles G. Morris in his book *Psychology* states/describes/explains/**claims**/**argues** that
- In Charles G. Morris' discussion of …(subject) in *Psychology, ...* (main idea)
- In his book *Psychology,* author Charles G. Morris states/describes/explains/claims/ argues that ... (main idea)

In a longer summary, you may want to remind your reader that you are summarizing:

- The author goes on to say that. . .
- The article further states that. . .
- *(author's surname here)* also states /argues that. ..
- *(author's surname here)* also believes that...
- *(author's surname here)* concludes that...

In the second half of the paper(text), *(author's surname here)* presents...

To summarize a passage (scientific article) it is important to identify its topic, main idea and **supporting details**.

Textbook chapters, articles, paragraphs, sentences, or passages all have topics and main ideas. The *topic* is a broad, general theme or message. The first thing you must be able to do to get at the main idea of a paragraph is to identify the topic – the subject of the paragraph. Your strategy for topic identification is simply to ask yourself the question, «What is this about?». Keep asking yourself that question as you read a paragraph, until the answer to your question becomes clear. Sometimes you can find the topic by looking for a word or two that repeat. Usually you can state the topic in a few words.

---

[1] cohesive – зв'язний

The *main idea* is the «**key concept**» being expressed. Every paragraph has the main idea – the most important piece of information the author wants you to know. The main idea may be stated at the beginning of the paragraph, in the middle, or at the end. *Details,* major and minor, support the main idea by telling how, what, when, where, why, how much, or how many. Locating the topic, main idea, and supporting details helps you understand the **point**(s) the writer is attempting to **express**. Identifying the relationship between these will **increase** your comprehension.

The sentence in which the main idea is stated is the ***topic sentence*** of that paragraph. This sentence provides the focus for the writer while writing and for the reader while reading. The idea of the article is not always stated in one topic sentence, sometimes it is **implied**. There are three important points to remember about a topic sentence.

1. A topic sentence is a *complete sentence;* that is, it contains a subject, a verb, and (usually) a complement[1]. The following are *not* complete sentences:

> Driving on freeways.
> The importance of gold.
> How to register for college classes.

2. A topic sentence contains both a *topic* and a *controlling idea.* It names the topic and then limits the topic to a specific area to be discussed in the space of a single paragraph. The following examples show how a topic sentence states both the topic and the controlling idea in a complete sentence:

> Driving on freeways requires skill and alertness[2].
> Gold, a precious metal, is prized[3] for two important characteristics.
> Registering for college classes can be a good experience for new students.

3. A topic sentence is the most general statement in the paragraph because it gives only the main idea. It does not give any specific details. The following is an example of a general statement that could serve as a topic sentence:

> The Arabic origin of many English words is not always obvious.

(Taken from: Т.В. Яхонтова, (2003) English Academic Writing; Oshima, Alice and Hogue, Ann, (2006) Writing Academic English; Е.В. Турлова, (2014) Rendering and Summary Writing)

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[1] complement – *грам*. додаток

[2] alertness – пильність, настороженість; обережність

[3] is prised – цінується

Activity 3. Do the test:

1. We use summarizing to:
- ○A. Retell a story
- ○B. Reduce information to essential ideas
- ○C. Get through an article more quickly

2. When summarizing, we want to _____ unimportant information.
- ○A. Summarize
- ○B. Highlight
- ○C. Disregard

3. The main idea is _____
- ○A. All the information provided
- ○B. The most important information
- ○C. Nothing to worry about

4. True or False: Basic Signal words are Who, What, When, Where, Why, How
- ○A. True
- ○B. False

5. The _____ gives the reader an idea about what the paragraph is going to be about.
- ○A. Concluding sentence
- ○B. Summary
- ○C. Topic sentence

6. True or False: When writing a summary, it is okay to include an opinions or background knowledge you have on the topic.
- ○A. True
- ○B. False

7. In order to give a good summary of a scientific research article, you must make sure you include which of the following:
- ○A. Only the most important details, your own words, what the text is mostly about
- ○B. As many details as possible, all of the information in the article
- ○C. All of the above
- ○D. None of the above

*(Taken from: http://www.proprofs.com/quiz-school/story.php?title=summarization;
http://www.helpteaching.com/questions/Summarizing?pageNum=3)*

Activity 4. a) Identify the topic of the text given in Activity 2; write the main idea and then write three supporting ideas in the boxes.

What is the main idea?

……………………………………………………………………………………………

Supporting ideas

b) **Summarize the text in Activity 2, write the summary down in your own words.**

Activity 5. Translate into English:

1. Згідно з автором, кожна наукова стаття має тему, головну ідею та допоміжні деталі.
2. На мою думку, ключові поняття, на які посилається автор, потребують подальшого опису і тлумачення.
3. Я повністю згоден з автором в тому, що головна ідея цього тексту сформульована на початку параграфа.
4. Я підтримую точку зору дослідника в тому, що речення, в якому формулюється тема повідомлення, є найбільш загальним твердженням в параграфі.
5. Автор припускає, що це твердження виражає думку більшості учасників експерименту.

Activity 6. Summarize the following article.

Humans Sacrificed Brawn for Brains, Study Suggests

Humans may be smart because energy once devoted to brawn was given up for brains, researchers say.

The most powerful computer known is the brain. The human brain possesses about 100 billion neurons with about 1 quadrillion – 1 million billion – connections known as synapses wiring these cells together. Humans possess more complex, powerful brains than humanity's closest living

relatives, such as monkeys and apes. One reason behind this jump in brainpower may lie in how much of the human metabolism is devoted to the human brain – it consumes a whopping 20 percent of the body's total energy.

How the brain evolved

To gain insights into how the human brain evolved, scientists compared the metabolisms of humans and animals such as *chimpanzees*, mice and rhesus monkeys. They focused on how much energy each species devoted to the brain and body. The researchers analyzed more than 10,000 compounds known as metabolites, which are small molecules formed by, or necessary to, metabolism, such as sugars and fats; the building blocks of proteins, DNA and cell membranes; and chemical signals given off by cells. They investigated metabolite levels in the kidney, thigh muscle and three brain regions – the primary visual cortex, which is involved in vision; the cerebellar cortex, which helps coordinate muscular activity; and the prefrontal cortex, which plays a major role in complex mental behavior, decision making and social behavior.

The investigators next compared how much the metabolisms of these animals differed with how far apart these species are evolutionarily. By analyzing human and other genomes, prior studies revealed when the ancestors of humans and other animals diverged. For instance, the ancestors of humans diverged about 75 million years ago, while divergence happened about 25 million years ago with the ancestors of rhesus monkeys and about 6 million years ago with the ancestors of chimpanzees.

For the most part, the scientists found the levels of differences between the metabolisms of these species matched how far apart they were evolutionarily. (The further apart evolutionarily, the greater the metabolism differences were.) However, they discovered the rate of change in the metabolism of the human prefrontal cortex was about four times faster than that of chimpanzees. Even more surprisingly, the rate of change in the metabolism of human muscle was more than eight times faster that that of the chimpanzee. "Even after so many years of research of humans and human evolution, we still can uncover large unknown differences between humans and other species," said study author Philipp Khaitovich, an evolutionary biologist at the Chinese Academy of Sciences' Key Laboratory of Computational Biology in Shanghai.

Humans vs. chimps

To rule out the possibility that these changes simply reflected the modern human couch potato lifestyle, the scientists performed additional

experiments on rhesus monkeys, moving them from a spacious countryside facility to small indoor homes and serving them fatty and sugary food for several weeks, all to imitate the environment and behavior of contemporary humans. These lifestyle changes had only a small effect on the metabolisms of the monkeys' muscles. "For a long time we were confused by metabolic changes *in human muscle*, until we realized that what other primates have in common, in contrast to humans, is their enormous muscle strength," said lead author Katarzyna Bozek, of the Chinese Academy of Sciences' Key Laboratory of Computational Biology in Shanghai.

To see just how much stronger chimps and rhesus monkeys are than humans, the researchers conducted muscle strength tests that involved pulling weights upward. All of the human volunteers in the experiment – who included professional athletes – were outcompeted by their primate opponents by more than twofold. "According to our results, an average adult chimpanzee is approximately two to three times stronger than an average adult human," Khaitovich told Live Science.

The fact that metabolic changes in human muscle are paralleled by a drastic reduction in muscle strength leads the researchers to hint that human ancestors may have swapped brains for brawn. "It is a very simple explanation, and it could be completely wrong," Khaitovich said. "In evolution, however, simple explanations often work well." "Our work opens a door to further studies of human metabolic uniqueness," Khaitovich said. "It is a huge field that is virtually untouched by scientists." The scientists detailed their findings online today (May 27) in the journal PLOS Biology.

(Taken from: Е.В. Турлова, (2014) Rendering and Summary Writing)

Lesson 4. What is Rendering

Aim
- to raise students' awareness of what rendering is;
- to practice vocabulary of the lesson.

Outcomes
As a result of learning on this lesson students should demonstrate the ability to
- render a scientific paper;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss:
1. What is rendering?
2. What way does it differ from summarizing?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. rendering – реферування
2. controversial scientific issue – суперечливе наукове питання
3. to single out the main idea – виділяти головну ідею
4. insignificant information – незначна (несуттєва) інформація
5. thorough comprehension – повне розуміння
6. to divide into logical parts – розділити на логічні частини
7. essential – істотний, істотно важливий
8. from the point of view of – з точки зору
9. element – елемент, складова частина
10. to provide background information – надавати довідкову інформацію
11. to reveal – показувати, виявляти
12. to follow basic principles – дотримуватися основних принципів
13. to express your own opinion – висловлювати свою власну думку
14. instead of – замість

Rendering a Scientific Paper

While dealing with the scientific research you may be in need of preparing a kind of synopsis[1] on some **controversial scientific issue**. You are to read the given texts attentively, represent them in a smaller volume, suppressing all **insignificant information**, and give your own conclusion. That is just *rendering writing*.

Rendering can't be produced without **thorough comprehension** of the passage. **Dividing** the text **into logical parts** and **singling out the main idea** of each of them can be an **essential** help in understanding the passage. You will have to read the original more than once.

The most important thing here is the compression of the information given in the text, which means you should avoid repetitions and do not generally repeat one and the same idea twice.

Rendering is the process of creating the text based on the notional compression of the original with the aim of rendering its general matter. All the events and facts in a rendering are presented **from the point of view of** the author of the original and include the **elements** of your own

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[1] synopsis – конспект

interpretation or evaluation.

A rendering has usually got the following structure:

– introduction, where you **provide** all necessary **background information** such as the title and source of the passage and state the main idea;

– the body, where the main idea is **revealed**;

– the conclusion on the passage;

– your opinion of the problem (position) introduced in the passage.

There are several **basic principles** you are **to follow** in order to make a successful rendering.

You have to develop your power of judgment, so that you may be able to decide rightly what must be expressed and what must be suppressed. In rendering, facts should be expressed as plain statements, with constant reference to the author of the passage. Try to avoid evaluative words and phrases in the body of the rendering, keep them for **expressing your own opinion**.

In British and American Universities a term "abstracting" or "summarizing" is used **instead of** "rendering" to mean an independent work and is also translated into Ukrainian as "реферування". An abstract is usually done in written form and presupposes no personal opinion or interpretation[1].

Activity 3. Discuss the questions:
1. What is the goal of rendering a scientific research article?
2. Why is it important to have a thorough comprehension of the text you are going to render?
3. What way does rendering differ from the original text?
4. What is the structure of rendering?
5. How to render a scientific paper effectively?
6. Why should the volume of your rendering be brief?
7. Should all main ideas of the article be included in a rendering?
8. Have you done any type of writing in the past like the writing described in this text? Why and how? Describe both similarities and differences between that experience and what is described in the text above.

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[1] Е.В. Турлова Rendering and summary writing

Activity 4. Do the test:

1. Rendering should not contain opinions, background knowledge, or personal information; rather, it should be entirely text based.
- ○ A. True
- ○ B. False

2. Teaching students to render improves their memory for what is read.
- ○ A. True
- ○ B. False

3. When you determine the main idea of a scientific paper, significant details and represent information in a short one or two sentence summary, you are:
- ○ A. Predicting
- ○ B. Rendering
- ○ C. Summarizing
- ○ D. Evaluating

4. Which of the following does rendering NOT help you do?
- ○ A. Gives you a way to check your understanding
- ○ B. Makes it harder for you to understand what you are reading
- ○ C. Helps you remember information
- ○ D. Helps you clarify relationships among the author's ideas

5. You should not include key details when you are rendering a scientific research paper.
- ○ A. True
- ○ B. False

6. While reading an article you are going to render, if you do not understand what you have read, or something is not clear, you should
- ○ A. Write "I don't know" when taking notes
- ○ B. Keep reading, because you want to finish first
- ○ C. Go back and reread the passage to get a thorough comprehension
- ○ D. Keep reading, maybe you will understand the article later.

7. The terms, "retell", "summarize" and "render" are synonyms of each other. In other words, they mean the same thing.
- ○ A. True
- ○ B. False

8. When rendering, you should ignore underlined words, words written in bold print, italicized words or words written in all CAPITAL letters.
- ○ A. True
- ○ B. False

(Adapted from: http://www.helpteaching.com/questions/Summarizing?pageNum=10)

Activity 5. Use the vocabulary items given below to make up mini-texts. Share them with a partner/ in groups.

1. – rendering   – to single out the main idea   – thorough comprehension
   – summary   – insignificant information   – key concept
   – topic sentence   – to express your own opinion   – supporting details

2. – essential   – according to   – to argue
   – to reveal   – to follow basic principles   – to imply
   – to express   – to evaluate background information   – instead of

3. – controversial scientific issue   – to divide into logical parts   – to claim
   – to provide background information – essential element   – main idea
   – from the point of view of   – to increase   – point

Activity 6. Translate into English:

1. З точки зору автора роботи, найбільш істотну інформацію необхідно розміщувати у висновках до статті.

2. Щоб досягти повного розуміння наукового тексту, необхідно кілька разів прочитати його, розділити на логічні частини, відкинути несуттєву інформацію та виділити головну ідею.

3. Науковий керівник порадив мені більш ретельно вивчати досліджувану проблему замість того, щоб торкатись суперечливих наукових питань.

4. Існує кілька основних принципів, яких необхідно дотримуватись науковцю-початківцю. Так, висловлювати свою власну думку щодо наукових знахідок інших слід обережно, оскільки критика має бути тактовною і доречною.

5. У вступі до реферування зазвичай надається довідкова інформація.

6. Реферована стаття виявляє найбільш істотні складові частини досліджуваного процесу.

Lesson 5. How to Render a Scientific Paper?

Aim

- to develop students' understanding of how to render scientific research articles;
- to practice vocabulary of the lesson.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to

- render a scientific article;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss:
1. Have you ever rendered a scientific paper either in Russian/Ukrainian or in English
2. What ways of rendering a scientific paper do you know?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

As Master students develop their expertise and start writing their own Master's thesis, they are increasingly likely to render scientific papers and research manuscripts. It's an important skill in a scientific community, but the learning curve can be particularly steep. Writing a good rendering requires expertise in the field, an intimate knowledge of research methods, a critical mind, the ability to give fair and constructive feedback, and sensitivity to the feelings of authors on the receiving end. Here are some general recommendations on how to render a scientific research paper.

Sometimes rendering begins with a paragraph summarizing the paper. It is reasonable to start with a brief summary of the results and conclusions as a way to show that you have understood the paper and have a general opinion. Then the most essential points for major comments and for minor comments are given. Major comments may include demonstrating the quality and novelty of the paper or suggesting a missing element that could make or break the authors' conclusions. Minor comments may include flagging the mislabeling of a figure in the text or a misspelling that changes the meaning of a common term. Overall, when rendering a scientific article try to make comments that would make the paper stronger. The tone of rendering should be very formal, scientific, and in third person. Try to be honest critiquing the work, not the authors. Stick to the facts, so your writing tone tends toward neutral. Finally, you may also comment on the form of the paper, highlighting whether it is well written, has correct grammar, and follows a correct structure.

To write a successful rendering you may use the following plan:
1. The title and author(s) of the article.
   a) The title of the article is ...
   b) The article is headlined ....
   c) The author(s) of the article is (are)….
   d) The article is written by ….

e) The article is published in … .

2. Key words: ……………….. (5-7 key words)

3. The main idea of the article.
   a) The article is about ...
   b) The main idea of the article is ...
   c) The article is devoted to ...
   d) The article deals with ...
   e) The article touches upon ...
   f) The purpose of the article is to give the reader some information on ...
   g) The aim of the article is to provide the reader with some facts/material/data on ... .

4. The contents of the article. Some facts, names, figures.
   a) The author tells us about …
   b) The author starts by telling (the reader) (about, that ...)
   c) The author writes (states, stresses upon, thinks, points out) that ...
   d) The article describes ...
   e) According to the author ...
   f) Further the author reports (says) that ...
   g) The author comes to the conclusion that ....

5. Your opinion of/on the article.
   a) I find/found the article topical=urgent (interesting, important, dull, of no value, too hard to understand ...) because ....
   b) In my opinion the article is worth reading because ....
   c) I think that …
   d) I share the author's view that …
   e) I (completely / absolutely) agree with the author when he writes that …
   f) I don't quite agree with the fact that …

   (Adapted from: http://www.sciencemag.org/careers/2016/09/how-review-paper)

Activity 3. Render an adapted extract from scientific article "Hand to Hand: Teaching Tolerance and Social Justice One Child at a Time" by Andrea Zakin (American scientific journal "Child-hood Education"). Study the new words before reading. Think of the key words for this article.

1. ability – здатність, спроможність; здібність, уміння
2. diversity– розмаїтість; різноманіття; відмінність, розходження
3. curriculum – курс навчання; навчальний план (програма); розклад (лекцій, уроків)
4. empathy – емпатія, співчуття; співпереживання

5. ethnicity – етнічна або расова приналежність
6. goal – мета, завдання
7. implementation – здійснення, виконання, реалізація
8. literacy – грамотність
9. multiple perspectives – численні перспективи
10. pedagogical imperative – педагогічна необхідність
11. skin colo(u)r – колір шкіри
12. social justice – соціальна справедливість
13. teaching tolerance – виховання толерантності
14. biracial – той, що поєднує в собі риси двох расових груп
15. diverse – різний, різноманітний
16. expedient – доцільний; вигідний, раціональний, підходящий, доречний
17. extended – розширений; тривалий; розтягнутий
18. multicultural – мультикультурний, багатокультурний, полікультурний
19. particular – особливий; специфічний; винятковий; докладний, детальний; конкретний
20. to care – турбуватися, непокоїтися; піклуватися

Hand to Hand: Teaching Tolerance and Social Justice One Child at a Time

by Andrea Zakin

Many educators (Cohen, 2006, 2007; Jones, 2004; Stevens & Charles, 2005) believe that teaching tolerance is a pedagogical imperative. Still others (Barrier-Ferreira, 2008; Jones, 2004; Mustakova-Poussardt, 2004; Paley and the Teaching Tolerance Project, 1998) go beyond tolerance to promote instruction in social justice. But is teaching tolerance, as the ability to care and have empathy for others, enough?

I decided to work with a group of young children in a preschool[1] setting that would welcome interdisciplinary activities predicated on art making, with the goal of exploring diversity in terms of skin colour. Investigating skin colour can be a first step in teaching tolerance and social justice. School is a key place for children to learn about diversity, and their ability to accept difference is dependent on teacher attitude.

Art is an expedient way to teach tolerance and social justice. Multicultural art education teaches students to look at cultural traditions, including their own, as well as that of others, from critical and multiple perspectives.

I elected to work with 4- and 5-year-old children because the age

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[1] preschool – (ім.) дитяча дошкільна установа, (прикм.) дошкільний

range bridges preschool and elementary school[1], and because teaching tolerance should start young. The lessons combined literacy and social studies with art.

The preschool, a parent-run cooperative located in the Bronx, New York, accepts children ages 2 to 5. The families are diverse in terms of ethnicity, race, income, profession, and family style. There were 20 children in the 4s/5s classroom. Nine children were Hispanic, one was African American, six were white, and four were biracial.

I recalled a colour-mixing activity in the book "*Starting Small*" that an early childhood teacher used to build community in her classroom. The teacher mixed "multicultural paint" (i.e., paint in a variety of skin tones) to match the hand of each student. The activity teaches students that while everyone is of a certain colour, no colour is better or worse than any other. They also learn that each skin colour has a specific name: caramel, ebony[2], cinnamon[3], and peach, rather than black, white, yellow, and red. A student may be a combination of beige and olive, but not white, since, as young child stated, no one is white "like socks".
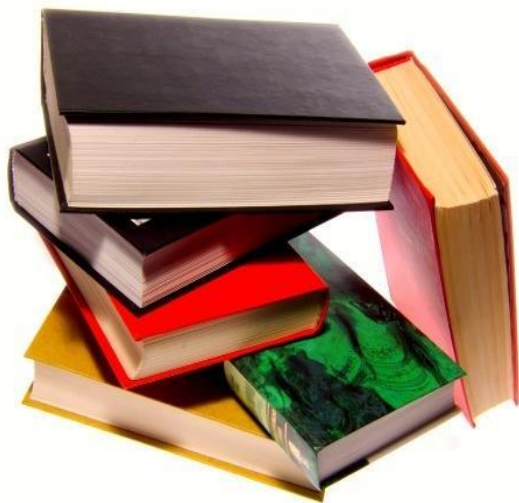
I decided to extend the multicultural colour-mixing exercise in a variety of concrete ways. The children, with adult help, mixed their skin tone (session one); made handprints[4] with their skin colour paint (session two); painted their hand with their particular skin tone (session three); and participated in a culminating self-portrait activity, along with a group discussion during circle time (session four).

The project served as closure for the unit on diversity and allowed the children to witness the "rainbow" of skin tones represented by their class. The children's comments show that they felt free to express their thoughts and feelings about skin colour. They actively participated in the extended literacy, social studies, and art curriculum.

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[1] elementary school – початкова школа

[2] ebony – чорний як смола

[3] cinnamon – світло-коричневий

[4] handprint – відбиток руки

I learned that the preschool children:

1) are interested in and enjoy exploring difference;

2) are aware of differences in skin colour but are not always cognizant of their own skin tone;

3) can explore skin colour diversity through literacy-related art activities;

4) are able to focus on detailed art activities, such as colour mixing, painting, and collage.

Discussions with the head teacher and school director revealed that they think that children, teachers, and staff benefited from participation in the project.

(Taken from: A.Zakin Hand to Hand: Teaching Tolerance and Social Justice One Child at a Time / http://www.freepatentsonline.com/article/Childhood-Education/312618326.html)

Activity 4. Find and render a scientific research article on your specialty.

UNIT 3

WRITING AN ABSTRACT

Lesson 1. What is Abstract?

Aim

- to raise students' awareness of what the abstract is;
- to develop students' understanding of how to write a good abstract.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to

- reflect on their own experience of writing an abstract (to the article, to the course paper, etc.);
- identify ways of how to write a good abstract;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss

1. What is abstract?
2. Reflect on your own experience of writing an abstract (to the article, to the course paper, etc.)
3. How is it important for a scholar to be able to write an abstract?

Activity 2. Read the text. Pay attention to the vocabulary items. Does the text mention anything you have discussed?

1. piece of writing – письмова робота
2. content of writing – зміст письмової роботи
3. web search – веб-пошук
4. to submit the thesis – надати дисертацію на розгляд
5. chronology of the thesis – хронологія дисертаційної роботи
6. to emphasize information – підкреслити інформацію
7. to identify the aims – визначати цілі
8. scope – масштаб, межі, обсяг
9. table of contents – зміст
10. spellcheck software – програмне забезпечення для перевірки правопису
11. the length of abstract – об'єм анотації
12. concluding statement – заключне твердження
13. to the point – доречно
14. headings and subheadings – заголовки та підзаголовки
15. to capitalize – починати з великої літери
16. to acquaint the reader with – ознайомлювати читача з…
17. to contextualise the source text – контекстуалізувати початковий текст
18. theoretical framework – теоретична основа
19. overall results of the research – загальні результати дослідження

What Is an Abstract?

1. An abstract is a greatly condensed version of a longer piece of writing that highlights the major points covered, and concisely describes the content and scope of the writing. Abstracts give readers a chance to quickly see what the main contents and sometimes methods of a piece of writing are. They enable readers to decide whether the work is of interest for them. Using key words in an abstract is important because of today's electronic information systems. A web search will find an abstract containing certain key words. The following items are usually included in an abstract: a title identical to the title of the thesis; the name of the author; the date of the thesis; where the thesis is submitted or published; the main topic of the thesis; the purpose of the thesis; the methods used to research information; further sub-sections within the thesis; results, conclusions, or recommendations.

2. A good abstract has the following qualities: uses one or more well developed paragraphs: these are unified, coherent, concise; uses an introduction/body/conclusion structure which presents the purpose, results, conclusions, and recommendations; follows the chronology of the thesis; provides logical connections between the information included; adds no new information, but simply summarizes; often uses passive verbs to downplay the author and emphasize information.

3. To write an effective abstract, you should follow these steps: write the abstract after you have finished the thesis; identify the aims, methods, scope, results, conclusions, and recommendations of your thesis in key words; use your headings and table of contents as a guide to writing your abstract; when you have finished use spellcheck software; show the abstract to someone who has not read your thesis and ask him / her if the abstract makes good sense. There are some types of thesis. This is the way to say them in English: Bachelorarbeit: bachelor's thesis; Masterarbeit: master's thesis; Doktorarbeit: doctoral thesis, doctorate. Note carefully the correct use of the apostrophe. You would only use capital letters if this was part of a title – see the next section on titles and headings below.

4. As for the length of abstract 150-350 words should be enough for an abstract for a bachelor's or master's thesis, but you can check with your thesis supervisor. A short abstract can be a single paragraph. Or you can

divide your abstract into short paragraphs. First paragraph: state what the thesis is about, give a simple statement of aims and methods. Second paragraph: explain the structure of the thesis and say something about the content. Third paragraph: give a concluding statement, including a short summary of the results. Abstract and thesis titles should be kept as short and sweet as possible and be to the point. There are simple rules for the use of capital letters in titles, headings and subheadings in English, including abstract and thesis titles. They are the following: headings and sub-headings should not end with full stops; do not place headings and sub-headings within quotation marks; first and last word should always be capitalized; do not capitalize articles (the, a, an), prepositions (to, from, with, over, etc.), or coordinating conjunctions (and, for, or, nor, etc.); do capitalize nouns, verbs (even short ones like Is), adverbs, adjectives, subordinating conjunctions (Although, Because, Due to, etc.) and pronouns (He,Their, etc.).

5. A good abstract is not an easy thing to write and can only be completed after the full thesis has been written. It acquaints the reader with the results of the thesis research. What does it mean? It means that people will get an idea of what was accomplished without having to read through the whole thesis. On the other hand the abstract makes other scholars realize whether it is worth looking at the full work. The abstract of the thesis should contextualise the source text, give a summary of this piece of writing, emphasize the theoretical framework and present overall results of the research.

(Taken from Greg Bond (2009) Writing Abstracts for Bachelor's and Master's Theses)

Activity 3. Are the statements 1-5 true (T) or false (F)
  1. Using key words in an abstract is not so important as you can easily find them in today's electronic information systems.
  2. A good abstract is characterized by logical connections between the information included.
  3. You are allowed to decide on the length of your abstract. It can be of any length
  4. Don't use full stops after headings and sub-headings.

5. The abstract give the idea of the whole thesis.

Activity 4. Find words or phrases in the text that match meanings 1-7
1. The work of a writer; anything expressed in letters of the alphabet (especially when considered from the point of view of style and effect) (paragraph 1)
2. Searching for information on the World Wide Web. The search results are usually presented as a list of web-pages, pictures or images (paragraph 1)
3. An item which occurs in a text more often than we would expect to occur by chance alone; a word that academics use to reveal the internal structure of an author's reasoning (paragraph 1)
4. The sequential order in which past events occur, a statement of this order, the science of arranging time in periods and ascertaining the dates and historical order of past events, a reference work organized according to the dates of events (paragraph 2)
5. To recognize a problem, need, fact, to set a goal, to define purpose (paragraph 3)
6. Concerning or with relevance to the matter at hand (paragraph 4)
7. Considering or including all findings of the research everything (paragraph 5)

Activity 5. Discuss the questions
1. What kind of information does the abstract cover?
2. What is the function of the annotation?
3. Is it important to use key words? Why?
4. Why should the title of the abstract be identical to the title of the thesis?
5. What are the main items usually included into the abstract?
6. Why should the abstract and thesis titles be kept as short and sweet as possible?
7. When should you use capital letters in titles, headings and subheadings in English?
8. Why can the abstract only be completed after the full thesis has been written?
9. What does the abstract make scholars realize?
10. What other types of abstracts apart from thesis abstract do you know?
11. Reflect on the following "The abstract of the thesis should contextualize the source text".

Activity 6. Translate the following into English, using vocabulary of the lesson

1. Ключові слова представляють собою невід'ємну частину анотації будь-якої магістерської роботи.
2. Автор викладає теоретичну основу магістерської роботи в анотації у скороченому вигляді.
3. У другому розділі роботи автор виклав загальні основи дослідження, підкріпив їх результатами проведених опитувань.
4. Автор несе особистісну відповідальність за зміст письмової роботи, а також додаткових матеріалів та результатів експериментальних досліджень
5. Не пізніше, аніж за місяць до захисту студент повинен надати свою роботу на розгляд наукового керівника.
6. Необхідно вдосконалити систему веб-пошуку наукової інформації в Інтернет-джерелах.
7. У своєму виступі на захисті магістерської роботи студент має підкреслити важливу інформацію, яка становить основу його дослідження.
8. Обсяг наукової роботи залежить від рівня, на якому вона виконується, зазвичай магістерська робота менша ніж дисертаційна.
9. Об'єм анотації до магістерської робота становить 2-3 сторінки друкованого тексту.
10. Кожна наукова бібліотека має відповідне програмне забезпечення для перевірки правопису будь-якої мови.
11. Анотація англійською мовою має певні правила, особливо що стосується слів, які потрібно писати з великої літери.

Lesson 2. Common Problems while Writing an Abstract

Aim

- to raise students' awareness of what the common problems of writing an abstract are;
- to develop students' ability to compile the common problems checklist.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to

- reflect on their own experience of making mistakes while writing an abstract (to the article, to the course paper, etc.);

- compile the common problems checklist and identify the ways of how to overcome these problems;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss

1. What problems do you face when writing the abstract?
2. What are the ways of overcoming these problems?

Activity 2. Read the text. Is there anything you have discussed?

Common problems

• **Too much detail, and hence too long**. Remember, this is the introduction, a kind of overview. Although you will cover important points, detailed descriptions of method, study site and results will be in later sections. Look at the proportion of a research paper an introduction takes up. Notice it is comparatively short because it serves as a summary of what follows.

• **Repetition of words, phrases or ideas**. You will have keywords that are crucial to your study. However, your reader doesn't want to read them over and over! A high level of repetition makes your writing look careless. To reduce it, highlight repeated words or phrases – then you can easily judge if you are overusing them and find synonyms or pronouns to replace them.

• **Unclear problem definition**. Without a clear definition of your research problem, your reader is left with no clear idea of what you were studying. This means that they cannot judge your work's relevance to their own work, or its usefulness, quality, etc. As an exercise, you should be able to complete a sentence that starts, "The purpose of this study is . . . " that encapsulates the problem you are investigating. Of course you will not include this exact sentence in your thesis, but it serves as an easy way to check that you have a clearly defined problem. In your thesis you should be able to write your research problem in one sentence – you can add details in the sentences that follow. You should also ensure that your research problem matches the title of your thesis (you'd be surprised how many don't !) as well as its methodology and objectives.

• **Poor organization**. Writing an introduction that effectively introduces

your research problem and encapsulates your study is not an easy task. Often when we write we discover gradually what we want to say and how we want to say it. Writing is often a process of discovery. Bear this in mind when you write your introduction, and be prepared to go back and make big changes to what you have written, and the order in which you have presented your ideas and information. Your introduction must have a logical sequence that your reader can follow easily.

(Taken from AIT Extension - Language Center, Asian Institute of Technology. 2003.
Writing up research: introductions.
<http://www.languages.ait.ac.th/EL21INT.HTM#top>. Accessed: 22 August 2016)

Activity 3. Discuss the following

1. Why is it so important to look at the proportion of parts of a research paper?
2. How is it possible to avoid the repetition of words, phrases or ideas in the abstract?
3. By means of what can the reader judge if your work is relevance to his or her own work, or assess its usefulness, quality?
4. Why is it recommended to write your research problem in one sentence?
5. What should your research problem match?
6. What are the characteristic features of poorly organized abstract?
7. Why should the author go back and reread the abstract?

Activity 4. Match 6 common abstract writing mistakes with their explanation

№	Mistake	Explanation
1	Authors do not provide a brief background that explains the importance of the unresolved problem which has been investigated and described in the abstract.	Excellent abstracts include a clear, concise synopsis of the current status in the field, statement of the issue, and the significance of solving the controversy. In the example, the first two sentences provide the current status of the field and the rationale for the study.
2	The length or format does not conform to the journal's or meeting's guidelines.	Each scientific journal or meeting gives the length and format for submitting an abstract. A few journals require an abstract of 150 words or less. Most journals allow abstracts of 200 or 250 words, and a few journals allow 400 words in the abstract. The format varies from an unstructured abstract

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		with a blank space to a structured abstract with 4-5 subheadings such as Background, Methods, Results, Conclusions. Regardless, abstracts should address each of these points in a concise, detailed manner.
3	Hypothesis and rationale are not evident	A rationale for investigating the studies is essential. Although the hypothesis might not be explicitly stated.
4	Methods section are written in the present tense.	Methods section should describe how the authors had performed the studies and analyses, and thus be written in past tense. Because of the space constraints, Methods section may provide an overview.
5	Results section used undefined terms like "dramatic".	Data should be analyzed with the appropriate statistical programs based on the type of variable. Results section should state whether the data from experimental conditions and controls were significantly different. Results that do not show a significant difference can also be published.
6	Conclusions are not fully supported by the data or literature	The conclusions should be based on the results and discussion sections of the manuscript or poster. Implications of the research should be included.

Activity 5. Find the mistakes in the following abstract. Offer the ways to overcome them.

Example of Abstract

Thesis Title: Elements of an Optimal Experience

This paper presents and assesses a framework for an engineering capstone design program. We explain how student preparation, project selection, and instructor mentorship are the three key elements that must be addressed before the capstone experience is ready for the students. Next, we describe a way to administer and execute the capstone design experience including design workshops and lead engineers. We describe the importance in assessing the capstone design experience and report recent assessment results of our framework. We comment specifically on what students thought were the most important aspects of their experience in engineering capstone design and provide quantitative insight into what parts of the framework are most important.

KEY Critique:

(1) This abstract begins well with a concise statement of the objectives of the paper, but then wanders from good technical writing style from there.

(2) The abstract is written in the first person (e.g. "We explain…", "We discuss…", "We comment…", etc.).

(3) No results are presented. This poorly written abstract describes only the organization of the paper.

Example: "Next, we describe… We comment specifically on what students thought were the most important aspects of their experience in engineering capstone design…"

Instead, the abstract should summarize the actual results and how they were obtained.

Example: "A statistical analysis was performed on answers to survey questions posed to students enrolled in a capstone design course at Georgia Tech. The analysis showed that students thought the most important aspects of their experience in engineering capstone design were quality of the instructor and quantity of student/instructor interaction time."

Activity 6. Read a well-written abstract, discuss what is done up to the point.

Thesis Title: Women Engineers in Kuwait: Perception of Gender Bias

Authors: P.A. Koushi, H.A. Al-Sanad, and A.M. Larkin of Kuwait University

Abstract

The greatest obstacle to the development of policies for the curtailment of gender bias is lack of information on the scope and effects of the problem. This study represents an attempt to quantify attitudes toward gender bias among profession women engineers working in the State of Kuwait. The major findings that emerged were as follows: a) Since 1970, Kuwait has witnessed an enormous growth rate in the participation of women in higher education. b) With respect to the job-related factors of salary scale, professional treatment, responsibility, benefits, and vacation, a clear majority (68%) of the professional Kuwaiti women engineers surveyed expressed a feeling of equality with or even superiority to their male counterparts. c) The one job-related factor in which significant gender bias was found to be in operation was that of promotion to upper management positions. In this criterion, the women engineers surveyed felt "less than equal" to their male colleagues.

KEY This abstract begins with a succinct statement of the problem and the objective of the paper. Overall results are clearly presented.

Activity 7. Create the checklist of common problems in abstract writing. Use the first 4 sections given below. Analyze the abstracts you wrote in Ukrainian or Russian according to this checklist
Checklist

Statement	Tick if this statement is valid to the abstract under analysis (v)
Too long, too much detail	
Repetition of words, phrases or ideas	
Unclear problem definition	
Failure to reveal the complexities of a conclusion or situation	
…	
…	
…	
…	

Lesson 3. Tips How to Write an Abstract
Aim
- to raise students' awareness of how to write an effective abstract;
- to develop students' reading and listening skills;
- to teach students to formulate tips for writing an effective abstract;

Outcomes
As a result of learning on this lesson students should demonstrate the ability to
- identify strengths and weaknesses of the abstract;
- formulate tips for writing an effective abstract;
- use vocabulary of the lesson orally and in writing.

Activity 1. Work in groups and discuss
1. Share your experience of writing abstracts in Ukrainian or Russian if you have any.
2. What piece of advice can you give your peers, who start writing their abstract?

Activity 2. Read the interview. Pay attention to the vocabulary items of the lesson. Do the speakers mention anything you have discussed?

1. tip – порада
2. appropriately – відповідно, належним чином
3. condensed version – стисла версія
4. angle – кут зору
5. purpose – ціль, мета
6. to uncover – розкривати
7. pitfall – пастка
8. to encounter – зустрічати, стикатися
9. to go beyond – виходити за межі
10. to include – включати, вміщувати
11. to prove – доводити
12. to avoid – уникати
13. to analyze – аналізувати
14. footnote – виноска, примітка
15. to tend to do – схилятися до
16. to paraphrase – перефразовувати
17. quotation – цитата
18. acronym – акронім
19. to embark on – починати
20. objective statement – об'єктивне твердження
21. rationale – обґрунтування
22. to engage – залучати
23. to tackle the problem – вирішувати проблему
24. methodology – методологія, методика
25. survey – опитування
26. approach – підхід
27. findings – знахідка, одержані дані
28. overview – огляд, загальне враження
29. to wrap something up – огортати, завершувати
30. concise – короткий, стислий

Interview

Interviewer (I): This week I'm going to talk with Dashia D'Onelly from learning teaching technology Center here in TIT. What we're going to talk about is… writing an abstract. So, at this stage when you've almost finished your dissertation, the last thing you need to do is to put together an abstract, which is going to **appropriately** summarize and explain. May be you'd like to start by telling us what it is that the abstract supposed to do?

Dashia (D): 0:30Certainly. I suppose, really, it is to look at the ingredients of a good abstract…em…some people look at it as a **condensed version** of the paper and, as you've said, it is usually left at the very end…em…but really if you're thinking from that **angle**, the primary **purpose** is to acquaint the reader about what they're going to find, **uncover** in your dissertation. And, there are some common **pitfalls** that students will **encounter** while writing an abstract…em… and may be if I just give a quick commentary of some of these in terms of things to avoid…01:03really…em…01:09so, it's more than just an introduction of your

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topic. Some people sort of start to read it from that angle. But you need **to go beyond** that. Some people would also read it…er…that it's like having a plan for the dissertation. They would **include** certain phrases like 'We hope to prove…' a certain thing…or "This article tried to analyze…' or 'The study seeks to…'. So try to avoid those particular terms or phrases…anyway…er...Other people fall into the pitfall of having a fuss about data in the…the abstract[01:45]…er…an uneatable argument or conclusion. So that isn't the right place for a lot of data to uncover…er…where possible you try to **avoid** having **footnotes** and even quotations in an abstract. Some people **tend to do** that…em…I suppose it 's greater to **paraphrase** rather than have a particular **quotation**. And try not to include abbreviations or symbols, or **acronyms** in an abstract because they have a better home in the introduction of your…your dissertation. So, to avoid all those, really, there's ..er..been lots of work done in terms of what you want..sentences…of what an abstract should be…em…so you would start off your abstract with a sentence of what you **embarked on** in this project…em…it could be that you research a gap in the literature or persistent problem.

I.: It's very important just when you use phrases 'Why did you embark on this?' and it's not 'Why did you do the study?' because…it has to be from the literature, hasn't it?

D.: Yes, an **objective statement**. You're absolutely right. And they're taking the instance of including absolutely clear sentence of **rationale**…why this is important. Why other people should sit up and take notes and read it. Because for a lot of people the abstract may be the first call, why they look at the dissertation.

I.: And it's also sometimes it isn't that the decision of whether I'm going to read further or not is whether

D.: Absolutely…

I.: whether abstract looks like anything interesting in this. So, that's very important.

D.: [3:20]Similarly, you know…in the introduction you need something **to engage** the reader straightaway. So, it could be a very intriguing statement or right a problem that you're trying **to tackle**…em..you're really talking what your project is about and want it to arise…em…topic of your whole area…then you go into why, you know, that's the why, sorry, and then you're going to highlight in terms of you actually tackled this project or study… em…and really tha't an essence or statement of your **methodology**.

I.: And again…it's short, isn't it Dashia?

D.: Yes…

I.: When you're talking about, you know, you're not gonna to justify the methods you take, what details are, how many people you interviewed in a **survey**, it is just…

D.: One or two sentences about methodology. It could be a key study, a key action research study, you're just informing reader of the **approach** you took…and to your study..and then you're going one to two sentences on your **findings** and again as you've said earlier it's not the fuss of data but it's just a very quick synopsis or an **overview**…or if you want a better word…of what your project uncovered[4:26]…em…and then you're moving towards the end of your abstract, at this point one to two sentences on any conclusions that you're going to draw from those findings…er…an essence – another word for that is your argument…was the key argument to culminate your dissertation. And some people like to end with one or two sentences on some recommendations either for practice or for policy and **wrap it up** at that point. So it really is a fairly clear, **concise** and, as you've said, not deep into lots of depth, it's just an overview and something to draw the reader to your dissertation.

Activity 1. Read the terms in the box. Find them in the text and translate the sentences with these words.

introduction	topic	angle	go beyond	dissertation	prove
analyze		avoid		pitfall	data

Activity 2. Reread the text from 3:20-4:26 and write T (true) or F (false) next to each statement.
1. In the introduction you need to engage the reader.
2. You needn't pay attention to the issue why you tackled this exact problem.
3. The abstract has to be as long as the thesis or dissertation itself.
4. In the abstract the author isn't supposed to justify the methods he took, or specify how many people he interviewed in a survey.
5. In the abstract the author is just informing the reader of the approach he took.

Activity 3. Discuss the questions
1. What is the abstract supposed to do?
2. What is the primary purpose of the abstract?

3. What should the author avoid while writing an abstract?
4. Is abstract a right place to uncover a lot of data? Why?
5. What exact pronoun should the author use in the abstract?
6. What is rationale? What is it aimed at?
7. How is it important to include the detailed results of the surveys, interviews or experiments into the abstract?
8. How many sentences should be devoted to the research findings?
9. What should be drawn from the findings?
10. Give adjectives the speaker uses to characterize an abstract (e.g. short, concise…)
11. What should the abstract be wrapped up with?

Activity 4. Individually or in groups write down tips on how to write an abstract. Present your tips to the whole class.

Tips on how to write an abstract

✓ _____

✓ _____

✓ _____

✓ _____

✓ _____

Lessons 4-5. Types of Abstracts

Aim

- to raise students' awareness of the abstract structure and types of the abstracts;
- to enable students to formulate the heading of their Master's thesis abstract in English;
- to practice vocabulary of the lesson.

Outcomes

As a result of learning on this lesson students should demonstrate the ability to

- structure the abstract and identify the key words;
- use appropriate language according to the stage of the abstract;
- use capitalization in the heading and subheadings wherever it is necessary;
- formulate the heading of their Master's thesis abstract in English;
- use vocabulary of the lesson orally and in writing.

Activity 1. Use capitals in the abstract headings wherever it is necessary.

1. description of the grant applicant institution's study and research facilities.
2. investigation of existing wireless and mobile communication systems
3. needs and constraints in british higher education related to the improvement of the quality of student support services.
4. the way exercises are used in physics teaching
5. communication and media competence among children and juveniles in early learning support and in class
6. problems and needs at the partner country's universities
7. development of the project idea and preparation of the project proposal
8. presentation and explanation of the research framework concept and the connections to the research profile of the university and the participating faculties
9. list of planned measures to be financed by dfg funds

Activity 2. Read the sample abstract of Master's Thesis, identify the keywords, and then compare them with the author's choice of the keywords.

Sample abstract

Greg Bond, Business and Law, University of Applied Sciences Wildau Abstract of Master's Thesis, Submitted 29 February 2009:

Writing Abstracts in English for Bachelor's and Master's Theses at the UAS Wildau

The aim of this thesis is to investigate and identify the present status of abstract writing in English for bachelor's and master's theses at the UAS Wildau, and to make recommendations for students who are required to produce abstracts in English.

In the first part, results of a short empirical survey of the university faculties and degree programs are presented. These show that there is growing demand for student abstracts in English, but at present students receive very little guidance in this matter.

The thesis then identifies the uses of an English abstract, and further outlines the structure of an abstract. In a detailed central section the thesis provides students with useful practical tips on the language of abstracts, including rules for creating headings and titles, and giving lists of phrases

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and vocabulary that are commonly used in abstracts. Here, the thesis draws on a number of sources from other universities and books on academic writing in English.

In conclusion, the thesis argues that abstract writing in English is essential but that students should not be expected to be able to write good abstracts without assistance. This thesis hopes to offer all UAS Wildau students useful tips on writing abstracts in English, and thus make a small contribution to improving the general standard of bachelor's and master's theses.

Keywords: abstract writing, empirical survey, structure of an abstract, practical tips, headings and titles, assistance.

Activity 3. Differentiate the sample abstract language according to the stage it is used at

Abstract stages		
Introduction (usually in present, could also be in present perfect or simple past tense)	**Materials and Methods (in past tense):**	**Conclusions (in simple present or past tense):**
❖ The purpose of this study is to investigate the effects of ... on ... ❖ The goals of this study are to determine … ❖ This study is an initial attempt to investigate the relationship … ❖ The aim of this study is to identify the characteristics of … ❖ The major objective of this study is to … ❖ This thesis discusses/describes/analyses/studies/focuses on/deals with … ❖ This study/experiment/research/survey was aimed at developing/improving/testing … ❖ The project was designed to …	❖ This study was conducted at North Karelia Polytechnic. ❖ The empirical part of this study was conducted in May 2000. ❖ Data for this study/research were collected/gathered/obtained from/by/through/with the help of/among … ❖ The subjects were randomly selected. ❖ Six groups, each consisting of …, were formed to … ❖ Using local and national data, this study was designed to investigate. ❖ A questionnaire was distributed/mailed/sent to … ❖ Respondents filled in a form/indicated their preferences/rated each item…	❖ These results suggest that … ❖ The results show that/reveal … ❖ It was concluded that … ❖ This study/survey shows/supports/questions/implies/indicates … ❖ On the basis of the results of this research, it can be concluded that … ❖ The results provide some support for …(ing)… ❖ The results did not support the expectations that … ❖ These data support the view that …

Activity 4. Read the text and answer the following questions

1. What are the main types of the abstract? What do they have in common and how do they differ from each other?
2. How is an abstract different from an introduction?

Types of Abstracts

There are two main types of abstracts: Descriptive and Informative. **Descriptive** abstracts are generally used for humanities and social science papers or psychology essays. This type of abstract is usually very short (50-100 words). Most descriptive abstracts have certain key parts in common. They are: background; purpose; particular interest/focus of paper; overview of contents (not always included). As for the **Informative** abstracts, they are generally used for science, engineering or psychology reports. You must get the essence of what your report is about, usually in about 200 words. Most informative abstracts also have key parts in common. Each of these parts might consist of 1-2 sentences. The parts include: background; aim or purpose of research; method used; findings/results; conclusion.

The table below summarises the main features of, as well as the differences between, the two types of abstracts discussed above. In both types of abstract, your lecturer/tutor may require other specific information to be included. Always follow your lecturer/tutor's instructions.

Descriptive abstract	Informative abstract
Describes the major points of the project to the reader.	Informs the audience of all essential points of the paper.
Includes the background, purpose and focus of the paper or article, but never the methods, results and conclusions, if it is a research paper.	Briefly summarises the background, purpose, focus, methods, results, findings and conclusions of the full-length paper.
Is most likely used for humanities and social science papers or psychology essays.	Is concise, usually 10% of the original paper length, often just one paragraph.
	Is most likely used for sciences, engineering or psychology reports.

How is an abstract different from an introduction?

Students are sometimes confused about the difference between an abstract and an introduction. In fact, they are different pieces of writing with different aims and key parts. The following table will briefly describe these differences in the case of a research paper.

Abstract	Introduction
The essence of the whole paper covers the following academic elements:	Introduces the paper. Covers the following academic elements:
•background	•background
•purpose and focus	•purpose
•methods	•proposition (also called 'point of view' or 'thesis' statement)
•results (also called 'findings')	
•conclusions	•outline of key issues
•recommendations (or 'implications', not always relevant)	•scope (not always relevant)
Summarises briefly the whole paper including the conclusions.	Introduces the paper and foregrounds issues for discussion.

(Taken from www.adelaide.edu.au)

Activity 5. Here is the abstract for the Humanities paper. Match the key stages on the left with the abstract parts on the right. Identify the type of the abstract

Abstract (Stevenson, 2004)

The opportunity to design and deliver short programs on referencing and avoiding plagiarism for transnational UniSA students has confirmed the necessity of combating both the 'all-plagiarism-is-cheating' reaction and the 'just-give-them-a-referencing-guide' response.

The notion of referencing is but the

Key Parts
background (introduction)

materials and methods

tip of a particularly large and intricate iceberg. Consequently, teaching referencing is not adequate in educating students to avoid plagiarism.

In this presentation, I will use the transnational teaching experience to highlight what educating to avoid plagiarism entails.

particular focus of paper (conclusions)

Activity 6. Read the parts of the abstract, put them into the logical order, identify the stages, emphasize common phrases used in the abstract, choose the keywords.

George Micajah Phillips, 2011

"Seeing Subjects: Recognition, Identity, and Visual Cultures in Literary Modernism"

Abstract:

Stage №	Text of the abstract	Common phrases
1	"Seeing Subjects plots a literary history of modern Britain that begins with Dorian Gray obsessively inspecting his portrait's changes and ends in Virginia Woolf's visit to the cinema where she found audiences to be "savages watching the pictures."	
2	Focusing on how literature in the late-19th and 20th centuries regarded images as possessing a shaping force over how identities are understood and performed, I argue that modernists in Britain felt mediated images were altering, rather than merely representing, British identity.	
3	As Britain's economy expanded to unprecedented imperial reach and global influence, new visual technologies also made it possible to render images culled from across the British world – from its furthest colonies to darkest London – to the small island nation, deeply and irrevocably complicating British identity. In response, Oscar Wilde, Joseph Conrad, T. S. Eliot, and others sought to better understand how identity was recognized, particularly visually.	
4	By exploring how painting, photography, colonial exhibitions, and cinema sought to manage visual representations of identity, these modernists found that recognition began by acknowledging the familiar but also went further to acknowledge what was strange and new as well.	

5	Reading recognition and misrecognition as crucial features of modernist texts, Seeing Subjects argues for a new understanding of how modernism's formal experimentation came to be and for how it calls for responses from readers today."	
Key words:		

Activity 7. Formulate the heading of your Master thesis abstract, give 5-6 phrases of your future abstract according to a stage, choose the keywords

Heading _____

Stage	Phrases used
Introduction	✓
Materials and methods	✓
	✓
Conclusions	✓
	✓
Keywords:	

Activity Write the abstract of your Master's thesis, think about what it has to contain, the following specific questions might help you:

1. What was done?
2. Why was it done?
3. How was it done?
4. What was found?
5. What is the significance of the findings?

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APPENDIX
SCIENTIFIC ARTICLES

By Cathy J. Pearman and Ching-Wen Chang

The International Society for Technology in Education (ISTE) recommends students demonstrate an understanding of the nature and operation of technology. Students should use technology during their school years. Technology is used in classrooms across America to engage students and to provide access to learning experiences. This is due in part to the transition from "traditional, print-based to electronic representations of text" (McKenna, 1999, p. 111).

These changes are not limited to middle school and high school classrooms. The National Educational Technology Standards (NETS) Project (2007) provides standards that list what students should be able to do with technology. The recommendation for beginning readers is that students should use developmentally appropriate multimedia resources to support learning. Interactive, electronic texts are one way teachers can help beginning readers advance in their reading program. Formats of electronic texts vary. Formats range from simply displaying text on a computer screen to the inclusion of features within the text that allow readers to become actively involved in the story.

CD-ROM storybooks, often referred to as electronic texts, e-books, and interactive stories, have features which support beginning and struggling readers. For example, most CD-ROM storybooks have an automatic read feature and many have audio and graphic animations where book characters talk and settings come alive.

Automatic or Selected Word/Phrase Reading

CD-ROM storybooks allow the entire story to be read aloud automatically. In much the same manner as a person-to-person read-aloud, this computer simulated read-aloud experience provides a reading model for beginning readers. Young readers hear the way the story is supposed to sound.

Audio and Graphic Animations

Most CD-ROM storybooks contain sound effects and graphic animations that can be distinguished as supplemental or incidental. Supplemental graphics and audio effects support understanding, promote the storyline, set the story tone, and prompt readers to focus on events. Audio features aid understanding by signaling the mood of the story and by cueing readers when an important event is going to occur. Audio and graphic animations also support new words' memorizing.

Incidental animations and audio effects are those which do not

advance the story line. Examples of these types of effects are a bird flying across the sky, a flower dancing in the garden, the sun moving in and out from behind a cloud, or a bicycle bell jingling. Trushell, et al., (2003) propose that these animations distract the readers by taking their attention away from the text.

Hotspots(hotspot - активный участок**) and Games**

Many CD-ROM storybooks contain additional animations, sounds, or games. As mentioned earlier, some of them are supplemental and allow readers to choose to hear words or view animations. Others are incidental and do not add to the story line or aid in understanding. Often they are hidden. For example, a wolf that appears from its hiding place. Lewis and Ashton (1999) found that readers taking part in Project Instruction Through Technology spent approximately 65% of their time activating cues and playing games rather than reading.

Learner Control

Reinking and Schreiner (1985) believe the degree of reader control found in CD-ROM storybooks is beneficial to young readers. Readers are able to point out words and phrases they self-select by clicking. Furthermore, assistance can be requested repeatedly for the same words without the computer becoming impatient.

Nonetheless, beginning readers still need a teacher's help. Computers only offer assistance upon reader request. They do not voluntarily offer assistance as would a teacher or parent.

Instructional Implications

As with any instructional technology, the teacher must have a thorough understanding of the technology itself in order to maximize its potential in the classroom. Thus, familiarity with the above advantages and disadvantages of interactive CD-ROM storybooks is necessary for educators planning and designing instruction for young readers. The results of the lesson will determine whether CD-ROM storybooks are a good choice.

While CD-ROM storybooks work very well for independent use in home reading, teachers can make them part of their regular classroom instruction. Teachers can project the story on a large screen or SMART-Board TM and read together with the class.

Conclusion

Electronic, interactive texts in the form of CD-ROM storybooks have features that support vocabulary growth, fluency, and understanding in young readers. Audio effects help set the mood and tone of the story and can signal about important events for a young reader. Along with these supplemental features, the ability to self-select new words increases reader

control.

However, games which take readers away from the text during the actual reading event may distract them from retaining the story. Games, even those which are academic in nature, should be in a separate mode for readers to utilize either before or after reading.

The features of CD-ROM storybooks provide valuable support for young readers. Combined with reading strategies instruction, CD-ROM storybooks are effective means to assist in reading development.

Using video to analyze one's own teaching
by Tonya Tripp and Peter Rich

Recently, interest in using video to facilitate teacher reflection[1] has increased. Despite this increase, there is a need to better understand how and in what ways video has been used to reflect on one's own teaching.

The following is a summary of the reported findings[2] for the varying aspects of video analysis which include: (1) type of reflection tasks, (2) the guiding or facilitation of reflection, (3) individual and collaborative[3] reflection, (4) video length, (5) number of reflections and (6) ways of measuring reflection.

There are a variety of *reflection tasks* that teachers can engage in during the video analysis process. These tasks included completing codes or checklists, participating in interviews or conferences, writing reflections and video editing. Using checklists to reflect on teaching videos helped teachers to notice specific behaviors and to gain insights into their teaching. Teachers' written reflections included notes, essays, questionnaire responses[4] and journal writings. These studies allowed teachers to recognize things they did not notice when they reflected from memory. Also teachers were asked to discuss their teaching videos during an interview (video conference) with researchers, supervisors or in a discussion group. The use of video provided a common frame of reference on which the discussions were based.

The majority of studies reported[5] that reflection tasks were valuable for facilitating reflection because they helped teachers to literally see their teaching from a different perspective, noticing that which they had previously either disbelieved or ignored altogether. When given the

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[1] to facilitate teacher reflection – сприяти рефлексії вчителя

[2] summary of the reported findings – стислий виклад результатів

[3] collaborative – спільний

[4] questionnaire responses – відповіді на анкету

[5] to report – доповідати

opportunity, teachers preferred conferences over other reflection tasks.

Research on reflection has established the importance of using some sort of *guiding framework*[1] (reflection questions, rubrics, checklists or category codes) whereby teachers see particular aspects of their teaching more clearly.

Teachers have *reflected* on their videos *individually, collaboratively, or individually and then collaboratively*. They preferred discussing their reflections with others over reflecting individually on their videos. This was especially prominent in preservice teachers[2], who reportedly trusted others' opinions more than their own. Teachers felt like the recommendations made during the video conferences were the most important factor in the changes they made.

The *length of the videos* used for reflection varied from 3-minute clips of a lesson to an entire teaching episode. The majority of studies asked teachers to view their videos one to three times. Although the length of video and the number of times teachers reflected on varied, studies did not show how these characteristics impacted teachers' reflections.

To *measure reflection* the researchers used reflection comments, changes in teachers' practices, self-assessments of reflection ability[3], perceptions of the effectiveness of using video to facilitate reflection, scores on pre- and posttests of teaching skills, and accuracy of video coding[4]. Video influenced what teachers noticed or focused on during their reflection. All of them made changes or improved their teaching practices after using video to reflect on their teaching. Teachers in Warden (2004) assessed their ability to reflect by completing a teacher profile at the beginning and end of the project. Twelve of the 13 teachers reported an improved perception of their reflective thinking skills and that the process of video editing was helpful.

Cell Phones in the Classroom: Are We Dialing up Disaster?
By George Engel and Tim Green

Though cell phone use began as a business tool, it has now become part of popular culture. Because of the near ubiquitous presence[5] of cell phone technology among teens in the United States, schools are beginning

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[1] guiding framework – скеровуючи основа
[2] preservice teacher – майбутній вчитель
[3] self-assessment of reflection ability – самооцінка здатності до рефлексії
[4] accuracy of video coding – точність кодування відео
[5] ubiquitous presence – розповсюдження

to explore the use of cell phones as a learning tool[1].

The use of cell phones in the classroom has been a mutual interest for us for the past several years. We decided to conduct a pilot use[2] of cell phones in a classroom of one of the authors to determine what could be learned from this process.

The pilot was conducted in a pre-calculus course[3] at Clarkstown High School South in West Nyack, NY. The student population was eighteen junior and senior students. There was an even mix of male and female students. All but one of the students owned a cell phone. This student used a classroom iPod Touch with SMS text capability for classroom activities.

We were able to present information about projects and other activities the students would do using their cell phones. The building principal agreed to send a letter home seeking permission from parents on the use of their children's phones in the classroom. We allowed the students to set the rules for the proper use of the cell phone in the classroom. They established a few simple rules: (a) students should only use SMS texts for class work, (b) texts should be respectful and relevant to the discussion, and (c) cell phones should only be visible when needed to complete classroom activities.

The students used cell phones: 1) as an audience response system (ARS)[4], 2) as a research tool, and 3) as a tool for making photographs and video recordings.

An ARS is an electronic tool that can pool students on a topic and give instantaneous feedback[5] to the students. The ARS allows a teacher to address immediately areas of learning where students show difficulties. Students used their phones to answer questions at the beginning and at the end of class as a closure activity.

After students became comfortable using their phones as an ARS, we introduced a new activity where students used the cell phone as a research tool. The use of the cell phone enabled the students to become active participants in their learning by using the Internet to search for background information[6]. After several weeks of using the cell phones as an ARS and for researching various topics, the last activity involved the use of the devices as cameras with Flickr and a class wiki. The purpose of using

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[1] a learning tool – засоби навчання

[2] a pilot use – експериментальне використання

[3] a pre-calculus course – курс попереджувального обчислення

[4] an audience response system – система, яка відображає реакцію аудиторії

[5] an instantaneous feedback – миттєвий зворотній зв'язок

[6] background information – довідкова інформація

these tools was to give students the opportunity to share and reflect on what they had learned during the unit. The students used their cell phones (digital cameras) to take pictures of their work and other related items and reflected on it directly on the wiki.

There was an observable rise in class participation when cell phones were used in the class. Students felt they were able to make a contribution to the class using their phones either to comment on the lesson, to answer questions, or to do research to help the lesson continue. Students also showed greater understanding of concepts by the quality of the various types of assessments in which they participated. They were able to prove their understanding of topics through their wiki projects and on class tests. Students learned to reflect on their work, writing about what they learned in a given task, and what they could have done better. Student and parental reactions remained positive throughout the pilot. We plan to expand this program. Additional instructional activities will be used with the cell phones to take advantage of the cell phone capabilities.

"Benefits of Service-learning for Freshmen College Students and Elementary School Children"

by Marion A. Eppler, Marcha Ironsmith, Stephanie H. Dingle, and Marissa A. Errickson

Service-learning is a "course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility" (Bringle & Hatcher, 1995, p. 112). Service-learning students report greater interest in interacting with culturally different and diverse people (Simons & Cleary, 2006) and increased commitment to future community service (Astin & Sax, 1998). In fact, involvement in volunteer activities during the senior year of college predicted involvement in community service nine years after graduation (Astin, Sax, & Avalos, 1999).

Study 1 focused on benefits of service-learning for the college students. We compared service-learning students to a similar group of freshman undergraduates not involved in service-learning. Both groups completed surveys at the beginning and end of their first semester assessing frequency of volunteer service, motivation for volunteering, and racism. Study 2 examined benefits for the service recipients, with emphasis on assessing the relationship between amount of tutoring received and reading achievement. We obtained the elementary school children's

reading achievement scores at the beginning and middle of the school year (comparable time to the college students' first semester). We also assessed changes in the children's achievement motivation.

A pool of 150 students attended a session in which they completed the survey. They were tested at the beginning and at the end of the semester. We compared changes in the responses of students who were required to participate in service-learning activities to those of the comparison students.

The service-learning students, who received no special training, tutored their assigned children about once a week. Teachers at a rural, low-income elementary school chose 28 children they thought were most in need of extra assistance, and each child was paired with a tutor. Most children (78%) were Hispanic English Language Learners, and 22% were African American. Achievement motivation was assessed at the beginning and middle of the school year. Each child completed an easy puzzle (8 pieces) with ample time to finish, followed by a difficult puzzle (24 pieces) with inadequate time to finish (4 min). To measure persistence and response to challenge, the children chose between working on a new puzzle like the current difficult one or like the first easy one.

Our findings, in contrast, showed the most reliable effects for personal outcomes. For first-year undergraduate students, understanding the self is an important developmental task. At a time of life when community service declines, service-learning appears to be a valuable way to help students adjust to college, adapt to social expectations, define career goals, and develop their identity.

Benefits for the children were less clear. Past studies have shown positive effects for children tutored by college students trained to use a structured reading curriculum. We also found benefits even when the college students had no special training or curriculum to follow and simply read with the children.

"Aerobic Fitness Exercises Associated with Fifth Grade Academic Achievement"

By Richard Wittberg, Lesley A. Cottrell, Catherine L. Davis, and Karen L/ Northrup

Daily physical education enrollment rates declined in the early 1990s and have not improved since that time. Only 35% of high school students report meeting nationally recommended levels of physical activity.

Previous research suggests that improving students' fitness levels through regular, vigorous activity improves academic achievement. Yet, we do not fully understand the best way to help students achieve aerobic

fitness. Furthermore, we do not know if the best practice for achieving enough fitness to witness elevations in academic progress is the same for boys and girls.

In our research standardized academic test scores[1] and aerobic capacity[2] scores were collected from two cohorts of 5th grade students over two years. Participants were 5th grade students from one country school district in a relatively rural area of West Virginia. West Virginia standardized academic test scores (WESTEST) and aerobic capacity, as measured by FITNESSGRAM, were collected on each child.

FITNESSGRAM is used to assess a child's fitness in six areas: aerobic capacity, abdominal strength and endurance[3], body composition[4], upper body strength and endurance, flexibility and trunk extensor strength and flexibility.

For this study, actual scores were collected for each child's FITNESSGRAM aerobic capacity test. Aerobic capacity was measured one of two ways: The Mile run or the Pacer. The Mile run was the time it took for the child to run or walk one mile. With the Pacer test, the student is expected to run back and forth across a 20- meter space at a pace defined on a beep-only or music audiotape and which gets faster each minute. The student is stopped when he/ she does not reach the line the second time before the beep. The score for the Pacer was the number of circuits the child was able to complete.

The research indicates that a significant positive relationship exists between physical fitness and cognitive function in children. If a fifth grade boy can complete the Mile run in 9 minutes or less and if a girl can score around a 30 on the Pacer, they have a higher probability of doing better academically. The significance of this opportunity may be more powerful for those students who are not fit but can become fit over time and, thus, increase the opportunity for improvements in their academic achievement. No matter a child's gender, socio-economic status, or perhaps even home conditions or IQ, if he/she can increase aerobic fitness, his/her academic progress may improve. Academically at-risk students who attended Zero Hour PE at Naperville Central High School (Illinois) showed improvement in reading and comprehension beyond that of other literacy students who did not attend the before-school PE class.

In addition, health instruction and opportunities to learn and practice

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[1] academic test score – тестова оцінка навчальних досягнень
[2] aerobic capacity – аербна здатність
[3] abdominal strength and endurance – сила черевного пресу та витривалість
[4] body composition – композиція тіла

healthy lifestyle behaviors are considered health education curriculum. A certified physical education teacher has the skills to develop fun age- and developmentally- appropriate programming across the school day to assist students at any level of fitness to improve their aerobic capacity. School physical education can be a significant avenue of opportunity to increase moderate to vigorous physical activity in students and improve aerobic fitness levels. Leadership from school wellness councils and administrators can support translation of physical education/activity initiatives into sustainable policy-supported programming. Policies that increase aerobic activity opportunities in school settings may also increase overall academic achievement, encourage positive health habits, and improve immediate and future overall health.

"Teaching for Tolerance of Diverse Beliefs"
by P.G. Avery, J.L. Sullivan, S.L. Wood

For almost 10 years, we have been studying political tolerance among adolescents. In collaboration with a small group of secondary teachers, we developed and tested a secondary curriculum designed to help young people explore issues related to tolerance.

In this article, we describe our work, beginning with our conception of political tolerance. We note, along with many others, that the traditional civics curriculum does little to promote tolerance. Our interviews with students support our contention[1] that people are not naturally tolerant; that is, tolerance for diverse beliefs must be learned. We describe the development and testing of the curriculum, and conclude by sharing our reflections on the need for educators to foster greater tolerance among young people.

The Curriculum

The four-week curriculum is composed of eight lessons, each of which can stand independently but are ideally taught as a unit, such that each lesson lays the conceptual foundation for subsequent lessons. Each lesson centers on a particular question or questions: 1. Victims of intolerance. 2. Intolerance – from whence it comes. 3. Basic human rights. 4. Censorship[2] issues. 5. Case studies. 6. International rights and responsibilities. 7. Beliefs and believers. 8. Taking action to increase understanding of rights of expression. Through an active exploration of the questions posed in the curriculum, students gradually come to understand the historical, psychological, and sociological dimensions of tolerance.

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[1] contention – твердження, точка зору

[2] censorship – цензура

The research suggests further that when people understand how the abstract principles of freedom of speech and minority rights are embedded in a system of legal protections and rights, they are more likely to acknowledge the civil liberties of unpopular groups. Throughout the curriculum, students systematically examine the ways in which the legal and constitutional framework of the US society directly embodies the norms of freedom of speech and minority rights.

The curriculum is characterized by a strong emphasis on active learning. Through a variety of active learning strategies, students explore the many dimensions of tolerance and intolerance. The curriculum also draws on the teacher's ability to show that conflict and disagreement must be accepted rather than avoided or ignored. Role play, simulations, structured discussions, journaling, and interviews are some of the teaching strategies used throughout the curriculum.

Developing Tolerance Among Adolescents

Our work with young people suggests that tolerance for diversity of beliefs can be taught. Although we have described a specific curriculum here, we suggest that certain teaching practices - those that address specific issues and groups, make explicit connections between minority rights and democratic ideals. Such teaching practices bring conflict into the classroom within a democratic framework. By teaching students to acknowledge the rights of others to hold opposing (and some-times highly offensive) viewpoints, we lay the foundation for conflict resolution.

"Humans Sacrificed Brawn for Brains, Study Suggests"

By Charles Q. Choi, Live Science Contributor | May 27, 2014 06:13pm ET
Article source - http://www.livescience.com/45910-humans-sacrificed-brawnfor-brains.html

Humans may be smart because energy once devoted to brawn was given up for brains, researchers say. The most powerful computer known is the brain. The human brain possesses about 100 billion neurons with about 1 quadrillion - 1 million billion – connections known as synapses wiring these cells together. Humans possess more complex, powerful brains than humanity's closest living relatives, such as monkeys and apes. One reason behind this jump in brainpower may lie in how much of the human metabolism is devoted to the human brain – it consumes a whopping 20 percent of the body's total energy.

How the brain evolved

To gain insights into how the human brain evolved, scientists compared the metabolisms of humans and animals such as *chimpanzees*, mice and rhesus monkeys. They focused on how much energy each

species devoted to the brain and body. The researchers analyzed more than 10,000 compounds known as metabolites, which are small molecules formed by, or necessary to, metabolism, such as sugars and fats; the building blocks of proteins, DNA and cell membranes; and chemical signals given off by cells. They investigated metabolite levels in the kidney, thigh muscle and three brain regions – the primary visual cortex, which is involved in vision; the cerebellar cortex, which helps coordinate muscular activity; and the prefrontal cortex, which plays a major role in complex mental behavior, decision making and social behavior.

The investigators next compared how much the metabolisms of these animals differed with how far apart these species are evolutionarily. By analyzing human and other genomes, prior studies revealed when the ancestors of humans and other animals diverged. For instance, the ancestors of humans diverged about 75 million years ago, while divergence happened about 25 million years ago with the ancestors of rhesus monkeys and about 6 million years ago with the ancestors of chimpanzees.

For the most part, the scientists found the levels of differences between the metabolisms of these species matched how far apart they were evolutionarily. (The further apart evolutionarily, the greater the metabolism differences were.) However, they discovered the rate of change in the metabolism of the human prefrontal cortex was about four times faster than that of chimpanzees. Even more surprisingly, the rate of change in the metabolism of human muscle was more than eight times faster that that of the chimpanzee.

Humans vs. chimps

To rule out the possibility that these changes simply reflected the modern human couch potato lifestyle, the scientists performed additional experiments on rhesus monkeys, moving them from a spacious countryside facility to small indoor homes and serving them fatty and sugary food for several weeks, all to imitate the environment and behavior of contemporary humans. These lifestyle changes had only a small effect on the metabolisms of the monkeys' muscles. "For a long time we were confused by metabolic changes *in human muscle*, until we realized that what other primates have in common, in contrast to humans, is their enormous muscle strength," said lead author Katarzyna Bozek, of the Chinese Academy of Sciences' Key Laboratory of Computational Biology in Shanghai.

Chimps are far stronger than humans. Kevin Hunt, director of the Human Origins and Primate Evolution Lab at Indiana University, once told of watching an 85-pound (38.5 kilograms) female chimp in Africa snap branches off a tree with her fingertips, one that took Hunt two hands and all his strength to break. To see just how much stronger chimps are than

humans, the researchers conducted muscle strength tests that involved pulling weights upward. All of the human volunteers in the experiment – who included professional athletes – were outcompeted by their primate opponents by more than twofold. "According to our results, an average adult chimpanzee is approximately two to three times stronger than an average adult human," Khaitovich told Live Science.

The fact that metabolic changes in human muscle are paralleled by a drastic reduction in muscle strength leads the researchers to hint that human ancestors may have swapped brains for brawn.

"Brace (пристрій) for Record Heat as El Nino Approaches"
By Becky Oskin, Senior Writer | June 02, 2014 04:43pm ET
Article source http://www.livescience.com/46049-el-nino-record-hottemperatures.html

A massive oceanic heat wave is rolling toward the eastern Pacific Ocean right now, a telltale signal of a brewing El Nino. An El Nino is a natural climate cycle marked by warmer than-average temperatures in the waters of the equatorial Pacific Ocean. Forecasters won't make their final call until later this summer, but all signs point to an El Nino this year, perhaps one as powerful as what occurred in 1982 or 1997. But even a weak El Nino could hike global temperatures to record levels, scientists think.

"If we have the El Nino that most are predicting, I think there's a good chance that it'll end up breaking the global temperature record set in 2010," said Andrew Dessler, a climate scientist at Texas A&M University in College Station.

That's because Earth's temperature is already rising, so any year with a boost from El Nino could easily break records. [How El Nino Causes Wild Weather All Over the Globe.

The warmest years in the past decade, 2005 and 2010, followed weak El Nino years, according to NASA temperature records.

This year's predicted El Nino could increase global surface temperatures by 0.18 to 0.36 degrees Fahrenheit (0.1 to 0.2 degrees Celsius), depending on the intensity of the event, said Wenju Cai, a climate scientist at CSIRO Marine and Atmospheric Research, a government research organization in Aspendale, Australia.

When an El Nino occurs, the equatorial eastern Pacific Ocean experiences several months of higher-than-average sea-surface temperatures. Since 1950, years during or just after an El Nino were hotter than average because this surface ocean warming adds to the planet's overall temperature, according to NASA records.

Chart of the temperature anomalies for 1950 to 2013, also showing the

phase of the El Nino-La Nina cycle.

Here's how it works: An El Nino pumps up heat from deeper ocean layers to the surface. Then, some of the ocean's resulting surface heat is released to the atmosphere, warming the air.

Most of this stored ocean heat comes from sunlight, but the release adds to the overall rise in temperatures caused by global warming, Cai said. "There's no doubt the underlying trend is caused by greenhouse warming," he said.

However, the record-setting temperature record may not occur until 2015. The fever from El Nino tends to lag a few months behind the start of the associated climate event, so the heat may not hit next year. During the 1997 El Nino, the Pacific Ocean heating kicked off in May 1997, but global temperatures peaked in 1998, at four times above average.

"Usually, the increase occurs more toward the latter part of the El Nino, when there is a mini-global warming," said Kevin Trenberth, a climate scientist at the National Center for Atmospheric Research in Boulder, Colorado.

"Benefits Of Face-To-Face Online Learning"
By Natasha Burke

Online learning has been established to be one of the best ways to get an education. Online learning occurs when knowledge or educational materials are obtained from the internet. We have all had interaction with face-to-face learning in the traditional classroom setting. We seem to be most comfortable with these forms of settings and seem to learn most by taking part in them. If you love the flexibility of online learning, but still treasure the effectiveness of face-to-face learning, you are probably wondering if the two can be blended together to form a teaching method that is both flexible and effective. Blended learning or face-to-face online learning is the process of combining traditional classroom setting learning and online learning.

In a traditional classroom setting, students and instructors face each other, face-to-face. The instructor tells the students what to do and the students follow. In some instances, the instructor might write something on the board and the students could write it down if they need to. On the other hand, online learning does not usually require the instructor and the student to even be online at the same time. At times the instructor might only be required to mail instructional material to the student. However, today, it is being demanded that these two education settings should be united. Advancement in technology is increasingly making it possible for an online

face-to-face to become a reality.

Video chats between instructors and students are the closest thing to make face-to-face online teaching a reality. It allows instructors to speak directly to their students without having to rely on things like DVDs and VHS tapes. Some of the video chatting systems used by online tutors today include Skype, Microsoft NetMeeting, webcams and Adobe Connect among others. Research has shown that students are able to better concentrate when they can see their instructor, as opposed to when they only hear them via voice recordings or email or chat. Video teaching is a promising instructional material.

There are so many advantages presented by face-to-face online learning, which is why it is becoming a trend today. Below are some of its advantages:

– Instructors present a sense of leadership; providing an opportunity to the students to closely follow their instructors as part of the overall training.

– Students are more involved in the classroom discussions, since they can be picked upon by their instructors to participate at any time.

– Students and instructors are usually able to give immediate feedback.

When students have questions, they can ask the instructors and get answers in the same session. Therefore, no questions are left unanswered or lingering.

– Great attention is paid to the work of each student, since the instructor is able to both chat with the students and look at what they are working on. This is true for websites that allow for active online participation.

There are so many benefits to this online learning method and it poses a great opportunity for those opting this type of learning. Online training not only offers freedom of time and choice but also enhances once decision making capacity as the final choice to take up such an opportunity lies solely with the student.

Article Source: http://EzineArticles.com/?expert=Natasha_Burke

"Volunteering for Happiness and Health"
by Sara Fernandez and Ray James

Why Do People Volunteer?

Being happy plays an important role in health and many people find happiness in volunteering. Dr. Albert Schweitzer once said: 'the only ones among you who will be really happy are those who will have sought and

found how to serve'. A study done by Argyle in 1996 identified volunteering as the second greatest source of joy. Dancing was first.

Many people worldwide participate in volunteer work. In America, more young people volunteer than vote, and in Australia, approximately 4.4 million people contribute around 701 million hours of their time per year in volunteering.2 (In W.A. alone, surf life saving volunteers spend about 60,000 hours patrolling beaches each year). Volunteering is estimated to be worth more then $10 billion to the Australian economy.

Reasons people decide to volunteer include:
- wanting to help people;
- to improve conditions in society/environment;
- to meet people;
- to pass the time;
- for enjoyment/ fun;
- to keep active;
- to increase skills; and
- to improve chances of getting paid
- employment.

The reasons people volunteer vary but the most common reason across all age groups is 'to improve society and environment'. While self-development possibilities are usually more important to younger people then to older adults, volunteering can bring direct and indirect benefits to a community and help to improve social and economic conditions.

Benefits of Volunteering

Volunteering is often seen in terms of the benefits volunteers bring to those they help but more recently many have become aware of the benefits to the volunteers themselves.

Volunteers may benefit economically from their volunteer work. Lonsdale's research indicates that 'volunteering is a way of gaining new skills to step into paid work'. The Australian Prime Minister recently agreed to consider a plan that involves paying retired volunteers for their efforts and giving tax breaks to volunteers still in the workforce.

Volunteering also has other positive effects including better physical health and enhanced social skills. For example, volunteering for environmental causes via outdoor work can provide individuals the recommended daily amount of physical activity. An inverse relationship between numbers of hours spent volunteering and number of times visiting a doctor also indicates that there may be health benefits to volunteering for older people.

Further, volunteering can be a way to bring families closer together, by providing a common goal for all family members and the opportunity to spend quality time together. Singles may find love through volunteering. Some people have found their current partners through volunteering.

Volunteering and Mental Health

Volunteer work can also improve volunteers' mental health. Volunteer work can lead to improved access to psychological and social resources. These resources are known to counter negative moods such as anxiety and depression. Studies have found that 61% of people who volunteer at least 5 times a year say volunteer work helps them feel less stressed.

Prolonged contact to volunteering benefits all populations. Studies show that for those over 65, volunteering can lower depression levels.

In the elderly, volunteering on religious grounds is more beneficial than volunteering for secular reasons.

Recent research on the benefits of volunteering amongst older adults has also found that those who participate in additional hours of volunteering report their well-being to be at higher levels, while the type and number of organisations with whom they volunteer have no effect. These benefits were not limited to race, gender, or social integration.

Other studies addressing social benefits and relationships that may exist between depression and volunteer work have shown formal volunteering presents a 'beneficial effect on depressive symptoms'. Researcher Carolyn Schwartz found that people who made others feel cared about report better mental health than the people they were helping.

Volunteering has also been used as recovery therapy for those with disabilities. Programs currently running provide volunteer opportunities for those living with a mental condition. Volunteering also presents a compensation effect for those with depressive symptoms as people with depression sometimes look to volunteering as a way to help their mental health.

Volunteering May Make You Happy

A number of studies and numerous individual testimonies clearly indicate that volunteer work has immense benefits for many individuals. There is a vast range of volunteer programs available and many opportunities for a diverse number of individuals to participate.

There are various reasons why volunteering may make individuals happy. Some people may just enjoy helping others. Some feel good that they have set a goal and achieved it through their volunteer work, and others may find their volunteer work useful for their own future endeavours. So, if you want to be happy try volunteering[1].

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[1] borrowed from the Internet at: S. Fernandez, R. James Volunteering for Happiness and Health / http://www.trenchhealth.com.au/articles/VolunteerForHappiness.pdf

"Should Social Studies Be Patriotic?"
by Joel Westheimer

What it means to be patriotic, however, is a matter of considerable debate. Some believe that patriotism requires near-absolute loyalty to government leaders and policies. Others see patriotism as commitment not to the government, but rather to *ideals*: democratic ideals such as equality, compassion, and justice. Still others advocate a healthy skepticism toward governmental actions in general, but prefer to close the ranks during times of war or crisis. Indeed, there are as many ways to express our commitment to country as there are ways to show our commitment to loved ones or friends.

Nowhere are the debates around the various visions of patriotism more pointed, more protracted, and more consequential than in our schools. As far back as 1890, George Balch, author of *Methods of Teaching Patriotism in Public Schools*, observed that public schools could serve as a "mighty engine for the inculcation[1] of patriotism."3 But 119 years later, patriotism remains highly contested territory, especially when it comes to the daily activities of schoolchildren. And while the winds of national pride have blown through the classrooms and corridors of the nation's schools, social studies educators, in particular, have been at the center of the storm. Public schools in a democratic society have a particular obligation to provide students with opportunities to think deeply about issues of public importance. So it is fitting to ask,

I want to propose two ways to think about patriotism – *authoritarian* and *democratic* – that highlight the potential dangers and benefits of teaching about it in schools. Although both authoritarian and democratic patriotism might employ familiar rituals to foster a sense of belonging and attachment, authoritarian patriotism asks for unquestioning loyalty to a centralized leader or leading group. A school curriculum that teaches one unified, unquestioned version of "truth" is one of the hallmarks[2] of authoritarian patriotism – and of a totalitarian society. Democratic patriotism entails commitment not necessarily to government leaders, but rather.

There are many varied and powerful ways to teach a democratic form of patriotism. These approaches to teaching about patriotism share several characteristics. First, teachers encourage students to ask questions rather

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[1] inculcation – впровадження; вселяння

[2] hallmark – ознака; критерій

than absorb pat answers[1] – to think about their attachments and commitments to their local, national, and global communities. Second, teachers provide students with the information (including competing narratives) they need to think about patriotism in substantive ways. Third, they root instruction in local contexts, working within their own specific surroundings and circumstances. Why? Because we cannot teach democratic patriotism without paying attention to the environment in which we are teaching it. This last point makes standardized testing difficult to reconcile with in-depth thinking about patriotism.

Psychologist Michael Bader argues that the emotional and psychological roots of patriotism can be found in the universal need for attachment and affiliation. We all want to belong and to know that our lives have meaning – and that we are part of something larger than ourselves. For social studies educators it would be easiest to avoid the controversy altogether. But that would be a mistake. Students need to learn about the contentious[2] debates with which adults struggle and prepare to take part in them. There are as many ways of showing one's commitment to country as there are games at the Olympics. But democracy is not a spectator sport[3].

"Can We Teach Patriotism in Schools?"
by Michael W. Ledoux and Thomas Marshall

Abstract

The disestablishment[4] clause of the US Constitution has led educators in the united States to establish guidelines about addressing religion in the classroom As a basic rule, districts have allowed teaching about religion without encouraging or supporting a particular religion This article suggests that patriotism and patriotic expressions are, in fact, religious and that encouraging or supporting patriotism may be tantamount[5] to establishing a state religion in the classroom.

Religion Cannot Be Established in Schools

The debate over the role of religion in the public schools is unceasing. For educators in compulsory educational settings, the dividing line between the acceptable and the unacceptable is that teaching about religions and

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[1] to absorb pat answers – отримувати готові відповіді

[2] contentious – спірний

[3] borrowed from the Internet at: J. Westheimer Should Social Studies Be Patriotic? / http://www.academia.edu/1159148/Should_Social_Studies_Be_Patriotic

[4] disestablishment – скасування; відокремлення церкви від держави

[5] tantamount – рівносильний, рівноцінний, еквівалентний

religious traditions is acceptable, but that promoting them is not. The question this article wishes to address is whether patriotism itself is a religion: if so, is it then forbidden to teach patriotism? That is, should schools teach about patriotism and patriotic activity without encouraging or supporting them, the same way they treat recognized religions?

Patriotism

One role of compulsory public education in the United States has been fostering pride among future citizens. However, the manifestation of that love and pride, the rituals, symbols, ideologies, and exclusionary history, can lead to understanding patriotism as a religious expression.

Note below how closely the elements of this definition of religion parallel the practice of patriotism (provided in brackets): Typically the term refers to an institution [*the government of the United States*] with a recognized body of communicants [*the citizenry*] who gather regularly for worship [*ceremonies, events, patriotic assemblies*], and accept a set of doctrines offering some means of relating to what is taken to be the ultimate nature of reality [*Constitution, Declaration of Independence, Bill of Rights*] (Reese 1980, 488 [authors' insertions[1]]).

The American religious experience is easily expanded to include other manifestations of civic piety[2]. The teachings of the American spiritual realm include the need to identify the will and intention of the founders; calling upon the spirit of the great leaders. There is a pantheon of American deities[3], each with his own temples: Lincoln, Jefferson, Washington, Kennedy, Anthony, Tubman beyond the natural realm of privilege awarded to those who have served the country militarily (health and pension benefits), there is regular remembrance of fallen heroes at such times as Memorial Day, Patriots Day, and Independence Day Chapters could be devoted to the symbols of the American patriot (eagles, flags, medals, uniforms, pins).

Does the patriotic curriculum insist that the American experience is the model for all others to follow? Do our observances of flag and founders go beyond a treatment of the historical context and political realities and "catechize[4]" children in compulsory education? And is there an understanding of superiority and exclusivity, bordering on nationalism in

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[1] authors' insertions – вставки авторів

[2] piety – благочестя

[3] deity – божество

[4] catechize – наставляти; повчати

that expression? If so, the curriculum of patriotism is indeed religion.

The idea that patriotism is actually religion or that the two are inextricably intertwined[1] is not new. Mathews's (1918) has proposed that patriotism fulfills religion and religion is fostered by patriotism.

Patriotism Fits the Definition of Religion

Patriotism, then, fits within what could be termed religion. The question then becomes: Can schools encourage patriotism? Should classroom time be dedicated to national hymns or sacred rituals, or are they actually antithetical[2] to what it means to be a citizen?

Today's classrooms, with their heterogeneous groupings of faiths, provide educators another opportunity to reflect on the true American experience. Perhaps the disestablishment clause can be applied the way it is to acknowledged religions: to teach patriotism and avoid nationalism but can we teach seven-year-olds a critical approach to national identity that does not exclude other doctrines or national values? If we are dedicated to the values of democracy, freedom of speech, and freedom of religion, is it time that we stop evangelizing our students with patriotism, or do we need to revisit the role of religious expression in the United States as a whole?[3]

"Teaching Empathy: The PEACE Curriculum"
by S. Salmon

There is a growing body of theory and research regarding the importance of emotional intelligence including empathy. The Center for Safe Schools and Com-munities has been involved in Aggression Replacement Training for the past several years. The staff has developed supplementary curriculum materials *The PEACE Curriculum* that include: P–Parent Empowerment[4]; E–Empathy Training; A–Anger Management; C–Character Education; E–Essential Social Skills.

The focus of this article is the empathy section of *The PEACE Curriculum*. "Empathy" is being seen as a critical skill needed in the world of work and in the world of relationship building. We found through experience that empathy was critical in the development of positive social behavior.

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[1] inextricably intertwined – нерозривно пов'язаний

[2] antithetical – протилежний

[3] borrowed from the Internet at: M.W. Ledoux, T. Marshall Can We Teach Patriotism in Schools? / http://files.eric.ed.gov/fulltext/EJ887225.pdf

[4] empowerment – надання (розширення) повноважень

Since the curriculum trains students in empathy, anger management, character education, and essential social skills, we have found that the students need to experience ALL aspects of the lessons within close proximity[1] of each other. Students need to experience a minimum of one lesson from each area at least within a week. For extremely violent students, we have found that they benefit from a heavy dose of the curriculum for two to three hours per day.

The empathy component began to develop around key steps that would help students learn compassion. The staff developed the HEARS model. "HEARS" stands for: H – Hold the correct posture; E – Eye contact; A – Assess the person's feeling correctly; R – Respond appropriately with your face; S – Say the person's feelings in your own words. Students were given lessons that taught this model. First they practiced holding their bodies in a listening mode. The students were given practice in looking at another person with "soft eyes," usually three to five seconds at a time.

Since violent students are fairly single minded in terms of feelings – most of them feel one feeling, anger – we began to develop many lessons around the development of a feeling vocabulary. Students are assigned the task of choosing a feeling word and acting it out non-verbally in class with the rest of the class having to guess what the feeling is. Students are then given pictures to practice the identification of feelings; they look up emotions in magazines and books. As a result, our curriculum has a great emphasis on this process.

Part of the HEARS model is learning to respond with appropriate facial expressions to someone who is showing certain emotions. With happiness, the face needs to change for the positive; with sadness, the face needs to change to concern.

Once the students learn to sit or stand appropriately, look at someone when they are speaking, and exhibit the appropriate facial expression, they are given practice in the Truax and Carkhuff model (Carkhuff, 1969). Students are taught to summarize the content briefly and to make a guess at the feeling. Students go through this kind of practice continually until they are able to respond easily and genuinely to anyone who is expressing a feeling to them.

Further a few samples of lessons on teaching empathy follow.

Aggression Replacement Training is an important intervention[2] with violent and aggressive youth. With the emphasis on empathy training,

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[1] proximity – (просторова) близькість; сусідство
[2] intervention – втручання; вплив

students will be learning an important skill that will prevent continued aggression in interpersonal relationships. Not only will students be able to prevent or change aggression, they will be gaining a skill that, according to the current field of thought, will help them in their work and in their personal lives[1].

"Understanding Student Differences"
by R.M. Felder, R. Brent

Students have different levels of motivation, different attitudes about teaching and learning, and different responses to specific classroom environments and instructional practices. The more thoroughly[2] instructors understand the differences, the better chance they have of meeting the diverse learning needs of all of their students. The problem is that no two students are alike. They have different backgrounds, strengths and weaknesses, interests, senses of responsibility, levels of motivation, and approaches to studying. Teaching methods also vary.

If it is pointless to consider tailoring[3] instruction to each individual student, it is equally misguided to imagine that a single one-size-fits-all approach to teaching can meet the needs of every student. Unfortunately, a single approach has dominated education since its inception[4]: the professor lectures and the students attempt to absorb the lecture content and reproduce it in examinations. That particular size fits almost nobody: it violates virtually every principle of effective instruction. It follows that if completely individualized instruction is impractical, a more balanced approach that attempts to accommodate the diverse needs of the students in a class is the best an instructor can do.

Diversity in education usually refers to the effects of gender and ethnicity on student performance. Those effects are important and are considered elsewhere in this paper. This article examines three other important aspects of student diversity:

Learning Styles. Some students are comfortable with theories and abstractions; others – with facts and observable phenomena; some prefer active learning and others lean toward introspection[5]; some prefer visual

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[1] borrowed from the Internet at: S.Salmon Teaching Empathy: the PEACE Curriculum / https://reclaimingjournal.com/sites/default/files/journal-article-pdfs/12_3_Salmon.pdf

[2] thoroughly [ˈθʌrəlɪ] – цілком; ретельно, як треба

[3] to tailor – пристосовувати, адаптувати

[4] inception – початок; вихідне положення

[5] introspection – самоаналіз, самоспостереження, рефлексія

presentation and others prefer verbal explanations.

Approaches to Learning and Orientations to Studying. Students may be inclined[1] to approach their courses in one of three ways. Those with a *reproducing orientation* tend to take a *surface approach* to learning, relying on rote memorization[2]. Those with a *meaning orientation* tend to adopt a *deep approach*, questioning and exploring the limits of new material. Those with an *achieving orientation* tend to use a *strategic approach*, doing whatever is necessary to get the highest grade they can, taking a surface approach if that suffices[3] and a deep approach when necessary.

Intellectual Development. At the highest developmental level normally seen in college students (but not in many of them), individuals display thinking patterns resembling those of expert scientists and engineers.

The research summarized in this paper recommends teaching strategies to help instructors meet the needs of the full spectrum of learning styles, induce[4] students to adopt a deep approach to learning, and promote students' intellectual development[5].

"Play As You Learn: Gamification as a Technique for Motivating Learners"
by Dr. Ian Glover

Motivation can sometimes be a problem for learners, especially when they do not find the purpose of a learning activity to be clear. Gamification is a recent concept that can make learning activities more active and participatory. This paper provides an overview of the background of gamification, the relevant key game concepts, gives an overview of examples from outside education and provides some suggestions for implementing gamification in education generally, and e-learning specifically.

The article contains seven parts: Introduction, Core Game Concepts, Existing uses of Gamification, Criticism of Gamification, Gamifying

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[1] to incline – схилятися, тяжіти; бути схильним (до чого-небудь)

[2] rote memorization – механічне запам'ятовування

[3] to suffice – бути достатнім; вистачати; задовольняти

[4] to induce – спонукувати, схиляти; впливати (на кого-небудь)

[5] borrowed from the Internet at: R.M. Felder, R. Brent Understanding Student Differences / http://www4.ncsu.edu/unity/lockers/users/f/felder/ public/Papers/Understanding_Differences.pdf

Education, Gamification in e-Learning, Conclusion.

Learning is an active process and it requires motivation to both begin and continue the process. In young learners, motivation to learn is often readily available, but it can wane in older learners, and this is especially the case when an element of self-direction and autonomy is required.

"A game is a rule-based formal system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels attached to the outcome, and the consequences of the activity are optional and negotiable." Many of the elements listed in this definition are directly comparable to elements within formal learning.

The idea that effortful activity encourages motivation and engagement is fundamental to gamification, which has been defined as "the use of video game elements to improve user experience and user engagement in non-game services and applications". It is not necessary for the elements to be derived solely from video games - the use of elements from playground or board games would be equally valid.

To understand gamification it is necessary to understand the core concepts of games. There are three basic parts in most games:
– Goal-focused activity. The focus on achieving specific goals is a major reason for the applicability of gamification to education.
– Reward Mechanisms. Games make use of many different reward mechanisms, depending on the context, but three main categories typically evident: Leaderboards, Prizes, and Achievements.
– Progress Tracking. As with learning processes, tracking progress toward goals is important within games, because it would otherwise be impossible to identify the remaining tasks required to fulfil the victory conditions.

Finally, we can come to the conclusion that gamification is a concept that can be used to make learning more engaging, but it should not be viewed in isolation to other tools and methods. There are many opportunities to implement the concepts of gamification within learning, both in traditional learning environments and, especially, in their electronic counterparts.

Gamification is not a panacea, it can do little to make low quality materials, activities and experiences more engaging or meaningful. However, it can provide additional motivation to ensure that learners fully complete activities and, with careful consideration of the implementation, can encourage 'good' behaviour and discourage 'bad' behaviour. The principles of gamification are chiefly derived from computer games and therefore are a good fit for learning processes and activities that have some

online element.

English for academic purposes

Англійська мова

для академічного спілкування

Навчальний посібник

Мелітопольський державний педагогічний університет
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