The Documentary Research within the Information and Documentation Centre (IDC) Premises of a Case Study

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This study is an investigation on integrating the users’ (pupils and teachers) desk research conducted within the Information and Documentation Centre (IDC) in the didactic activity, through project-based pedagogy, with a view to elaborating a local strategy (at school level) on developing and including information-documentation competences in the development of subject-specific competences of future graduates of compulsory education. The introduction presents words and concepts that are relevant to the topic of the research; then, the study covers an applicative research framework methodology (methods, instruments) aimed at identifying the appropriateness of the project based pedagogical method in exploiting the documentation actions within the IDC, by developing the pupils’ correlated competences. The study highlights that the goal of training pupils in the information-documentation field through didactic activities can be fulfilled in optimal conditions by using the IDC as a specialized and attractive information documentation structure and by applying the pedagogic project as a modern and efficient didactic method.

Keywords: documentary research, constructivist chdactics, project-based pedagogy, desk research

Motto: Building learning through documents.

I. Theoretical Premises

1. The project-based Method - a Modern Pedagogical and Documentation Effort

The dictionary defines the project as: the plan, the intention of undertaking something, of organizing, of doing something in the future.1

Regarding the types of projects, they cover a very broad area, including various fields of activity; we can thus talk about institutional and personal development projects, as well as funding, training, and research projects, but also educational projects.2

In the educational field, the project is associated to learning by doing3, while in project-based pedagogy, the concept of project refers to a research topic aimed at reaching a well-defined goal and conducted through the interference of scientific research and practical actions. In other words, in project-based pedagogy,
while learning the scientific content and the process, the subject (pupil/student) directly relates to the practical activity.

The project-based method was initiated by John Dewey at the beginning of the 20th century and was based on the principle of learning by doing. This expressed the requirements of American practical education and was supported by William Kilpatrick, its main theoretician, who, in 1918, published an article that had a huge impact in education: The Project-based Method. According to the project-based method, the subject content was divided, not into learning objects, but into a number of projects, and the pupils actually designed and conducted projects, solved real problems within a determined period of time, thus acquiring practical knowledge and skills.

Widely applied in the USA, the project-based method spread to Europe too, mainly advocated by Celestin Freinet, known for his Freinet classes: investigations by the pupils outside the classroom.

A teaching-learning-evaluation method belonging to constructivist didactics, the project-based method involves a knowledge-building activity, in which the subject (i.e. the pupil): gets informed, searches for, selects, critically analyses information (reformulates, analyses), experiments - recognisable processes in the stages of a desk research, resulting in documentation-educational products which, at pre-university level, cover a variety of types, corresponding to the multiple subjects in the curricula and to their specificity: text, journal, exhibition, model, experiment, portfolio, dance, song, drawing, painting, graphic organizer, bibliography, etc.

As a modern pedagogical model promoted by constructivist didactics, project-based pedagogy is an active-participatory method, encouraging critical thinking and learning by cooperation, since learning by doing projects allows the pupils to: acquire knowledge by means of an action which results in a product that is materialized, communicable, having a certain utility; by mobilizing their cognitive and practical skills in a creative manner; by socializing, being stimulated and motivated by the interaction with their work group/team; by overcoming the shortcomings in classic pedagogy (lack of mobility, listening instead of participating, overstraining in learning, etc.).

2. The Project-based Method in Pedagogic Activities within the IDC

The project method, as a research-action topic reflecting the constructivist basic principle, according to which any theoretical acquisition happening in schools must be connected to its application, optimally takes place in the school's flexible and offering space of the Information and Documentation Centre (IDC).

Resulting from a Romanian-French bilateral project, required by the integration of Romanian schools in the European Union, the Information and Documentation Centre (IDC) is nowadays stipulated in the Ministry of Education, Research, Youth and Sport's Order no. 5556 of 07.10.2011 on the Regulation regarding the organization and functioning of school libraries and information and documentation centres.

The IDC is a modern information-documentation resource, a multidisciplinary, multimedia and multi-support resource centre which materializes the role and the importance of documentation in secondary education. Training the pupils in the field of information-documentation is the IDC's major mission (art. 8), as part of its pedagogical function (together with its other three functions: cultural, communication and management) (art. 32).

Through its specific organization, in modular spaces serving different purposes (for example, reception, reading for pleasure, individual study, team work, multimedia, etc.), through the variety of its material resources (documentation stock, technical equipment, furniture), through free access to documents (free access at shelves), through the dynamic character of the activities, as well through the flexible programme, etc., the IDC becomes a place favourable for desk-research-like didactic activities, through which pupils are guided to acquire information-using skills, by covering the stages of a desk research, finding and selecting documents, collecting and processing information, organizing information and communicating it under the form of a final product.

The sequence of documentation operations necessary for achieving the educational product outlines the concept of desk research, in a series of synonymous terms: education for information, information culture, information-using skills, information-documentation competences, as stipulated in the Regulation regarding the organization and functioning of IDCs.

Therefore, it is desirable for the desk research, as an attribute of information-documentation structures, to be included among the documentation sequences of IDC-oriented pedagogical activities, for the IDC is a favourable space for the intersection of formal and non-formal education and for complementing the development of competences: pupils' subject-specific and information-documentation competences.

From the viewpoint of including information-documentation competences in the development of subject-specific competences, the Regulation regarding the IDC projects the need of devising a training plan in partnership: specialized teacher — IDC responsible, including: subject-matter objectives correlated with information-documentation objectives; the exploitation of IDC resources; pupils' products: from questions to answers and from simple to complex work tasks.
3. Hypothesis for integrating IDC documentation into project-based pedagogy

If IDC desk research will be part of project-based pedagogy:

Pupils will undertake an effort allowing them to acquire knowledge and skills in the information-documentation field, which they will need for solving project tasks, by: using information-access instruments (free access shelf, reference works, catalogues, bibliographies, web search engines, etc.); exploiting the reading of the consulted documents through techniques of expressing essential messages (graphs, sketches) and text-processing methods (analytical, synthetic); ordering the information to find an answer for the research topic; respecting basic rules in creating various products (summary, report, essay, graph, power point presentation, bibliography, exhibition, concept sheets, poster, etc.); the correct indication of the bibliographic references of the documents they consulted.

Teachers will be able to try, outside the class, modern training and evaluation strategies, correlated to resources allowing for the use of project-based pedagogy directly, during teaching classes; they will have the possibility to develop a complementary curriculum by integrating information-documentation competences into the development of subject-specific competences, thus responding to the objectives and requirements of the school programmes;

IDC: The pedagogical function will be exploited; the following objectives will be met: training and development of the users' information culture; contribution to the development of pupils' key-competences and subject-specific competences.

The IDC responsibles will be able to complete and intensify the pedagogic activity inside the IDC; they will use their own, professional and personality resources in the children's information-documentation counselling; they will respond to the recommendation of elaborating local strategies for training pupils in the information-documentation field by writing documentation pedagogic projects, including them in the IDC's quarterly/annual plas.

II. The framework-methodology of a case study

1. Preliminary observations

Starting from the recommendations within the documents regulating the IDC on developing strategies for training pupils in the information-documentation field, and for including the information-documentation competences in the development of subject-specific competences, and, at the same time, for establishing partnerships between teachers and IDC responsibles, the opportunity of a case study arises, as the methodological framework for achieving the above-mentioned objectives, which constitutes the IDC's major mission.

The elaboration of a plan, in the partnership specialized teacher-IDC responsible, for the integration of the desk research in the IDC into the didactic activity, with a view to developing an integrated curriculum (as an integrating theme among the components of the educational action: objectives, contents, strategies, evaluation)\(^{15}\), as discussed in the new education and considered more efficient than the traditional kind, in the IDC's offering space, will lie at the centre of the pursuits to solve the pupils' need of education for information in solving the didactic tasks-the case.

The framework of the investigation will, of course, be the Information and Documentation Centre (IDC), an ordinary IDC noted X. The reporting time can include a semester or a school year. The sample refers to teachers and pupils.

2. Documenting the case

2.1. The observation method

When documenting the case, the observation method proves useful, alongside its tool, the observation grid, based on which we will analyse the collected data regarding the way in which the IDC documentation is approached related to the didactic activities and the way in which the pupils complete their school tasks.

Observation grid model

Complementary education
Running number | Indicators | Achievement level | Evaluation tool
--- | --- | --- | ---
1 | Requesting IDC for pedagogic activities with a class/group of pupils: |  | 
2 | Completing the documentation-sequenced pedagogic activities: |  | 
3 | Accessing traditional documents with a view to solving the didactic tasks: |  | 
4 | Accessing the web with a view to getting documented for school tasks: |  | 
5 | How documentation resources are used when doing homework: |  | 

2.2. Opinion survey
A research tool borrowed from social sciences, we apply the opinion survey on teachers, to evaluate their interest for using the IDC in their classes/didactic activities in implementing the project.

We consider the following: the sample (a certain number of respondents); the survey motivation (stated at the beginning); a certain type of questions, depending on their content (for example, opinion), on their form (example, closed, multiple choice); the answers and the result analysis.

**Model survey for teachers**

To investigate your interest for project-based pedagogy in relation with the use of the IDC, please answer the following questions of this survey:

1. In the project-based method, the subject-specific competences are complemented by the pupils’ information-documentation competences:
   - strong / moderate / low agreement / total disagreement;

2. Project-based pedagogy is a didactic method favoured by the use of the documentation structure inside the school, i.e. the IDC: strong / moderate / low agreement / total disagreement;

3. Solving the tasks through the pedagogic project method involves the pupils using the IDC resources individually (non-formal), as well as collectively, with the specialized teacher (formal);

4. The classic (free access to shelf, reference works, means of accessing information within a document) and the modern (digital catalogue, other data bases, internet) information retrieving methods available in the IDC are indicated in the pupils’ documentation:

<table>
<thead>
<tr>
<th>Methods</th>
<th>Strong agreement</th>
<th>Moderate agreement</th>
<th>Low agreement</th>
<th>Total Disagreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. The application of project-based pedagogy by the teachers is reflected in how often users visit the IDC (number of visits), as well as in the (classic and modern) way of accessing of documents:

<table>
<thead>
<tr>
<th>Record</th>
<th>Strong agreement</th>
<th>Moderate agreement</th>
<th>Low agreement</th>
<th>Total Disagreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessing documents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. The products of the pedagogic project exploit the documentation operations in the IDC: strong / moderate / low agreement / total disagreement;

7. The documentation operations are essential in creating the project products: strong / moderate / low agreement / total disagreement.

3. The intervention method for solving the case

Based on the analytical data obtained in the documentation phase, a decision is made on how to intervene to find solutions for the pursued issue, i.e. the recommended partnership strategy, specialized teacher - IDC responsible, in conducting didactic activities supported by documentation, by using IDC resources.

**Project-based pedagogic activities in the IDC**

In the context of investigating the case, the strategy is shaped as an educational project with pedagogic activities conducted in the IDC, with a view to exploiting the documentation through the method of the school project.

The educational project borrows structural
elements from project management, respectively: argument, purpose, general and specific objectives, implementation team, target group, period/duration, place, project activities, activity graph, human, material and time resources, strategies (organization, didactic methods), results/expectations, dissemination. Among these, the general and specific objectives could, for instance, include the following:

**General objectives**
Integrating the desk research in the didactic activities through documentation-sequenced pedagogic projects conducted at the IDC;
Exploiting project-based pedagogy, as a complementary didactic method, by developing pupils’ documentation products, during dynamic, cooperation, motivating, attractive, activities, that stimulate critical thinking;
Exploiting the IDC and its pedagogical function, by exploiting the material, information, multidisciplinary and multimedia resources;
Collaboration between the IDC responsible and the teachers in conducting desk research pedagogic projects.

**Specific objectives**
Completing didactic tasks: searching for and selecting documents, collecting and processing information, noting their bibliographic references, organizing the processed information with a view to communicating it (in writing and/or orally) in the form of the final product;
Using the information-access instruments, both classic (free access shelf, CZU classification, means of access within a document, reference works), and modern (local-access digital catalogue, web search instruments);
Approaching the variety of documents (multidisciplinary, multi-support, multimedia) and using bibliographic models specific to each type of document when consulting them;
Resorting to critical thinking when dealing with the extracted information (text processing methods, techniques of expressing essential messages);
Acquiring the knowledge specific to different subjects through documentation concepts, as a result of practising the project pedagogic method.

**Pedagogic project activity**
The design of the pedagogic project will also follow the aspects of project-based management, in which we distinguish the objectives, the work tasks, and the evaluation requirements, considering them both at discipline, and at documentation level.

At documentation level, we exemplify with the work tasks and their related requirements, possible in a pedagogic project activity:

<table>
<thead>
<tr>
<th>Running number</th>
<th>Work task at documentation level</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Finding printed documents and finding in them the information necessary for the project theme and the chosen product specificity:</td>
<td>Using the documents on the free access shelf. Using classical methods;</td>
</tr>
<tr>
<td>2.</td>
<td>Accessing web documents, according to each group’s project requirements:</td>
<td>Using specialized websites and relevant information. Using modern documentation methods;</td>
</tr>
<tr>
<td>3.</td>
<td>Collecting and processing information from the book and web documents consulted during the project activity:</td>
<td>Synthetic and schematic organization of the information retrieved from the consulted documents.</td>
</tr>
<tr>
<td>4.</td>
<td>Noting the bibliographic references of the documents used:</td>
<td>Recording the sources in the indicated bibliographic format (on the study sheet), depending on the document type.</td>
</tr>
</tbody>
</table>

**Evaluating pedagogic project activities**
Each pedagogic activity programmed during the project as a whole will be evaluated using various methods and instruments, such as:

**a. Activity products research method**
We are considering the following components of the activity: products research method:
The objective of the evaluation: pupils’ documentation products, at team level, created during the pedagogic activities conducted in the IDC;
The time and type of evaluation: at the end of the activity; summative assessment;
Evaluation tool: check list with levels of task completion, by marking.

**Pupils’ opinion survey**
The pupils’ interest in the pedagogic project activity conducted in the IDC will be investigated through the survey.

**Model pupils’ survey**
1. What motivates you most in completing the
project at the IDC?
Choose one of the following:
The flexible space of the IDC
Team work (cooperation)
The attractiveness of the project per se.
2. How does the project activity help you learn?
Choose one of the following:
By combining theory and practice.
By combining theory, practice and documentation.
None of the above.
3. How do you improve your project activity tasks
by using the IDC?
Choose one of the following:
Through individual visits and by working
individually.
Through small group visits and working together.
Through class visits and team work.
4. What kind of documentation do you prefer
during your project activity conducted in the IDC?
Choose one of the following:
Classic: printed documents (books, magazines, en
encyclopaedias, dictionaries, etc.)
Modern: electronic resources (web, local resources,
CDs, DVDs).
Both classic and modern.
5. Which documentation operation do you find
more difficult?
Choose one of the following:
a. Searching and selecting documents
b. Collecting and processing information
c. Recording information sources
6. Do you find the IDC useful in the project
activity?
Choose one of the following:
Yes.
No.
Both evaluation means of the pedagogic project
activities will be followed by an analysis of the thus
obtained results, which will lead to the conclusions
regarding the unfolding of the entire project, conceived
as a means of intervention for solving the case.

Conclusions
The theoretical investigation of the problem under
study, i.e. identifying the desk research in the didactic
activity, by making use of the project-based pedagogy,
while using the Information and Documentation
Centre (IDC), has revealed the following fundamentals:
The desk research is an essential feature of
the project didactic method, as it ensures the
documentation stage necessary for the pupils' building
their knowledge, that is, the information searching,
selection and processing operations, under their
typological diversity, with a view to obtaining a new
product - the result of a creative act of learning by
discovery;
The information and documentation centre
(IDC) favours the unfolding of the project
pedagogic activity by fulfilling the requirements
specific to this didactic method: mobility for pupils
interaction and team work, diversified educational
offer, multidisciplinary and multi-support information-
documentation resources, the optimum place for
formal education to meet non-formal education;
The project-based pedagogy method facilitates
the integration of information-documentation
competences into subject-specific competences.
The pedagogic project activity consists of a strategy for
developing and integrating information-documentation
competences (mentioned in the Regulation on IDC),
stipulated by school curricula, by different subjects,
as well as in the development of key competences,
promoted by European educational policies;
The partnership specialized teacher - IDC
responsible exploits the project-based pedagogic
activity by conducting both the operations for
achieving the subject-specific objectives, and the
documentation objectives in the optimum space of
the IDC, resulting in the development of correlated
competences and to an integrated curriculum;
By integrating the desk research in project-
based pedagogy through the IDC, positive
effects are achieved: for pupils (their own effort
of building their knowledge, at subject and at
information-documentation level, in an attractive
and interactive manner); for teachers (creating an integrated
curriculum more efficient than the traditional one);
on the IDC (exploiting its pedagogic function and
its information-documentation, space, furniture and
specific equipment resources); for the IDC responsible
fulfilling their duties to unfold documentation activities among pupils).

The applicative research, summarized as the framework-methodology of a case study, creates the context for the elaboration of the recommended strategy for the development of pupils’ information-documentation competences through subject-specific competences, as an objective of the national and international educational programmes/policies in place.

Starting with the encouraging findings of the theoretical research on the topic discussed within the proposed methodological framework of a case study, we believe it is opportune to apply the project-based pedagogy to the documentation resources within the IDC as an optimum means of intervention identified as an answer to the issue of developing pupils’ correlated competences, and thus to fulfill the goal of creating a local strategy to include desk research in subject study, by establishing partnerships between the IDC responsible and the teachers.

Note:

10. The bilateral project “Education for information in the disadvantaged rural environment”, which took place in the year 2000, was the result of a partnership between the Romanian Ministry of Education and Research and the Embassy of France in Bucharest, aimed at setting up Information and Documentation Centres (IDC), following the French model, in schools in the disadvantaged rural environment. The project for the implementation of IDCs in Romania included a pilot-phase for six counties (Alba, Bistrița-Năsăud, Botoșani, Maramureș, Neamț, Sibiu) and an extension phase, starting with January 2002 (Order no. 3248/2002 of the Ministry of Education and Research).
11. Order (of the Ministry of Education, Research, Youth and Sport no. 5556 of 7 October 2011) on the Regulation regarding the organization and functioning of school libraries and information and documentation centres (M.O. no. 757 of 27 October 2011).
12. Regulation regarding the organization and functioning of school libraries and information and documentation centres. Annex to the Order, doc. cit.
15. Ioan Nicola, Tratat de pedagogie școlară, Bucharest, Aramis Publishing House, 2003, p. 428

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