

Pedagogy through innovative technologies and biomedical
approaches

UNIVERSITY OF WEST ATTICA

School of Health and Care Sciences

School of Administrative, Economic and Social Sciences

Department of Biomedical Sciences

Department of Early Childhood Education and Care

ASPETE

Guide for the Elaboration of a Postgraduate Thesis

Inter-institutional Postgraduate Studies Program

Pedagogy through Innovative Technologies and Biomedical
Approaches

The Coordinating Committee of the IPP:

President: Efstathia Papageorgiou

Deputy President: Kalliopi Kounenou

Member: Anastasios Kriebardis

Member: Eleni Mousena

Member: Christina Fountzoula

Egaleo, March 2019

Version 2.1

Table of modifications

Date	Modification
10/8/2018	Initial version.
11/9/2018	Addition of the possibility for students to choose supervisor A and for collaboration between two students on the same Thesis.
5/3/2019	Consolidation of research fields, courses concerning the thesis, addition of a final text submission stage (third progress), removal of all paragraphs concerning the writing of the Thesis and their addition to the "standard initial pages" document.

Table of Contents

<i>Introduction</i>	<i>4</i>
<i>The educational purpose of the thesis</i>	<i>4</i>
<i>Stages of thesis submission</i>	<i>5</i>
<i>Stages of conducting the thesis</i>	<i>6</i>
<i>Text Formatting</i>	<i>7</i>
<i>Change of thesis title</i>	<i>8</i>
<i>Thesis deliverables.....</i>	<i>8</i>
<i>Presentation of the thesis</i>	<i>8</i>
<i>Good practices for writing the thesis text</i>	<i>8</i>
<i>Good practices for electronic or print reading.....</i>	<i>9</i>
<i>Writing of research papers.....</i>	<i>9</i>
<i>Good practices in writing the text.....</i>	<i>10</i>
<i>Thesis evaluation criteria</i>	<i>10</i>

Introduction

The purpose of compiling this guide is twofold. It provides detailed information on:

- the formal procedures to be followed for the elaboration and presentation of the thesis by the postgraduate students of the Inter-institutional Postgraduate Studies Program (IPP) and by the advisors and supervisors, and
- the method of evaluating all parts of the thesis during its progress until completion.

The educational purpose of the thesis

The thesis is part of the overall educational process and is a prerequisite for the completion of the Postgraduate Studies Program. The purpose of the thesis is to demonstrate the postgraduate student's ability to expand their knowledge, assimilate new knowledge, and express it correctly. The purpose of student research is to explore and review previously acquired knowledge, to define and study a problem, to interpret phenomena or situations, and to combine the above depending on the topic and the postgraduate student's ability in analysis, synthesis, and logical processing of data. The most common approaches are research-based literature review, experiment, the study of various cases, and surveys.

The intended objectives, with the elaboration of the thesis, are the following:

1. To enhance the student's ability to address a problem.
2. To enhance learning, through the study and processing of a significant problem and the acquisition of new knowledge derived from the¹ study.
3. To enhance the student's proficiency in providing a complete and correct solution to problems that may arise.
4. To train the student in searching, investigating, selecting, using, and recording information from bibliographic sources.
5. To train the student in writing and presenting a text with information from bibliographic sources, without altering the meaning of the information from the original source.
6. To educate the student in the ability to write not only a thesis but any kind of text that needs to incorporate scientific thought, presentation of positions and proposals, submission of new ideas and directions, and generally, any kind of text that serves the author's scientific credibility and the promotion of their ideas and proposals.

Stages of thesis submission

Postgraduate students who have completed the first two (2) semesters and have successfully completed at least seven (7) of the nine (9) common courses of the Study Program are entitled to undertake a thesis.

At the end of the second (2nd) semester:

- postgraduate students electronically declare a field of scientific interest according to the table below.
- prospective supervisors declare one (1) to three (3) fields of research interest. The Coordinating Committee (CC) of the IPP reserves the right to revise the list of research interest fields depending on demand and the educational/research needs of the IPP. The CC, taking into account the student's preference in the field of research interest, matches the student with an advisor. Students have the option to request collaboration with a specific A supervisor (advisor). Furthermore, there is the possibility of research theses being elaborated by two (2) postgraduate students if the students request it, with the advisor's consent, and if approved by the CC.

Fields of research interest

Field Number	Research Field	Content
1	Preschool education	Mainly concerns kindergarten and nursery school teachers or individuals who want to conduct research on these age groups.
2	Primary education	Mainly concerns primary school teachers or individuals who want to conduct research on primary school-aged children.
3	Secondary education	Concerns junior high and high school teachers or individuals who want to conduct research on the education of children in adolescence and pre-adolescence.
4	Technical education	Concerns technical education through Vocational Lyceums (EPAL) as well as any form of technical, vocational education e.g., technical schools, OAED apprenticeship schools, two-year HEI programs.

5	Adult education and non-formal education	Concerns adult education through any form such as formal education (HEI) or non-formal education (organization of seminars, corporate training, IEK - Vocational Training Institutes, etc.).
6	Distance education and application of technologies in education	Concerns education using distance methods at any level of education.
7	Education of minority teachers, third age	Concerns education through modern technologies at any level of education.
8	Application	Concerns the education of minority teachers (e.g., Roma children, refugees, Muslim minority, foreigners residing permanently in Greece) at any level of education and education for the third age.
9	Applications of biomedical sciences in education	Concerns the biomedical approach to education regarding its neurobiological phase as well as the education of chronically ill patients.

At the beginning of the third (3rd) semester and exclusively within one month, the student notifies the IPP Secretariat of the topic agreed upon with the advisor (supervisor A). The CC initially approves the topics and advisors. Additionally, it appoints two other members from the teaching staff who, along with the advisor, form the three-member examination committee for the thesis. Each advisor also serves as supervisor B for an equal number of theses. Supervisor A (advisor) and supervisor B evaluate and guide the thesis as defined below. Supervisor C has a grading role only if there is disagreement between the advisor and supervisor A. The topics, the three-member examination committee, and the progress report dates are officially announced after approval by the CC.

Stages of conducting the thesis

The theses of the IPP are organized, coordinated, and monitored via a separate website: <http://e-du.edutech.uniwa.gr>

Training in thesis writing: Before students begin submitting their text, they are trained electronically or in person on matters concerning the writing of theses and the search for bibliographic sources.

First progress report (drafting of initial pages): Two months from the start of the third (3rd) semester, the student uploads the text of the first progress report to supervisor A (advisor) and supervisor B (grader). This text contains specific pages and content included in the accompanying document to this guide called "standard initial pages." The two supervisors grade the first progress report on a scale of 1 – 100, with a passing grade of 90. In case of rejection, comments and remarks are sent to the student. The student has time to make the necessary corrections by the second progress report. Theses that have not been submitted for the first progress report or have not been separately approved by the two supervisors cannot be submitted on the date of the second progress report. The CC of the IPP publishes the list of theses that have been successfully submitted for the first progress report and can be submitted for the second progress report.

Second progress report (final draft of the text): Two months before the presentation of the theses, the student sends the text of the second progress report to supervisor A (advisor) and supervisor B (grader). This text follows the formatting requested in the first progress report and contains the development of the entire thesis, without necessarily being the final text. For example, the final conclusions may be missing, it may still contain omissions, spelling, and syntactical errors. In any case, this text should be in a form that allows its completion in less than a month. In case of rejection, comments and remarks are sent to the student. The student has time to make the necessary corrections by the third progress report. Theses that have not been submitted for the second progress report or have not been separately approved by the two supervisors cannot be submitted for the third progress report. The CC of the IPP publishes the list of theses that have been successfully submitted for the second progress report and can be submitted for the third progress report.

Third progress report (submission of final text): At the latest, two weeks before the presentation of the theses, students submit their final text. This text is graded by supervisors A and B according to the provisions of the paragraph "Thesis evaluation criteria." This text will be uploaded to the IPP repository.

Presentation: Theses that have successfully passed the two progress reports are presented before at least supervisor A and supervisor B. If one of the two professors is absent, supervisor C replaces them. The presentation dates are published on the IPP website at the beginning of the academic year.

Text Formatting

Described in the document "standard initial pages and text formatting."

Change of thesis title

The title and advisor of the thesis can be changed at all stages of its submission (first progress, second progress, final text). It is noted that a change of research field is permitted after approval by the Coordinating Committee of the IPP.

Thesis deliverables

- Text of the thesis, the content and writing of which is the main objective of the evaluation. The size of the main text should be at least 8,000 words, but its extent depends on the subject of the thesis. This word count excludes the table of contents, summaries, bibliography, tables, and captions.
- Multimedia. In the case that the subject of the thesis is the development of new educational activities, the student submits audiovisual material from them, such as video, photographs, graphics.
- Software/websites/Apps. In the case that the subject of the thesis is the development of original software or a website, this material is delivered in some suitable format at least for the judgment of the advisor and the other members of the examination committee.
- Constructions. In the case that the subject of the thesis is the development of new educational activities using constructions (games, robotics constructions), these constructions should be available at least for the presentation of the thesis.

Presentation of the thesis

The presentation of the thesis can be done by:

- A short lecture of 10 – 15 minutes with slides.
- With the demonstration of constructions e.g., robotics, preschool education games.
- With the presentation of software, websites, or an application (App) created for this purpose.

Good practices for writing the thesis text

The IPP establishes the following rules so that the appearance of the theses is uniform and there is the relative consistency which allows for comparison and evaluation of the thesis format.

Good practices for electronic or print reading

1. All hyperlinks should be activated.
2. All images and tables will have a caption regardless of whether there is a reference to their content within the text.
3. It is not forbidden to use color fonts in some cases, but it should be taken into account that they may not appear well in the printed form of the thesis.

Study and finding bibliographic sources

The acquisition of knowledge comes from many sources of information, which are classified as follows:

Primary written sources of information are books, articles from various scientific journals, conference proceedings, various reports and publications of official and scientific bodies, government publications, etc. Only primary sources are those that shape the research bibliography and the strict scientific background of the scientist.

Secondary sources are monographs, manuals, review articles, scientific summaries of various topics, publication indexes for finding specific publications, etc.

Tertiary sources are various guides, general content bibliographies, encyclopedias, etc., which mainly contribute to simple information on a topic, meaning that a serious bibliographic study of a topic is not based on a guide or an encyclopedia.

Multimedia: The sources for the thesis can be audiovisual material (video, TV/radio broadcasts). Such sources add value to a thesis with a corresponding theme, and students should resort to them as well.

Writing of research papers

The first section of a research paper, titled "Introduction," discusses all the information needed to understand and justify the experiments conducted. The reader is introduced to the problem posed and to the research or questions that led to it. The second section, titled "Methodology," contains the research method, the study sample, the research material and/or tools, and the research procedure. The third section, titled "Results," describes what results emerged from the research. Particular care is given to the clear and understandable presentation of the results. If there is statistical data analysis, a section titled: "Statistical analysis" will be inserted, describing the statistical techniques applied. The fourth section, titled "Discussion," describes similar works carried out by others, and the results are compared and commented upon. Finally, a brief "Conclusion" is provided regarding the results and possible prospects.

Good practices in writing the text

Plagiarism is equivalent to failure and is unethical in the requirements of an academic study. The quality of the written word is directly related to the type of preparation and effort. The choice of words and the syntax of sentences reflect the degree of understanding of the subject. The formulation of arguments is characterized by clarity and distinctness, is understandable to others, and leaves no gaps or questions. Long sentences in which many and disparate pieces of information are crowded together should be avoided. A literary style should be avoided. Scientific writing should be simple, without pomposity or exaggeration. In writing the thesis, the material taught in the IPP is not developed, as it is known. Information that introduces the topic and is considered integral to the development of the main theme is written. It is noted that the first time a foreign bibliographic term is mentioned, the Greek rendering is written first, followed by the international rendering and the internationally accepted abbreviation in parentheses. Throughout the rest of the text, either the Greek rendering or the abbreviation is written. When the text includes many abbreviations, it is advisable to include, at the beginning after the table of contents or at the end after the text and before the bibliography, a list of abbreviations with their international and Greek renderings.

Thesis evaluation criteria

Correctness and validity of content (40%)

- Structure of the thesis (10%). A grade of 10% is given to work that follows the provided instructions or applies commonly accepted good practices in its composition.
- Scientific adequacy of the review (10%). Whether the thesis is research-based, a review, or even an application of an original teaching method, there will be some review of bibliographic references. The perfect synthesis of this material with dense citation of bibliographic references receives the top grade of 10%.
- Correct use of bibliographic standards (5%). Students must faithfully follow one of the established bibliographic standards (e.g., APA, Harvard, Numeric, etc.). Depending on the bibliographic standard they follow, they should also compose their in-text citations accordingly.
- Correct use of the Greek Language (5%). Concerns spelling and syntactical errors found within the text.
- Presentation (20%). The presentation stage allows students to develop their rhetorical proficiency and communication skills. Depending on the topic, they may display slides, constructions, IT applications, etc. Innovative elements and research prospects (20%). A grade of 10% is awarded to a thesis whose topic is itself innovative, such as research on new teaching methods or their application to

other educational groups. If the thesis can be presented or has already been presented at a conference, it receives an additional 10%. Theses related to innovative actions in the community that also receive relevant publicity are also graded highly.