The portfolio

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MÉDIAINFORMATIKAI KIADVÁNYOK

The Portfolio

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1. INTRODUCTION

1.1 AIMS, COMPETENCIES, CONDITIONS OF THE COMPLETION OF THE SUBJECT

1.1.1 Aims

The major aim of the course is to help the students acquire knowledge about the rise and the functions of traditional portfolio. The student should understand the concept of electronic portfolio, and should be able to distinguish its types. The students should acquire appropriate knowledge about the function of dedicated portfolio systems. The student should get acquainted with the system of point of view of construing portfolios, should be conversant with the most important knowledge of data handling and creating of views. The participants in this course should understand the system of assessment of the portfolio and the role of reflexivity. It is important that the students should possess knowledge that can help them find their way in the world of copyright and personal rights. The students should get acquainted with the function of the so called serious games and their most popular variants as well as with the role of virtual spaces. The students should be conversant with the concept of the avatar and create and present their own avatar. Apart from the systems of dedicated portfolios the students should have a clear understanding of different possibilities of introducing educational products as well (e.g. virtual galleries). The above are organized in chapters in the book as follows:

The aim of the second chapter is to provide students with knowledge about the formation of traditional portfolio and its functions. The students should get acquainted with the concept of electronic portfolio and its theoretical background, the different names of electronic portfolio and the practical approaches to its functions. The student should possess knowledge regarding the functions of electronic portfolio. The students should know the types of portfolio systems, should have an idea of the way in which electronic portfolio can be realised. The students should be able to speak about offline web folios, the static online portfolio and the web2.0 online portfolio.

The aim of the third chapter is to endow the students with knowledge about dedicated electronic portfolio systems employed in education, and to have a clear view of their most important characteristics. The student should be able to speak about the characteristics of integrated e-portfolio system, and should understand clearly the major services of e-portfolio.

The chapter also has the aim of teaching students about the different types of portfolios on the basis of the ownership of the respective portfolios.

The aim of the fourth chapter is to teach the students the advantages of using electronic portfolios, and to inform them about the main arguments of the criticism formulated against using electronic portfolios. We can enlist among the advantages students can benefit from, the individually „tailored" management, the development of aim/target planning, the understanding of relationships among learning experiences, and the possibility to check their previously acquired knowledge. From among the criticisms formulated against electronic portfolio we have to mention questions related to time management and opinions which question the assessment function of portfolios.

The aim of the second part of the chapter is to introduce the reader to the role of reflexion in the electronic portfolio. We have to stress that we concentrate on the students' reflexions without ignoring the role of the teachers' reflexions as far as motivation and assessment are concerned. The chapter is going to clarify the concept of reflexion and the role of students' reflexions. We are going to discuss the dynamics of reflexion and the references of positive reflexions.

The aim of the fifth chapter is to introduce to the students to the knowledge of handling of digital data which is indispensable for the usage of the portfolio. In this chapter we are going to discuss, among other things the characteristics of text based digital documents, about digitalization and the OCR technique. We are going to touch upon the creation of digital still pictures and their characteristics, and the digitalization of still pictures. We are going to discuss the creation of digital motion pictures and the digitalization of analogue motion pictures. From among the digital registers we are also going to discuss the most relevant characteristics of digital voice (the creation of digital voice registers, its types, and the digitalization of analogue voice).

In the second part of the lesson we are going to touch upon the procedures linked to digital registers, including the copying and storing of digital text based documents, digital still pictures, digital motion pictures and of digital voice.

The aim of the sixth chapter is to inform the students with basic legislative elements related to copyright. The discussion of the topic involves the discussion of copyright and non-copyright works. We are going to examine who can benefit of copyright and what regulations are valid as far as copyright is concerned in the case of collections.

In the second part of the lesson we are going to touch upon the practice of author related rights and general rules regarding financial rights. The presentation of the above topic involves the discussion of the rights of multiplication, dissemination, public lectures, the transfer for the larger public of a work and the right of adaptation/rewriting of a work. We intend to inform the students about the legal standing of works created in employment or similar legal situations and the characteristics of the period of protection.

We continue our overview of legal aspects in lesson seven. We are going to introduce our students to the limitations of free usage and copyright, we touch upon the cases of free usage, the copy rights of non-profit institutions, and the preparations of temporary programme recording. We are going to examine the cases of fee usage in audio visual media broadcasting, the presentation of these works in education, research and learning.

We are going to touch upon laws related to copyright and the defence of performers. We are going to touch upon the defence of audio record producers, of the copyright protection of radio and television organizations. The chapter also highlights the relationship between copyright with related laws/legislation and the protection period as well.

In the course of our studies we are going to examine the ambitions to regulate the creative usage of works of art by Creative Commons. We are going to inform our students about the basic principles of personal rights, the right to good reputation and legislative measures linked to its protection and possible legal solutions as well.

The aim of the eights' lesson is to introduce an institution of higher education in which they have been using the portfolio in the process of education following the discussion of relevant theoretical issues. The lesson aims at introducing the different possibilities of interpreting the concept of the portfolio and the main characteristics of its/their application into practice, with special emphasis on formative and summative assessment possibilities and the usage of the portfolio in the process of acquiring knowledge. And, with special emphasis on the summative and formative assessment possibilities and employing the portfolio in its application into the learning process.

The aim of the ninth chapter is to guide the student through the process of planning portfolio systems through a practical example and to provide information regarding about differences among portfolio systems. In the second part of the lesson the students will be introduced to the basic aspects of the structure and handling of the open coded Mahara system.

The aim of the tenth lesson is to help the students get acquainted with the basic knowledge of using e-portfolio. In the course of this section the students will get an idea of how the e-portfolio is prepared for the reception of the teachers and students, what the dynamics of portfolio is and how the portfolio filled with professional contents should and a few words will be said about the role of reflexivity as well. In the second part of the lesson practical instructions for using portfolios are given: how to load files, organize them into folders, and views. Suitable for transfer and assessment can be created and how they can be sent for assessment. In the closing section of the chapter we are going to offer the students a brief presentation of the steps of portfolio assessment.

1.2 THE CONTENTS OF THE COURSE

2. The concept and the emergence of traditional and electronic portfolio and the types of electronic educational portfolio

3. Dedicated portfolio systems

4. The system of points of references in constructing the portfolio and the role of reflexion in him portfolio

6. Handling of digital databasein the portfolio

7. Copyright and personal rights in relation with publication

8. Personal rights and the Creative Commons

9. The employment/use/application in practice of e portfolio at Umea University

10. The introduction of portfolio at Eszterházy Károly College

11. Practical instruction for the use of the portfolio

12. Summary

2. LESSON: THE CONCEPT OF THE TRADITIONAL AND ELECTRONIC PORTFOLIOS, THEIR DEVELOPMENT AND THE TYPES OF ELECTRONIC PORTFOLIOS

2.1 AIMS AND COMPETENCIES

The aim of the chapter is to introduce the students to the knowledge regarding the emergence of traditional portfolio and function. The student should also get acquainted with the concept of electronic portfolio; the student should see clearly the theoretical background of traditional end electronic portfolios, the different names of electronic portfolios and practical approaches to the functions of electronic portfolio. The student should also have knowledge about the functions of dedicated systems of portfolio. The students should also understand the types of portfolio systems, should have an idea about the creation of electronic portfolio. Students should be able to speak about offline web folios, static online portfolios and 2.0 online portfolios.

2.2 STUDY MATERIAL

- Introduction
- Theoretical background of traditional and electronic portfolio
- Definitions/names of electronic portfolio
- Practical approaches to the function of portfolio
- Types of portfolio systems
- Creating the electronic portfolio
- Off-line web-folios
- Static online portfolio
- Web 2.0 online portfolio

2.2.1 Introduction

Nowadays we hear more and more about the role of electronic portfolio in higher education. The word became accepted in a number of languages via the French (portefeuille) and Italian (portfolio) words from the Latin word „portare”, meaning taking or carrying, and „folium”, meaning letter. In education the word portfolio means the collection of the works/activities of the students. Before the digital revolution the paper based variant was widespread, and its application into the educational system can be traced to the sixties and following a period of decay in the

1980s it returned by the mid-1990s, in digital guise. Its appearance can be linked to three major elements on the basis of Trent Batson's work entitled The Electronic Portfolio Boom: What's It All About?:

- The works of the students are prepared in an electronic format (even if they are handed in in a printed form).
- The internet is present everywhere, the students can reach the world-net virtually everywhere on the premises of the institute of higher education.
- The databases linked to the process of education are available through computer systems, and this enables the students to carry out a relevant part of their work via the internet.

There are a number of definitions of the electronic version of the portfolio, but almost everybody agrees that the products should be stored in an electronic form and should be accessible through the web. On the basis of the function of the portfolio among others we can distinguish between variants of assessment and collection, and on the basis of ownership we can distinguish between portfolio of the student, of the educator and of the institute. From among the advantages of using it we can highlight that the portfolio can be a tool of assessment, by the help of which we can measure characteristics which cannot be assessed by traditional means. The successful use of the portfolio depends on how effectively we can integrate it in our present form of education.

2.2.2 The theoretical background of traditional and electronic portfolios

The use of electronic portfolio in higher education spread very fast in recent years. There are opinions according to which electronic portfolio can be one of the greatest achievements of technological development at universities and colleges, which can change the foundations of higher education. Perhaps this is a too optimistic presupposition (similarly to multimedia and the early assessment of the role of e-learning), but it is possible that electronic portfolio will also find its adequate role in higher education.

2.2.3 Definitions of electronic portfolios

The different definitions of the portfolio (e-portfolio, digital portfolio, and web-folio) are often used as synonyms. This is not right in all the instances, as the electronic information carriers are not always compulsorily digital. In a larger sense the electronic portfolio can contain electronic, analogue mediums (e.g. video-record on a VHS video-cassette), but if we are speaking of a digital portfolio the portfolio can

only contain (files) representations of the different material which can be visualized with the help of computers. The name web-folio further reduces the circle, as the files have to appear on the web. There are further differences in opinion in that whether we should call an electronic portfolio exclusively the collection of digital mediums, or the enumeration of the tasks needed for the writing of the portfolio, the assessment of the tasks, as well as the reflexions should also be included in this category. In our opinion electronic and digital portfolio can be used as synonymous concepts with the observation that due to the definitions of digital in informatics electronic portfolio should be given priority. In the present document we are going to use electronic portfolio, e-portfolio, and digital portfolio as if they were synonyms.

2.2.4 The practical approach to the function of the portfolio

On the basis of the function of the electronic portfolio there are a number of definitions of the concept. George Lorenzo and John Ittelson in the work entitled An Overview of E-portfolios consider that an electronic portfolio is a collection of works which contain textual, graphic which contain multimedia elements, stored on the web or on DVD (sources, tasks, presentation) which represent a person, a group, an organization or an institution. According to another definition of the same authors the portfolio is individually tailored collection of tasks, solutions and reflexions on the web the aim of which is the context and time based demonstration of knowledge of key importance.

2.2.5 The advantages of the electronic portfolio

From among the advantages of the electronic portfolio we have to mention the possibility of media integration that is besides the traditional textual and still picture contents it is possible to visualize motion pictures, voice/audio and animation/cartoon as well. The suitable meta-material can be traced/searched for, rendering the search for information considerably simpler. While the traditional, paper based material could only be seen by a few persons, the electronic variant can be published widely on the internet. Due to the characteristics of the files constructing the electronic portfolio its copy is identical with the original and thanks to this a number of presentations put together from different points of view can be produced.

2.2.6 Types of electronic portfolio

From the point of view of the realization of the electronic portfolio we can distinguish two larger groups. The first group includes those e-

portfolios which are realized through non dedicated portfolio systems. In this case the students should possess all the knowledge needed for the operations through which media elements can be processed and for their publication through online or offline websites. This solution raises two more problems: on the one hand, do all students have the necessary knowledge of informatics/computing (is it compulsory?) on the other hand it could be difficult to compare and accurately assess portfolios of individual structure and layout. Within this type of portfolio we can distinguish three more groups:

2.2.7 Off-line web-folios

These portfolios consist of websites (more precisely HTML documents) which contain documents created by way of digital medium processing software (word processor, excel, word processor, chart-processors, still-image-processors, audio-material-processors, motion-picture-processors). The portfolio is offline, because it cannot be reached on the internet, the websites only serve as frames for the visualization of the documents. Among the advantages of this method is that all its elements can be carried (even on a pen drive) there is no need for a web server, and the rights linked to the author are in greater safety due to the reduced size of the publicity, than in the case of an online electronic portfolio. Its disadvantage stems from this situation as well it can only be viewed within the already mentioned limits. This portfolio can be transformed into an online one if we have it published on a webserver.

2.2.8 Static online portfolio

This portfolio can be accessed through the internet if we type the address of the respective website. It can be achieved with the help of servers who make the creation of the personal website free of charge or for certain retribution. Usually the service can be accessed through a graphic surface, that is, we do not need knowledge of informatics for the creation of the respective pages on the website. Another advantage of the method is that it can be achieved within a few minutes (hours), we need not activate a web server and our works become accessible on a large scale. It is a disadvantage though that the type of the document uploaded, the available space, the design of the page/layout, the safety of the page, its stability, and the speed of data fluctuation, depend on the server. What is more we have to upload our documents on a server which is owned by a „stranger”, and if we want to use the service we have to accept the contractual conditions in order to use this service, and that the fate of our documents would be decided by the user’s agreement (there are servers where we have to give up the copyright of our documents uploaded and we have to tolerate the publicity and

advertisement appearing on our page). As far as our personal rights are concerned this cannot be considered ideal because endowed with the knowledge of the title of the page anybody can access our documents. It also should be remembered that it is just a matter of time that the automatic searcher can spot and render our pages „searchable" (this means that the help of the necessary keyword our page will also be enlisted for the searchers), thus knowledge of the address of the website is not necessarily needed for finding it.

The static quality of portfolio pages/sites also means that the contents of the page is not updated automatically (e.g. a new version of a presentation of a give topic is not automatically uploaded on the page, the outdated elements are not removed from the page), on the other hand the readers/viewers of the page cannot communicate with us, they cannot send their comments.

2.2.9 Web 2.0 online portfolio

Similarly to the former one, this portfolio is also accessible through the internet by typing the address of the given website. This is usually placed with the help of servers who charge a certain sum, or offer free services for the creation of individual websites. Another similarity is the graphic surface, and the short time period needed for the creation of the website. We do not have to have an own server in this case either, and our works become accessible for larger public.

In contrast with the former type, in this case the type and the space provided for storing are not limited (e.g.in the case of Google Sites it might even be 10GBs). The information technology security of the site, its stability and the speed of transfer depends on the server in this case as well, but in the case of servers with high reputation (e.g. Google) there is no reason for complaint. Although this solution does not seem ideal from the point of view of individual related/personal rights either, our documents are in much greater safety than in the case of the former type.

In this category one of the best services is provided by Google sites (on the basis of site http://www.google.com/sites/overview.html):

Our sites can be created with the help of some clicks

Virtually all types of documents can be made accessible (text, motion picture, still picture, excel documents, diary entries etc.) To sum up the advantages of using Google Sites:

- Design that can be personally tailored
- Patterns help the fast creation of the website

- Support for shared work with the help of documents
- Allows for the widespread regulation of document sharing

2.3 SUMMARY, QUESTIONS

2.3.1 Summary

Nowadays we can hear more and more about the role of electronic portfolio in higher education. In this chapter our aim was to introduce the emergence and functions of traditional portfolio to the students within the frame of the topic. We introduced the concept of electronic portfolio, highlighted the theoretical background of traditional and electronic portfolios, the different definitions of electronic portfolios and practical approaches to the functions of the portfolio. Through the themes of the present chapter, it was also our aim to endow the students with knowledge regarding the functions of dedicated portfolio systems, types of portfolios and to have an idea regarding the creation of electronic portfolios. We also hope that the student can talk about offline web folios, static online portfolios and web2.0 online portfolio.

2.3.2 Self-assessment questions

1. Speak about the etymology of electronic portfolio!
2. What do you mean by the practical approach to the function of the portfolio?
3. Enlist the types of portfolio systems!
4. Enlist the steps of creating an electronic portfolio!
5. Speak about the major characteristics of offline web-folios!
6. Speak about the major characteristics of static online portfolios!
7. Speak about the major characteristics of web2.0 online portfolios!

3. LESSON: DEDICATED PORTFOLIO-SYTEMS

3.1 AIMS AND COMPETENCIES

The aim of this chapter is to provide students with knowledge regarding dedicated e-portfolio systems, to help them become conversant with their major characteristics. The student should be able to speak about the characteristics of integrated e-portfolio systems and have a clear view of the most important e-portfolio services. It is also the aim of the present chapter to introduce the students to the differentiation of types of portfolios on the basis of ownership.

3.2 STUDY MATERIAL

- Dedicated educational e-portfolio systems
- Dedicated portfolios systems
- Integrated e-portfolio systems
- E-portfolio services
- Types of portfolios on the basis of copyright

3.2.1 Dedicated portfolio-systems

Those portfolios belong to the second major type of electronic portfolio systems, which are built upon individually tailored database and user layout, which provide suitably structured storing space for the students, and make possible for them the orderly storing of their data.

We can distinguish three sub-types in this case as well:

3.2.2 Dedicated educational e-portfolio systems

One of the most important elements of these portfolio systems is a central computer (server) and the portfolios server uploaded on it, which provides portfolio services for the students and teachers via the web (under optimal conditions the server is provided by the institution). There are a number of types of e-portfolios, among which can find the extremely expensive for-profit software developers, but we can also opt for open coded free ones as well. One of the most popular members of the latter category is the Mahara portfolio system.

1. Figure: Title page of the dedicated e-portfolio system of Eszterházy Károly College

We are going to offer a selective interpretation of some of the major characteristics of this type of electronic portfolio:

- Its great storing capacity makes it possible to collect all the recorded documents produced during the period of studies, even if at first sight some of the elements might be considered redundant, not really „useful". The structuring, the way in which it is organized makes it possible to render visible the really valuable and important elements[1].
- The elements of the portfolio can be supported by metadata, through which the portfolios can be searched for and all types of portfolios can be discovered and revealed.
- The event-recording function of the portfolio can help the evaluation of the student's and teacher's work. We mean that the work done on the portfolio can be precisely assessed, for example how much time the student spends on creating and editing the portfolio. It also provides information regarding the work of the teacher as it records the time spent on evaluation of the student's portfolio. On the basis of the above we can assert

[1] Just think of the fact that the student can store the entire video material of its teaching practice on the server of the portfolio, and with its help, it can illustrate its competencies linked to teaching during the final examination.

with some certainty that this type of portfolio can be useful as a means of a monitoring quality.

- The well-constructed/designed portfolio should be capable of exchanging data with the other dynamic, database supported electronic systems used in higher education, for example with the educational system, integrated library system, educational frame-system etc.. The advantage of this appears mainly in the students' automatic recruitment to portfolio courses.
- Another important characteristic of the well planned portfolio is its portability that is the student can make a copy of the actual state of the portfolio whenever needed, which can properly support the statements included in the CV, or set forth in the course of a job interview.

In our opinion the properly designed user space of an electronic portfolio and the presence of up to date integrated services can influence positively the motivation of the student. In spite of this the results of researches show that students enlisted the portfolio among the not so useful tools[2]. Apart from the causes enlisted by the survey we identify one of the causes of this situation in the fact that the earlier applied methods are partially outdated. One of the greatest advantages of the dedicated electronic portfolio is that it attempts to adjust to the day to day activities and customs of the students. Blog writing or handling of the materials of acquaintances could be examples in this respect, as they seem to be favourite past time activities for the students.

3.2.3 Integrated e-portfolio systems

We have already mentioned the greatest challenge of the dedicated portfolio systems: the electronic portfolio should be able to exchange data with the other dynamic database supported electronic systems used in higher-education. This means that the institutions of higher education employ different systems for the electronic management of the administration of studies (e.g. Neptun, ETR), another system for the publication of the e-learning study materials (Moodle, WebCT etc.) and other systems for the handling of e-portfolios (e.g. Mahara). This means three independent databases, where the data, their position related rights, files are stored and administered in such a way, as to enable the

[2] Min Zou: Organizing Instructional Practice around the Assessment Portfolio: The Gains and the Losses. In: http://eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED469469&ERICExtSearch_SearchType_0=no&accno=ED469469, Downloaded: 2008. April 15.

systems to smoothly exchange data, which requires relevant human and computer resources.

Integrated e-portfolio systems significantly resemble as far as the character of their services is concerned to the mentioned dedicated e-portfolio systems, but in the course of their application they are not introduced as independent portfolio systems, but they are integrated in already existing electronic systems (most often in the electronic educational frame systems) (e.g. the Moofolio e-portfolio-system integrated in the Moodle educational frames system). The advantage of the system is that the two systems use the same hardware and software resources to provide services and naturally the exchange of the data between the two systems can be achieved without problems.

3.2.4 E-portfolio services

E-portfolio services provide all the services provided by the dedicated portfolio systems on a for-profit basis. The expenses are either paid by the institution (in this case it can be used free by the students) or by the students, but there are solutions whereby both the institutions and the students pay for the services. In order to understand, to offer a more comprehensive image about the services provided by this solution to the institutions we shall survey their most important characteristics:

E-portfolio servers usually provide services not only for the students but for the institutions as well. We can understand the nature of the services if we read the proposal of one of the most popular overseas server (we intentionally avoid mentioning its name): „The departments of the institutions of higher education daily have to face the burden of lack of time. In the interest of their efficient functioning our e-portfolio system reduces administrative burden, so that the educators can concentrate on education and research. Our online system helps the simplification of the administrative work of the departments, the monitoring of professional development and the creation of statistic surveys.”

Nearly all servers make the unlimited use and creation of the three major types of portfolios (collection, selective, evaluative) possible for the students, sometimes enlarging the possibility with career portfolios which focus on finding a job following their studies. It is important to mention that the portfolios do not cease following graduation, the students can keep them active for years (for fees).

The servers try to render the space of the portfolio attractive for teachers by providing simplified tools for specifying assignments and which render evaluation easier (checking lists, shared monitor

evaluation, support of unavoidable transatlantic evaluative strategies etc.).

With the help of general visitor statistics (how many times was the website visited, how much time they spent studying the website, which are the most often visited websites etc.) they can access statistics which help them increase the efficiency of their work.

We can also mention monitoring of the development of the target group related to a certain date or period of time, which can be compared to other data (e.g. demographic data) as well.

3.2.5 The grouping into types of the portfolio on the basis of its ownership

When discussing the types of the electronic portfolio we mentioned functional types (portfolio of collected works, presentation, and evaluation).

Another point of view for the categorization of the portfolio is linked to ownership. From this point of view we can distinguish portfolios belonging to the students, teachers and the institutions. The given portfolios can be further categorized according to their contents and what they are used for: e.g. a student's electronic portfolio may contain the work of the students, their self-assessment, perhaps teachers' self-reflexions etc.. In most cases the owner of the portfolio is the student even if he or she uses the digital infrastructure of the institution for the creation and publication of the respective portfolio.

While the portfolio of the faculty (department) primarily carries information regarding the study material, the curriculum, the task to be met, and methods of assessment, the institutional portfolio primarily offers information with respect to the system of training, accreditation, the diplomas that can be obtained, and perhaps the evaluation of the system of training and of the individual departments as well.

3.3 SUMMARY, QUESTIONS

3.3.1 Summary

In this chapter we introduced the students to the interpretation of the concept of dedicated e-portfolio systems and their major characteristics. We touched, among other things, upon the e-portfolio services used by teachers and students. Among the aims of the chapter we enlisted the task to enable the students to establish the types of the portfolio on the

basis of the ownership of the portfolio (student, teacher, faculty and institute.

3.3.2 Self-assessment questions

1. Speak about the main characteristics of dedicated e-portfolio systems!
2. What dedicated portfolio systems do you know?
3. What are the most important characteristics of integrated e-portfolio systems?
4. What services do you know?
5. Speak about the essential elements of the types of portfolios on the basis of ownership!

4. LESSON: THE THEORETICAL SYSTEM OF PERSPECTIVES OF PORTFOLIO DESIGN

4.1 AIMS AND COMPETENCIES

The aim of the fourth chapter is to introduce the students to the advantages of using of e-portfolio systems, and let them know the points of view of the critical opinions regarding the use of electronic portfolios. We can include among the advantages experienced by students, among other things, the individual based knowledge management, the development of target planning, the understanding of the relationships among different types of knowledge, and the possibility of checking on personal educational antecedents. From among the critical statements regarding electronic portfolios we have to mention the questions regarding time management and the opinions which question the evaluation function of the portfolio.

The aim of the second part of the unit is to inform the students about the role of reflexivity in electronic portfolios. It is important to emphasize that we are primarily concerned with the reflectiveness of the students, not forgetting though the role in terms of motivation and evaluation of teachers' reflectiveness. The chapter includes, among other things, the definition of the concept of reflectiveness, and the role of the reflectiveness of the students. We also discuss the dynamics of reflectiveness and the positive aspects of the reflectiveness of the students.

4.2 STUDY MATERIAL

- The advantages of using electronic portfolio
- Criticism formulated against portfolio
- Time management problems of portfolios
- The evaluative function of the electronic portfolio
- The key to the successful electronic portfolio
- Reflectiveness
- Definition of the concept of reflectiveness
- Students' reflectiveness
- The system of viewpoints of students' reflectiveness
- The dynamics of reflectiveness
- Positive aspects of students' reflectiveness

4.2.1 The advantages of using electronic portfolios

From among the advantages of electronic portfolios we have to mention the possibility of media integration, that is, the possibility of visualisation? Of motion pictures, voice/audio and cartoons besides traditional text based, and still picture contents. The suitable document containing metadata can be searched for thus simplifying the search for information considerably. While the traditional paper based portfolio could be seen by a limited number of persons electronic portfolio can be published on a larger scale through the internet. From the characteristics of the files constructing the portfolios it follows that the copy of the portfolio is identical with the original, and thanks to this a number of selective portfolios of presentations can be organised/designed from a various points of views can be produced from it.

George Siemens in his work entitled ePortfolios groups the advantages of e-portfolios in accordance with their types, that is, he distinguishes advantages linked to students', departments', and institutions' portfolios.

According to Siemen the students can profit enormously from creating electronic portfolios:

1. Individual based knowledge management
2. The history/record of the growth of knowledge and acquisition of skills
3. Development of target designing abilities
4. Understanding of relationships between learning experiences
5. Providing future related learning design metacognitive elements on the basis of earlier successes and failures
6. Checking on personal education antecedents
7. From among the advantages related to Faculties (departments) he enlists:
8. The possibilities of sharing contents with other departments,
9. More credible, reliable evaluation (as compared to traditional methods of evaluation),
10. Preparing the students for lifelong learning,
11. Collecting centralised assessments, accessible for the students as well.

Advantages which can be linked to the institution:

1. Creation of values as the students can hold personal control of their portfolios,

2. The relationship/contact between the institution/faculty and the students- institution is not limited to the period of study, instead through lifelong learning it gets closer to lifelong contact.

4.2.2 Criticism formulated against the portfolio

One of the most often formulated criticisms is that the application/use of the portfolio does not compulsorily lead to the earlier mentioned positive effects. In our opinion this is natural, as using a tool in itself cannot guarantee the appearance of all the positive effects instantly, and we can be certain that in the early phase of the introduction of the portfolio only a relatively small number of its positive effects will be felt/sensed/experienced.

4.2.3 Time management problems of portfolios

The second argument against the portfolio is that it can take up valuable time from the already limited time dedicated to education. In Daniel Koretz's and his co-authors' work entitled „Interim report, the reliability of Vermont portfolio scores in the 1992-93 school year" we can read the following: „it goes without saying that the introduction of the portfolio is going to require excess time on behalf of both the teachers and of the pupils. In order to minimalize it, it is indispensable to work out a technical background and methodological support. In our opinion a suitably designed portfolio can save time for the teachers and students through its function of collecting data and the function of evaluation, and thus it can compensate them for the loss of time stemming from its application". We suppose that this will be the task of the institutes of higher education, as we consider that in Hungary providing paid portfolio services on a business terms is not possible for institutes of higher education, nor can they request participation in the financing of portfolios from their students.

4.2.4 The evaluative function of the electronic portfolio

The third critical observation questions the evaluation function of the portfolio. Roughly at the same time with Daniel Koretz's and his co-authors' report, the traditional portfolio system which functioned for about twenty years as final exam in English language was abolished in the United Kingdom. Jay Mathews in his writing entitled Teachers struggle for depth despite tests published on the columns of the Washington Post quotes the words of Dylan Williams, an English specialist in evaluation: „The most equitable exam at the end of the studies of the students is the written examination". Matthews also quotes Lisa Graham Keegan, the

president of the Board of Educational Leaders: „The collection of the works of the students can be incredibly valuable, but it cannot replace the objective and systematic evaluation programmes. Hopefully the time will come when the two methods can be united." This last statements contains the idea that the collective portfolio should also involve the evaluative/assessment function, but it is obvious that electronic portfolio generally is not capable of measuring lexical knowledge, it rather can provide information on and analysis of the existence or lack of certain competencies (which in turn cannot be examined with exactitude by the help of traditional evaluative methods).

4.2.5 The key to the successful electronic portfolio

We consider the fourth critical observation to be very important, as it belongs to the themes carried out in the realm of students' electronic portfolio, and the circumstances are very much similar to those existing in Hungary. In Min Zou's study entitled Organizing Instructional Practice around the Assessment Portfolio: The Gains and the Losses examines students participating in teacher training who had to construct/design their portfolios from their second year to the state examination. The students' portfolios consisted of two parts, first the students had to select from their products the ones that could best document that they managed to meet the requirements of the training during their studies, secondly they had to explain the reasons for their choice in the form of reflexions.

In the course of his questionnaire based collection of data, his direct observations and his conversations with the students found that the attitude of the students towards the portfolio was passive: they found the portfolio yet another burden along with their tasks related to the respective subjects (in the questionnaire section the portfolio received the second worse position, that is it was enlisted as „not too useful"). Yet passivity and the negative enlisting were not the only problems, Zou observed that the students did not choose their products in the proper way – they often chose products which were irrelevant from the point of view of the training expectations/requirements –, and the reflexions giving the reasons for their choices were not suitable either. Zou traced back the problems to three factors:

1. Lack of comprehensive relationship between the portfolio and the other tasks required by the respective subjects, and as a result the aim of the portfolio was not clear for the students.
2. The students did not have adequate understanding of the importance and assessment methods of the portfolio and as a consequence the students lacked motivation for self-assessment.

3. The complex training requirements were extremely concisely formulated, and the students could not comprehend them adequately.

In our opinion the observation formulated in Zou's study can provide the key to successful electronic students' portfolios: Yet it is not sufficient to use the portfolio as yet another „fashionable" tool if we want to be successful. The efficiency of introducing it depends on the way in which manage to integrate the students' electronic portfolio into the present form of training in such a way as to let the students see clearly that the aim of the portfolio is to document the existence of the competencies formulated in the requirements, for which the portfolio is the best solution because refined for the examination of these competencies.

4.2.6 Reflectiveness

One of the most important elements of the electronic portfolio is reflectiveness. Without reflectiveness the electronic portfolio is not more than an on-line collection of documents. Yet it is not that simple to define reflectiveness, it is in fact a difficult task. One of the reasons for this is that the concept can be examined from a number of points of view and the meanings do not cover one another exactly, another reason is that there does not exist a precise pedagogic method by the help of which reflectivity can be measured. The following definitions are mainly focusing on the teachers' self-reflectiveness, but we attempted to select them so they could be applicable to the students' reflectiveness as well.

4.2.7 The definition of the concept of reflectiveness

In Gustafson's and Bennett's work entitled Promoting Learner Reflection: Issues and difficulties emerging from a three-year study published in 2002 reflectiveness is defined as a meditation about experiences collected in the near past which concentrate on the similarities, differences and relationships of the elements of experience.

Ildikó Lenkovics in her work entitled „Learning teaching" quotes Iván Falus's and Magdolna Kimmel's definition: reflectiveness makes possible the dialogue between the situation and the person reflecting on it, so it is nothing else but a taking into account of the influences of our activity onto ourselves and others. For the assessment of one's own praxis/activity there is need for inclination, ability, method, and certain critical personal characteristics are also indispensable. Professional knowledge, perfecting of one's affinity can be learnt, reflective thinking can be developed. Reflectiveness is an extremely effective principle as far as the changing of one's professional knowledge is concerned. To put

it in simple terms, the teacher creates „its own professional knowledge and competencies".

As opposed to this in his work entitled „How We Think" published in 1997 Dewey places emphasis onto activity: „reflectiveness is an active, continuous an careful examination of the knowledge material not yet solidly built into our a conscience on basis of our earlier knowledge and our conclusions regarding future".

In Schön's often quoted work entitled The Reflective Practitioner reflectiveness is the development of strategies capable of handling complex, unstable and peculiar situation of teaching practice.

As we can see reflectiveness is not a new component of education as it has been a well-known concept of the process of becoming a teacher for a long time. As John Dewey in his work entitled Democracy and Education: an introduction to the philosophy of education published in 1966 puts it: „…we do not learn from our experiences, but from our reflections based on our experiences …"

4.2.8 Students' reflectiveness

We intend to concentrate mainly on the students' reflectiveness, when discussing the electronic portfolio, but we do not intend to ignore the role of teachers' reflectiveness with regards to motivation and assessment either. The students are supposed to view the learning process through bifocal lenses while designing their portfolios. By this we mean that the students have to concentrate on actual tasks, but at the same time they have to be aware of the output requirements in the context of the whole training, and should be aware of the role the respective task plays as far as the aims of the whole training are concerned. This perspective is the basis of reflectiveness.

4.2.9 The system of views of the students' reflectiveness

The student generally takes into consideration the following in the course of his or her reflections:

- What were the tasks or problems he or she intended to solve by performing certain activities?
- From among what possibilities could he or she choose (to what extent was he or she free to choose)?
- Did he or she succeed in performing a task or solve a problem?
- Knowing the results did he or she make the right choice from among the accessible ones?

- What problems di he or she encounter while performing the task?
- What would he or she do in a different way?

Last but not least:

What is the role of the knowledge and experience acquired while performing the task or solving of the problem in meeting the requirements of training output.

4.2.10 The dynamics of reflectiveness

Reflectiveness is closely linked to experiences, but the process is much more complex: it starts with the identification of the problem which is followed by the phase of performing the task. Following the act itself come the analytical observation and reflective synthesis.

The process is repeated following every relevant task during the training process and finally the student creates his or her own/personal reflection regarding the whole of the training. This reflexion differs from the earlier ones as its primary aim is – in optimal cases – the reflective presentation of meeting the requirements of the training.

The difference is also visible in the fact that while in the case of the former reflectivity the target audience was the student who wrote it, the latter might be presented to a larger public: the viewpoint of selection is at least as relevant in the case of selective portfolios as the documents which are selected according to specified points of view.

The points of view are defined on the basis of acquired knowledge, competencies, skills and training requirements earlier described by the student. From the above it follows that we can state that selective portfolio is the collection of documents and reflections selected with the intention of presenting the process by which the aim of achieving the training can be reached, and it is accompanied by the oral reflection of the students during its presentation.

4.2.11 Positive characteristics of students' reflectiveness

Reflections motivate the students to observe their efforts during the educational process and the consequences of their activity. It also can help them understand the relationships between the completion of the learning tasks and the learning strategy rendering the acquisition of knowledge more efficient and contributing to the development of self-knowledge.

Teachers can also profit from reflections as it can help the select the most efficient pedagogic tools and avoid the less efficient ones.

With the help of reflectivity the students can more easily find the cause of their poor results in a given subject. Experience shows that the students used to blame themselves, the teachers or the material without reflectiveness.

It can be important for the students that their opinion counts: the observations formulated in the reflections can help in rendering the educational process more efficient, of course in a suitable form.

4.3 SUMMARY, QUESTIONS

4.3.1 Summary

In the fourth chapter of the book about electronic portfolios the student got acquainted with the advantages of using the electronic portfolio, and the criticism formulated against the electronic portfolio. From among the advantages experienced by the students we can mention individual knowledge management, development of aim planning, understanding of the relationship among learning experiences, the possibility of checking upon their personal learning antecedents. From among the critical statements regarding the electronic portfolio we have to mention questions regarding time management and the opinions which question the evaluative function of the portfolio.

In the second part of the chapter we introduced the reader to the role of reflectiveness in the context of electronic portfolios. We concentrated primarily onto students' reflectiveness without ignoring the motivational and evaluative role of teachers' reflectiveness. In this chapter we also discussed the definition of reflectiveness and the role of students' reflectiveness. We also discussed the dynamics of reflectiveness and positive aspects of students' reflectiveness.

4.3.2 Self-assessment questions

1. What are the advantages of the use of electronic portfolios by students?
2. What are the advantages of using electronic portfolios for departments?
3. What are the advantages faculties can experience if they use electronic portfolios?
4. What problems can electronic portfolio cause, as far as the time management of education is concerned?
5. What problems can arise with regards to the evaluative function of the electronic portfolio?

6. Define the concept of reflectiveness!
7. Enlist the characteristics of students' reflectiveness!
8. Enlist the system of the viewpoints of students' reflectiveness!
9. Speak about the most important characteristics of the dynamics of reflectiveness!
10. Mention the positive aspects of students' reflectiveness!

5. LESSON: HANDLING OF DIGITAL DATABASE IN THE PORTFOLIO

5.1 AIMS AND COMPETECIES

The aim of this chapter is to introduce the students to the knowledge regarding the handling of digital database indispensable for the use of portfolios. In this chapter we are going to touch upon the characteristics of digital text based documents, digitalization and the OCR technique. We are going to say a few words about the creation of still pictures, their characteristics and the digitalization of still pictures. We are also going to speak about the production of motion pictures and the digitalization of analogue motion pictures. We are also going to discuss the major characteristics of digital voice/audio among the digital database (creating digital audio database, types of digital audio database, and the digitalization of analogue audio materials).

In the second part of the unit we are going to discuss the procedures connected to digital database, including the creation and storing of digital text based documents, digital still pictures, and digital motion pi audio material.

5.2 STUDY MATERIAL

- Digital data
- Basic concepts related to digital documents
- Text based digital documents
- Digitalization of text based documents, scanners, OCR
- The role of colour depth
- Sensibility region
- The resolution of images
- The contact surface
- Hand scanners
- Flatbed scanners
- Drum scanner
- Optical character recognition (OCR)
- The process of character recognition
- Limits of character recognition
- Digital still pictures

- The creation/production/design of digital still pictures, its types
- Digital still pictures produced with the help of computers
- Digitalization of still pictures
- Digital motion pictures
- Producing digital motion pictures
- Digitalization of motion pictures
- The digital audio material
- The production of digital audio database, its types
- The digitalization of the voice/audio material
- Copying digital database
- Copying text based digital documents ¤
- Copying digital still pictures
- Copying digital motion pictures
- Copying digital audio materials
- Storing digital databases

5.2.1 The digital database

The expression digital database is widely used in informatics, most often as the synonym of file. We can often come across the expression digital document as well, which is used with the same connotation as the expression files. In our opinion database and file can be more or less adequately used as synonyms on the basis of their connotation, but the relationship between database and the document implies a sense of hierarchy: the database is a larger concept (it includes programmes that can be run, the data files which contain no information for the human mind etc.), while the contents of the digital files can be generally limited to, can be reduced to information provided by texts, pictures, audio material or motion pictures.

If we approach it from the technical point of view the situation is reversed: the file is a more limited category, which can be characterized independently from its contents, in relation to its size, type and other attributes. As opposed to this the document (consider the HTML documents for example) can contain information on metadata (keywords, copyright, number of version etc.) as well.

Users of e-portfolio systems usually distinguish the elements of the portfolio on the basis of the contents of the document so it seems more adequate to use the term digital document instead of digital database definition in this case.

If we want to have a closer look at the characteristics of the digital document it is worth examining the etymology of the word as well: the word document comes from the Latin verb „docere" meaning „teaching, educating". The term digital document is widely used; in spite of the fact that in a stricter sense it is only the documents created in a digital format belong to this category, which exist as digital signs from the moment of their creation. In fortunate cases storing, transfer and, a processing preserve this format, and we only re-transform them into documents consisting of analogue signs which can be interpreted by people only in the course of visualization.

In a larger sense digitalized documents, which were originally analogue initially but were digitalized for the sake of safer storing, transfer and transformation, are also included in the definition of digital documents.

The course of digitalization of different types of documents can differ, a situation we are going to discuss later.

5.2.2 Basic concepts regarding digital documents

As we mentioned it in the previous section the digital documents can be enlisted into different groups according to/on the basis of their contents. On the above basis we can use the definition of database, or more often software definition, as those intellectual properties are called software's[3], with the help of which we can use the potentials and possibilities included into the hardware. It follows from the nature of the software that materially it cannot be grasped. In this sense the concept of the software is not linked exclusively to the computer, as we can call our video recordings made with the help of digital video recorder software, although they cannot always be processed with the help of a computer. If we interpret the software in a more restricted sense, as a programme which supports functioning of the computer, or as a data intended to be processed by the computer, storing, or visualization of materials created with the help of the computer, we get quite close to the concept of the file: the unit of the storing unit situated on the background storing system of the computer is the file, which can be a data (it can carry an extremely great variety of contents, we are primarily dealing with the text, still picture, the audio material, and the motion picture) or programme.

The definition of the programme[4], which is occasionally – in certain cases mistakenly- used as the synonym of software: is the series of orders addressed to the computer , which decides the way in which the

[3] http://ecdlweb.hu/index.php?title=A%20számítógép%20működési%20elve

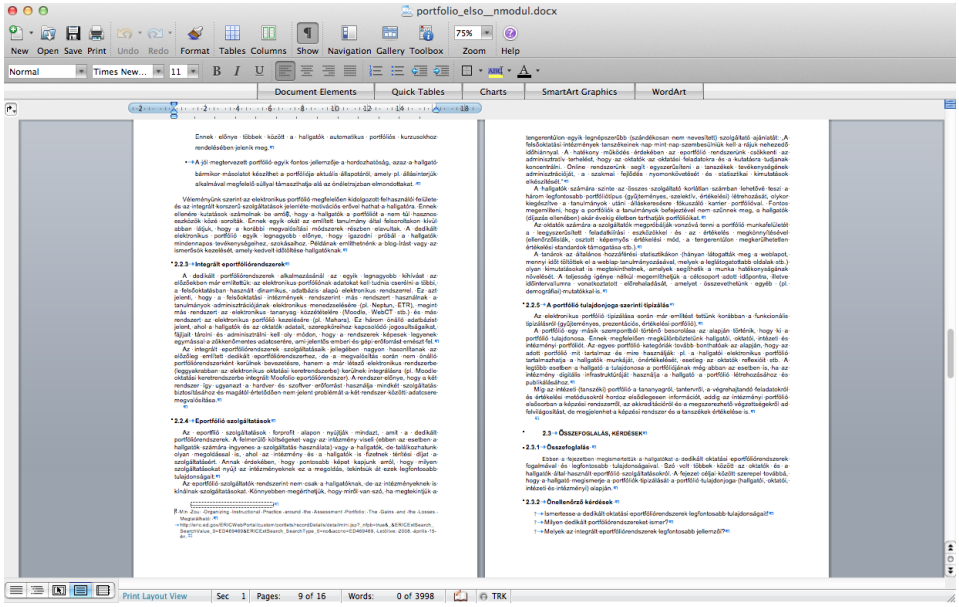
[4] http://ecdlweb.hu/index.php?title=A%20számítógép%20működési%20elve

computer is supposed to perform a given task on the basis of a specified algorithm. We also call the source programme worked out by the programmers, which stores both the description of the task a format that can be interpreted by the user and the code, the computer is actually performing: the programme that can be activated, the programme which is created from the source programme with the help of and cooperation of special programmes – translator programmes.

5.2.3 Text based digital documents

The starting point of a digital text is marked by our thoughts which we write into the computer aided by a certain word processor with the help of a keyboard. We usually fix the format of the text we are writing (quite complicated structures and layouts can be produced as well: headings and footnotes, margins and page numbers etc.), perhaps we attach to it some illustrations, then we save it on the mass data storage or we print it. One of the great advantages of the electronically stored text is that it requires a very tiny space, an A4 format one page text, with no illustrations or more complicated formatting elements is usually 10-50KB in size.

In the case of text based documents – in contrast with audio materials and motion pictures – we usually employ the same software for the recording of the text and for its editing. Nowadays the most widely sold software/text/word processor is Word which belongs to the programme family of Microsoft Office. MS Word has spread to such an extent that products of the rival word processors (Open Office, Star Office etc.) have to be able to import texts written with the help of MS Word and they have to be able to export in Word compatible format.



2. Figure: Word document

The application which can be also used for Microsoft Word text and editing of documents, which besides the general functions of word processors (character-, paragraph-, stet formatting, transfer of texts, copying, inserting etc.) – has to be handled with appropriate care due to the specific qualities of the Hungarian language – is a programme capable of spelling and corrections, in which charts, drawing, organic diagrams can be produced and illustration can be inserted etc. The Word WYSIWYG (What You See Is What You Get) editing, that is the document being created is identical with its printed version. We can save our documents, among other possibilities, without formatting as simple t (.txt), or as formatted Word documents (.doc), or as website formats (.html).

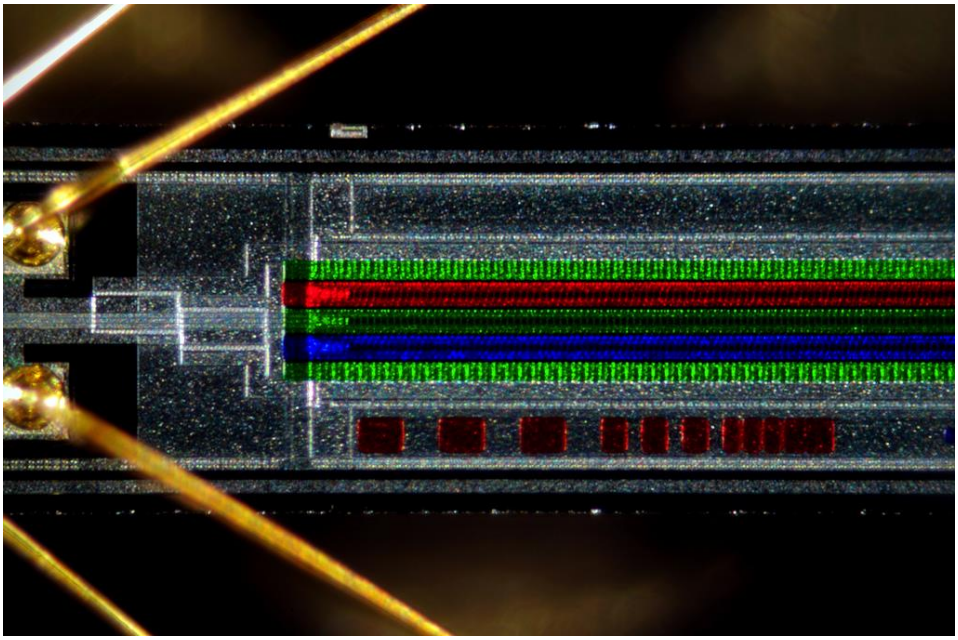
Owing to the advantages of text storing and of the text processing it seems understandable that we might wish to transform our paper based documents into digitally formatted ones.

5.2.4 The digitalization of text based documents, scanners, OCR

The aim of scanners (might be translated into Hungarian as site-readers) is to digitalize paper based (two dimensional) documents. The optical/electronic transformer of the scanner (also called CCD, viz. Charge Coupled Device) detects the light reflected by the document lit by

the reading head, and on the basis of the intensity of the light falling onto the basic points produces its analogous electronic picture, which has to be digitalized in its turn in order to present a form which can be handled by the computer.

The elementary/basic points re called pixels, the reading of the contents of each and every pixel, processing and digitalization is performed on an individual basis. The greater the number of pixels the richer in details the image we get will be. The richness of details of an image is expressed by the resolution of images, the unit of which is the DPI that is Dot per Inch. For example a scanner with 1200x1200 DPI can differentiate between 1,200 image points in vertical and horizontal directions on a 2,54cms length. The capacity of the tools for the resolution of images which are designed for use in offices is generally around 1200-2400 DPI. The values specified in the case of some cheap tools, e.g. the unrealistic 9600x9600 DPI value do not refer to the optical resolution, but to the interpolated value produced by way of software's.



3. Figure: The CCD of the page scanner

5.2.5 The role of colour-depth

Colour depth shows how many bits describe one pixel on an image. The higher this number is, the more colour-shades the scanner can distinguish/differentiate.

The scanners in circulation are usually capable of 24 bits colour-depth, which means that in the case of the scanning of collared images one pixel is represented by eight bits per one colour-channel that is the three colour channels may have 256 shades – thus (256x256x256) the result amounts to 16, 7 million colour shades.

Nowadays we have scanners which are capable of 14 or 16 bits per channel; this results in 42-48 bits colour depth. Yet this does not result automatically in better quality images. Some producers „increase" the quality/punctuality of the colours with the help of software's, and it can also happen in the case of original, hardware based techniques that the producers employ the higher bit values to hide the image „noise" of the poor scanning mechanism.

If we exceed the 24 bit limit the size of the database and the period needed for reading increase considerably and the extra shades of colour does squeezed out are outside our capacity to sense them, which means that the result is usually not in proportion with the time needed and the storing capacity used for it. What is more, most contemporary monitors are of 24 bits, which means that, we cannot visualize the extra colour information.

5.2.6 Sensitivity region

References to sensitivity region (also called region of dynamics) are less frequent: this parameter measures the regions which can be recorded by scanners on a scale from zero to four. This value does not have too much relevance for average users, but it can provide reliable information regarding the quality of the scanner in for professional users (printing houses).

5.2.7 The resolution of images

The sensors of the CCD are capable of sensing the light of one point at a time. The name of this point is pixel. The horizontal (decoding) gives the number of sensory points which are to be found in the CCD. In the course of the scanning manoeuvre a stepping engine moves the head which is equipped with the source of light and the sensors. The head should be moved continuously and at constant speed if possible.

The size of the steps is decided with the help of the vertical resolution of images. The more points we use to create an image, the more they converge, and thus the quality is also improved.

The resolution of images and the quality of the scanner as well as its price are determined by the electronics, the optics, the filters and the engine control. The physical capacity for resolution of the scanners

cannot be simply extended due to its technological limits, and this contributes to the increase of the price of the tool.

In certain cases the possibility of a simulacrum of increase of resolution through the use of interpolation. In the course of interpolation the scanners are trying to figure out by the help of some mathematical methods the point of images situated between the digitalized points and they place them in between the points of the real image.

If the physical resolution 600*300 is dpi, and the interpolated one is 2400 dpi, the tool interpolates three points among every point of the real image. The optical resolution of modern scanners is 600-1200 dpi; greater values can be obtained with the help of interpolation.

5.2.8 The contact surface

Before the turn of the millennia scanners transmitted data onto/towards the computer with the help of parallel port, individual contact cards, or sometimes by using SCSI interface.

Nowadays the use of USB contact surface is the most widely spread one. Its advantage is the greater speed of transfer (which is not always true in all cases compared to SCSI surfaces) and the relatively simple installation. Scanners which can be connected to parallel ports usually contain a connection/link to the printer, so the scanner and the printer can form a chain. Scanners can communicate with the graphic programmes running on computers through the TWAIN interface (Technology Without Any Important Name).

4. Figure: SCSI scanner and card

5.2.9 Hand scanner

The simplest form of scanners is the hand scanner used in libraries and shopping centres barcode reader equipment, which is not capable of transferring graphic data (still images/pictures).

5. Figure: Hand scanner

Another variant of hand scanners is capable of reading images and texts as well. The sensor cans percept a stripe of about 10 cm. The scanner has to be moved along the target document smoothly by hand. One of the disadvantages of hand scanners is that the spectrum of the reading is narrow and it is sensitive to movements during its handling. The image read by a hand scanner can be distorted by uneven movements or differences in speed.

The third variant of the hand scanners the size of the scanners is identical with the wider side of A4 documents (about 29, 7 cm). It passes the document to be used between two rolls, and the page is read in the meantime. The tools stores the documents in its memory, and usually it can be transferred to computers with the help of USB contact.

5.2.10 Flatbed scanners

The flatbed scanner can be compared to a copying machine. Nowadays it is the most widely spread type of scanner. It is capable of reading A4 and A3 size black and white or coloured documents.

6. Figure: Flatbed scanner

In most cases it functions on the principle of sensing reflected light, but there is a type which filters light. It contains built in source of light. The motion of the popper or in the case of certain types of the source of light is automatic.

There are types which can be complemented with slide readers, and master photo negatives, slides can also be read with its help. It is most often used for reading office documents and photographs.

5.2.11 Drum scanner

7. Figure: Drum scanner

In the case of the drum scanner the page, film, or slide is recorded onto a rotating drum lit from the inside. It is suitable for the high quality reading/recording of large sized, black and white, coloured documents and films. Types working on the principles of penetrating and reflected light are available as well. The image has to be recorded on the surface

of the drum, which has to be rotated at a great speed to achieve it. In the meantime the breading head is punctually/precisely/accurately moved and the sensor reads the image on a spiral route.

5.2.12 The Optical Character Recognition (OCR)

The definition OCR comes from the name Optical Character Recognition (optical identification). Word processor programmes (e.g. Microsoft Word) are not capable of reading the pixel graphic image (it got its name from the fact that it consists of pixels) created as the result of the scanning process. In the course of character recognition we are trying to identify the text contents of an image.

In brief, in order to create text files from a pixel graphic image, the programme for the optical character recognition examines the image minutely and decides on the position of the possible sequences of letter, and then compares the elements of the image with the letter- patterns stored in the programme line by line, letter by letter. It creates a text file on the bases of the recognized characters, which is never identical with the contents of the image of the text document, as the efficiency of the recognition is never 100%, in spite of the fact that since the appearance of the OCR relatively primitive programmes in the 50s they have developed a lot and in the case of larger texts they are more efficient than retyping the text.

5.2.13 The process of character recognition

If we want to understand the process of character recognition a little better, we have to mention that character recognition can be performed by way of a number of methods. In all instances we are going to need elements of etalon which are going to store the information regarding the individual memorized characters. We can decide to which character the character being examined resembles to the greatest extent by way of comparing it to the etalon elements.

In the case of contour designation we compare the particular characteristics of the contour of the character to the etalon elements.

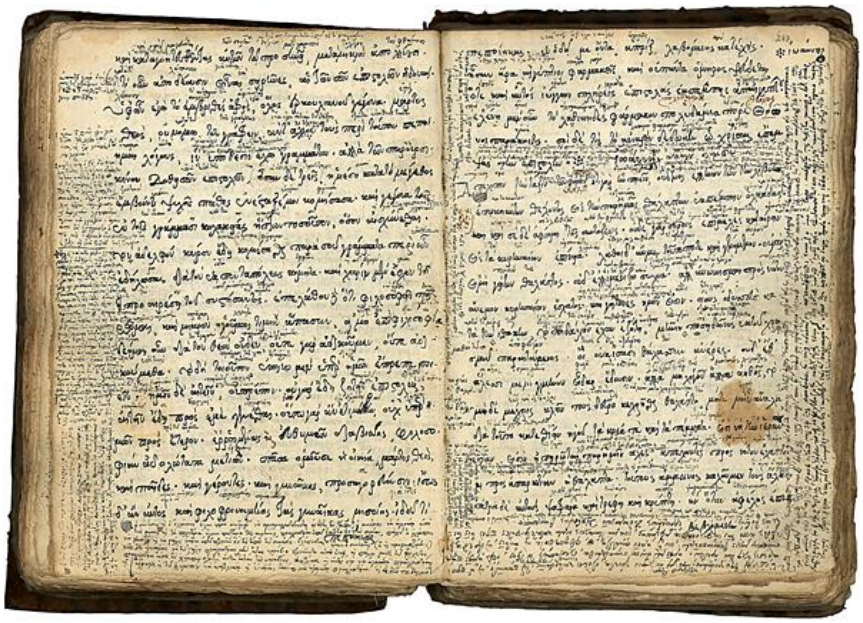
In the case of the specification of the skeleton we define the skeleton of the character, and on the basis of the information provided by the number of points of bifurcation on the skeleton and their position and with the help of information obtained from their position we can state about a character, which etalon it is the closest to.

In the case of recognition by the help of Walsh-transformation we store the characteristics of a character with the help a matrix produced with the help of Walsh transformation in a vector, and we are looking for

the minimum distance of this vector related to the vector related to the etalon element. The etalon element the in the case of which the distance is minimal is the etalon element which resembles most to the recognizable one.

5.2.14 The limits of character recognition

There are documents in the case of which optical character recognition cannot be performed. This may have a number of reasons, e.g. the document is in a bad physical state, its surface is dirty to such an extent that in spite of intervention supported with image manipulation software's the programme cannot identify it or it can identify the characters with extremely low efficiency.



8. Figure: Document with unknown sign system

There are documents which cannot be transformed with the help of the OCR software into text based documents, whose sign system cannot be transformed into any of the sets of character of the languages known by the tool (e.g. pictography). In such cases we have to put up with the archiving of the image of the given document provided by the available technical conditions.

5.2.15 Digital still images

Digital still images play an ever increasing role in our days. As a very often quoted Chinese saying refers to it: „An image is worth one thousand words". The culture of the 21st century is continuously shifting towards a culture of visualization. The media are broadcasting such an incredible amount of information day by day that it would be impossible to transfer it in text format, only still and motion images are capable of this. Let us just consider the advertisements: we just throw a glance at the advertisements provided by television, on the Internet, the giant posters in the streets, they have to convince us, consumers, in this short interval about the existent or non-existent positive characteristics of a product, and to create our desire to possess it.

The case is similar in education as well: Comenius called attention to the importance of illustration back in the 17th century. Concise image formulation has an extremely important role among the citizens of the 21st century predestined to lifelong learning by information society?

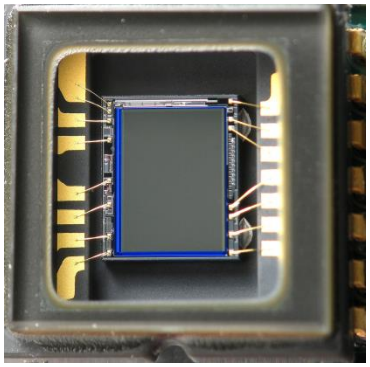
5.2.16 The creation of digital still pictures, their types

The digital camera is the most widely spread tool for creating digital still pictures nowadays. We can observe a sharp fall in the price of digital cameras along with the improved technical parameters similarly to the general tendency in the case of other tools of information technology. As a result of this tendency tools of excellent quality capable of, relatively great relevance tools became widely available.

9. Figure: Digital camera

As far as its function is concerned the digital camera resembles very much to the scanner. Recording of the image and processing reaches the interior of the camera through the objective is provided by the CCD

(Charge Coupled Device) that is the process is handled by way of the optical- electronic sign transformer.

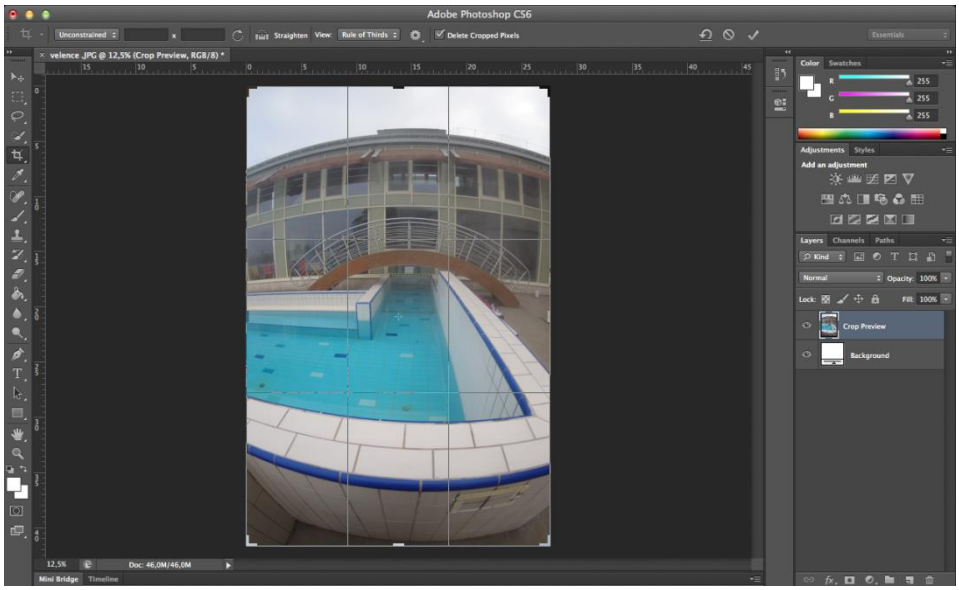


10. Figure: CCD

While in the case of the scanner it is useless to increase the number of the basic points of images (pixels) of the CCD over a given value, this limit is far in the case of digital cameras: models which exceed the number of pixels of earlier ones are produced in fast sequence. The image produced by the CCD is digitalized in this case as well, they store it on small size hard disc, and in most cases they are transferred onto computers to the computer to have it processed.

5.2.17 Still pictures produced with the help of computers

Another tool used for creating digital still pictures is the computer. While digital cameras produce exclusively pixel graphic images (the definition comes from the fact that the images are constructed out of elementary image points, called pixels), the computers are mainly used for producing so called vector graphic images.



11. Figure: Pixel graphic image in the Photoshop image processing programme

The most relevant characteristic of vector graphic images is that they are not constructed out of pixels, but the objects represented by the image are described by the help of functions: the description of a 4cms diameter circle situated in the geometrical centre of an A4 sheet, in the simplest possible situation contains besides the description of the parameters of the A4 sheet the description of the centre of the circle, its diameter, the colour and the thickness of the contour of the circle and the colour of the circle.

One of the consequences of this kind of visualization is that in nearly all cases less space is needed for the storing of the file than in the case of a pixel graphic image of the same character. Another relevant characteristic is that the vector graphic images can be enlarged or minimised, as desired and this does not affect quality. As opposed to this a pixel graphic image consists of a given number of pixels, the proportion of enlarging it is not optional, greater enlargement renders the elementary points of the image visible and this results in the so called pixeling phenomenon.

5.2.18 The digitalization of still images

The digitalization of still images and scanning played a much greater role before the spreading of digital cameras. A few years ago if we needed the image of a processor, we photographed it with the help of a

traditional camera, we, a developed a photography, enlarged it and scanned it with the help of a scanner. The process of scanning is entirely identical with the initial steps of the digitalization of text based documents with the exception of the optical character recognition of course.

5.2.19 Digital motion pictures/images

The history of the emergence of digital motion images can be traced back to the mid-90s years, when side by side with Sony and Panasonic more than 50 companies reached an agreement with respect to the standard pattern of the Digital Video cassette.

12. Figure: DV cassette

This system was used for professional purposes in the beginning, due to its extremely high price. In the second half of the 90s the cameras became cheaper and cheaper and of better and better quality, and by now they became cheaper that their analogue counterparts which are of lower quality and are less practical.

The advantages of the DV system can be summed up as follows:

1. Better resolution and fidelity to colours
2. Simpler computer processing
3. At least Audio CD quality voice
4. Smaller size

5.2.20 Production of motion pictures/images

Following Digital Video, mainly with the support of Sony, Digital 8 (D8) format appeared which was intended as a sort of transition between the analogue and the digital video systems for professional video experts. D8 cameras can play earlier analogue system based HI8 and V8 cassettes, but they can only record in D8 format.

Following D8 MiniDV, which is the miniature version of DV, appeared, and all its characteristics (width of tape, speed of tape, sign format) are identical with DV. Its production was necessary to enable the production of smaller size video cameras.

Nowadays we mainly record motion images on the memory cards digital cameras, as it is relatively simple to transfer them onto computers, than linear (cassette) analogue, or digital versions. In the case of these mediums the great size of the file and the coding of the motion image can be problematic. These problems have to be considered as portfolio systems usually limit the size of the file to be uploaded and occasionally its type as well.

In digital video cameras, similarly to digital cameras and scanners optical transformation is provided by CCD (Charge Coupled Device, annexed tool) or CMOS (Complementary Metal-Oxide Semiconductor that is a complementary metal oxide semiconductor). In these tools, - as opposed to the digital cameras – it is not advisable to increase the number of pixels over a certain limit, as the aim is to create a television quality image containing around half a million pixels, and for this reason before recently they did not use CCD containing more than containing more than 800,000 pixels but with the appearance and spreading of the HD standard (High Definition, 1920x1080 pixel) CCDs containing more millions of pixels emerged as well.

5.2.21 Digitalization of motion images/pictures

If we intend to archive or process our video files with the help of a computer the first step is to transfer the film into the computer. This can cause problems because the exterior links of analogue video recorders and cameras (composite, svhs, scart etc.) cannot be directly connected to the entry points of the computers. This means that we need to insert some sort of special tool, also called digitalizing card, which transforms the analogue video into a digital one in most cases. This tool provides the link between the computer and the video recorder/ camera and the computer.

13. Figure: The iMovie processing software

Digitalizing cards can be grouped first on the basis of whether they are situated within the computer boot or outside it, we can distinguish interior and exterior digitalizing cards and they also can be grouped on with respect to their use for the processing of analogue or digital (or perhaps both) sources.

14. Figure: Digitalizing card

If our source is digital, this naturally means that we do not need digitalization, the motion picture can be adapted with the help of a computer following slight modifications, or in certain cases (in the case of

recordings on DVD, memory card, cameras using hard disc) we do not have to transform them.

5.2.22 The digital audio material

When we speak about the digital Audio-CD comes to most people's mind first. The standard created under the auspices of Sony and Philips is nearly 30 years old, and we still use it nearly every day.

Although SACD (Super Audio CD), DVD-A (DVD-Audio), together with MP3 and the condensed FLAC formats will eliminate it one day, it is likely that similarly to the collectors of Bakelite records many people are going to insist on their old CDs.

5.2.23 Producing digital audio materials, types of audio materials

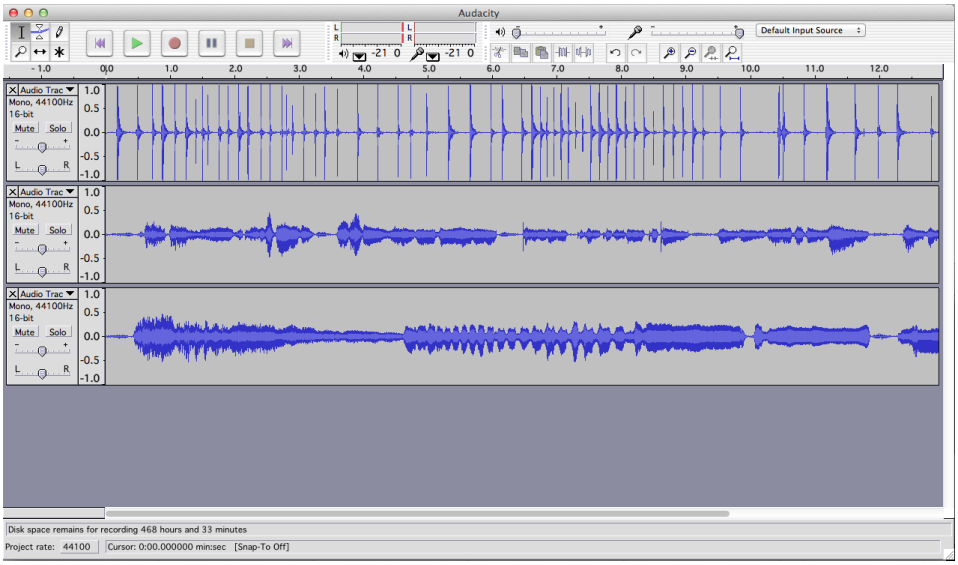
The only disadvantage of Audio-CD is that it was impossible to record voice on it outside the studios for quite a long time. The first tool capable of digitally recording voice was DAT (Digital Audio Tape) but due to its high price and linear character it did not become popular.

The next tool, with reasonable price was MiniDisc developed by Sony, which made possible the production of easily portable small sized discs 7 cm in diameter.

Still it wasn't these two latter tools that played the greatest role in the history of digital voice recording in a curious way, it was a procedure used for condensation of motion images, a side product of MPEG 1 (Motion Picture Experts Group) the MP3 condensation of audio materials, which approaches Audio-CD quality, but made possible the creation of files five times smaller. As a result the storing of digital audio files became much more economical, the storing of 6 hours good quality audio material became possible on a single CD of average capacity, and the size of the file made possible the transmission of the MP3 files on the internet, which, understandably, provoked the criticism of the copyright authorities.

5.2.24 The digitalization of the audio material

In a physical sense voice is a mechanical oscillation which needs, some sort of transmission medium for its circulation. To transform the oscillation into electronic sign we need a transformer. We digitalize the electronic sign that is we obtain discrete value digital signs from an analogue sign which is continuous in time and value, by way of assessing temporary samples, following quantitation.



15. Figure: The Audacity audio processing software

In computer environment the task of digitalization is performed by the voice card of the computer, the voice card creates the series of digital signs in response to the analogue audio signs provide by the microphone or linear input.

Naturally we need digital-analogue transformation if we want to play the audio material, and this is also provided by the voice card of the computer.

5.2.25 Copying digital materials

One of the advantages of digital documents is that copying them is simple, and the original and the copy are nearly always identical.

5.2.26 Copying text based digital documents ¤

As we produce our digital text based documents with the help of a computer, we can say that the text based document stored on the driver of the computer and its copy can be regarded as being entirely identical in quality, and we can distinguish them only on the basis of the information linked to the file (time of creation etc.).

5.2.27 Copying digital still images

In the case of digital still images the document can be created on the memory card of the digital camera, or in the memory of the computer and

its background repository. While in the former case the images stored on the card can be regarded the original ones and the ones stored on the computer are copies (this can even mean difference in contents as some photographers only store the images only in a special format which can be processed with the help of a suitable software to obtain the best possible shot), in the latter case we can only distinguish the original from the copy with the help of the information linked to the file.

5.2.28 Copying digital motion images

Digital motion images can appear in digital linear form (e.g. DV) and in digital non-linear form (motion picture file, DVD-Video etc.). Copying of linear digital motion pictures can be performed without the help of a computer (e-g- with the help of two digital video players); in this case the two films are going to be in all cases entirely identical in all respects (if the two cassettes are similar in all respects). We can also state in the case of copying motion pictures that the copy and the original are identical in quality, and again the information linked to the files can help us identify them. By copying pre-recorder DVD-Videos we could produce copies identical with the original only in studio environment. The main reason for this is that for the average users neither the raw material nor the technology used for industrial production of these records are available for the users and thus the original and the copy are going to differ in many respects.

5.2.29 Copying digital audio materials

In the case of digital audio materials the document can be created on the data carrier of the digital audio record (MiniDisc, DAT cassette, memory card etc.), or on the memory of the computer and its background repositories. While in the case of the former the audio materials recorded on the data carrier can be regarded to be the original ones, and the variants stored on the computer can be regarded to be the copies, in the latter case we could only distinguish the differences between the original and the copy could only be distinguished with the help of the information linked to the files.

When copying pre-recorded Audio-CDs – like in the case of DVD-Videos – copies identical with the original can only be produced in industrial environment. The main reason for this is that neither the raw material, nor the technology with the help of which these records are produced are available for the user, so the original and the copy are going to differ in many ways. This is true in spite of the fact that as recordable CD-k became cheaper, there is the possibility of copying the entire material of pre-recorded data carriers, and when we play them

they provide nearly the same experience with the original, but these records/discs cannot be regarded identical neither from the point of view of durability nor from the point of view of quality.

5.2.30 Storing digital database

From the point of view of storing the exponential increase of the quantity of digital documents create ever greater problems. The problem is partly caused by the fact that there is need for a storing technology which might be satisfactory both from an economic point of view (the sum needed for the storing of one unit should be low), and from the point of view of safety (the safety of the stored materials should be guaranteed for a conveniently long period of time). On the other hand tracing back the data should be possible, that is the storing technology should make it possible to fast finding of the data and their description with the help of metadata. Metadata could be best described as data about data, that is key words and other relevant information which are organically linked to the data and can be found, searched for. The two most widely spread meta-systems are the Dublin Core (for more see: http://www.dublincore.org), and Learning Object Metadata (for more information see: http://www.imsglobal.org).

Unfortunately, a system which would be optimal from all points of view is not available. The methods by which we can store our data for a long time safely (e.g. magnetic tape storing units); do not make possible the fast search for the data. The hard discs suitable for fast search are too vulnerable and the less expensive optical modes of storing (DVD, BluRay) are not reliable on the long run. The magnet optical discs which are able to store safely data for decades are extremely reliable, but their capacity is too small, so we can only achieve optimal solutions only by employing more systems jointly? (e.g. hard disc system for searching the documents, of which we make safety copies on a regular time basis with the help of magnet tape storing units).

5.3 SUMMARY, QUESTIONS

5.3.1 Summary

The primary aim of the chapter was to provide the students with knowledge regarding digital data processing indispensable for using the portfolio. In the course of the chapter we discussed the characteristics of text based digital documents, their digitalization, and the OCR technique. We also mentioned the creation, characteristics, and digitalization of digital still images. We also spoke about the creation of digital motion images and the digitalization of analogue motion images. We also

examined the main characteristics of digital audio material/voice (the production of digital audio materials, their types, and the digitalization of analogue audio materials).

In the second part of the unit we discussed the procedures linked to digital database, including the copying and storing of digital text based documents, digital still images, digital motion images and digital audio materials.

5.3.2 Self-assessment questions

1. Enlist the types of digital databases you know!
2. Characterize the basic concepts related to digital documents!
3. Discuss the characteristics of producing; copying and storing of text based digital documents!
4. Discuss the characteristics of producing, copying and storing digital audio database!
5. Discuss the characteristics of producing, copying and storing digital still images!
6. Discuss the characteristics of producing, copying and storing digital motion images!
7. Discuss the essence of optical character recognition (OCR)!
8. What do you know about scanners?

6. LESSON: COPYRIGHT AND PERSONALRIGHTS RELATED TO PUBLICATION

6.1 AIMS AND COMPETENCIES

The aim of the seventh chapter is to introduce the students to the basic knowledge of law related to copyright. Through the discussion of this theme we are going to get acquainted with works which fall under copyright regulations and ones that do not. We are going to discuss who is entitled to copyright and what directives regulate the publication of individual works in collections.

In the second part of the lesson we are going to say a few words about the practice of individual rights and general rules regarding property rights. The theme also occasions the discussion of the right of multiplication, the right of publication, the right of public lecturing, the rights of transferring the work to the public, the right to adapt a work. We are going to discuss some legislative aspects regarding works created by employees and other similar legal statuses and the characteristics of the period of protection.

6.2 STUDY MATERIAL

- Copyright
- Copyright works
- Non-copyright works
- Who is entitled to copyright?
- Copyright of collections
- Personal rights? Personality related rights
- Practice of personal rights
- General characteristics of rules regarding property ownership
- The right to multiply
- The right of dissemination
- The right to public lecture
- The right to transfer the work to the greater public
- The right to adaptation of a work
- Works created by employees or under other similar legal conditions
- The period of protection

6.3 COPYRIGHT

Copyright is regulated by the Law of 1999/ Act LXXVI.: „Updated regulation of copyright, which can keep pace with technical development plays an important role as an incentive for intellectual products, and the protection of national and universal values; it provides and maintains equilibrium between the interests of authors and other people or organizations entitled to it, and those of users and of the larger public, taking into consideration the demands of education, scientific research and access to free information as well; it also supports the widespread implementation of copyright and related rights."

6.3.1 Works defended by copyright

Copyright defends all literary, art, and scientific works, irrespective of the fact whether they are really mentioned in the text of the law, but the force of the law does not affect for example facts and daily news which constitute the source of mass media communication, intellectual values created by folk art or legislation. Legal defence is in force from the moment the respective work is created and is independent of its size or aesthetic characteristics. We quote a section from the law in order to see which works belong under its force:

a) Literary works (e.g. literature, special literature, scientific and articles),

b) Speeches, lectures delivered in public,

c) Computer programmes and related documentation (from now on software) either in their source code, or subject code or any kinds of it fixed/recorded in any other form, user programme and the operational system included,

d) Drama, musical dramatic work, dance, and pantomime,

e) Musical work, with or without text,

f) radio- and television plays,

g) Films and other audio visual works (from now on generically: film productions),

h) Works or plans of works produced through drawing, painting, sculpture, engraving, or lithographic printing,

i) Work of photography,

j) Maps or other cartographic products,

k) The plans and results of the art of architecture, and the plans of groups of buildings, or the design of town image,

l) The plan of a technical establishment,

m) Products of applied arts and their plans,

n) Plans of costumes and props,

o) Architectural design of industrial buildings,

p) Database which is considered collection of works.

(3) The work is entitled to the protection provided by copyright on the basis of its original character stemming from the intellectual activity of the author. Protection does not depend on quantitative, qualitative or aesthetic characteristics of the work or on value judgements referring the standard of the respective work.

6.3.2 Works which do not fall under the protection of copyright

Legal regulations, other legal tools of state leadership, decisions of legal courts, declarations of authorities or other official announcements and documentations, as well as standards made obligatory with the help of law and other similar directives.

Facts and daily news which serve as sources for official announcements and materials used by the press do not fall under the protection of copyright.

Certain ideas, principles of concepts, methods of functioning, or mathematical or mathematical operation cannot be subject to copyright.

Expressions of folklore do not fall under the protection of copyright. This decree does not affect the authors of characteristically original works of art inspired by folklore.

Performing artists, producers of audio recordings, radio and television organizations, producers of films, the achievements of database producers are entitled to the protection stated by this law.

6.3.3 Who is entitled to copyright?

The person who created the respective work (the author) is entitled to copyright. The recreation, adaptation or translation of a work is also entitled to copyright as well – without violating the copyrights of the author of the original work – if it has an original character.

In case of works produced in cooperation, if its parts cannot be employed separately, the co-authors are entitled to copyright together- and in case of disagreements- the co-authors are entitled to proportionate rights; any of the co-authors can appeal against violation of copyright individually. If parts of a work written in cooperation can be used independently, copyrights can be exercised independently as well in relation to the co-author's own section. In the case of a works collected on an individual basis, the linking of a certain part of the work with another work can only be achieved following the agreement of all the co-authors contributing to the respective work. A joint work is a work in the case of which the contributions of the co-authors are joined in a way which does not make possible the statement of the copyright of the individual authors separately.

6.3.4 Copyright of collections of works

There are works which are edited collections of individual works. These are called individually collected works, regulated by copyright in as follows:

„The collection enjoys copyright if the selection, arrangement or editing of its contents has an original character. The collections of works are also entitled to protection even if its parts, the elements of its contents, do not enjoy or are not entitled to copyright. The editor is entitled to the copyright for the entire work, but this does not affect the individual rights of the authors whose works have been included into the collection. Copyright does not affect the elements of contents of the collection of works.

6.3.5 Personal rights

The identity of the authors of the works of art is related to a number of laws, e.g. all sorts of distortions, maiming or other changes of the author's work violate the personal rights of the author in ways that are harmful for the good reputation and honour of the author.

As far as the publication of the work is concerned, the author has the right to decide whether it can or cannot be made public, and can decide that before the publication of the work essential information regarding its contents can only be released with the contribution of the author. The contract of using a product – among other things – deals with questions regarding the publication of the work. Unpublished works discovered following the death of the author – if no other option can be documented – should be regarded as works which were meant for publication by the author. The author has the right to retract his contribution to the publication of the work on serious grounds, and can prohibit further

publication or using of earlier published books; but the author is obliged to pay the expenses caused before the date of his or her declaration.

As far as his name is concerned, the author has the right to have his or her name mentioned as the author on his or her work or publications dealing with his/her work, depending on the size and character of the respective publication. The author also has to be mentioned in cases when an excerpt is used, or his or her work is quoted. The author can use his or her right to mention his or her name depending on the character of the way in which the work is used, and in accordance with it.

6.3.6 The practice of personal rights

The author has the primary right to practice the rights linked to personality. Following the death of the author the person in charge of the literary-, scientific- or art- heritage can take the necessary legal steps against violations of the personal rights of the author within the period of protection, or the person who inherited the copyright. Following the period of protection if the memory of the author is violated the joint legal organization or the organization for authorial rights can act against attitudes which could violate the author's right to have his or her name written onto the respective work or publication reflecting on the work during the period of protection.

6.3.7 General rules regarding property rights

General rules regarding property rights. On the basis of copyright the author has exclusive right to use under financial or non-financial terms the whole work or an identifiable part of it, and has the right to give permission for each and every use of it. The permit to use a work can be obtained by way of contract.

In change for the permission to use his work the author is entitled to remuneration, which – unless there is a different agreement – has to be in proportion with the income produced by its use. The author can renounce to the income? The person entitled to remuneration can renounce to it by way of express declaration. Should the law link the validity of the contract for using it to a given form, renouncing to remuneration is valid only with reference to the form stated in the contract. The user is obliged to inform the author his or her rightful heir or the organization handling copyright of the respective work about the method and quantity of using the respective work.

Cases considered as using a work:

a) Multiplication,

b) Dissemination, circulation

c) Public lecture,

d) Transmitting it to the public by way of broadcasting or otherwise,

e) The transmission of the work by interpolation of other organization than the original one of the work broadcast,

f) Adaptation,

g) Exhibition.

6.3.8 The right of multiplication

Law identifies the method commonly called copying as multiplication. By definition: it is the recording of the work directly or indirectly, in any form, either temporarily or finally, as well as making one or more copies of the record of a work. Mechanical, film, magnetic recording and copying, producing image or audio records, broadcasting, or transmission to the wider public by way of cable are considered multiplication. Also storing of the work on an electronic toll in a digital form, and the material reproduction of works transmitted onto computers through computer networks are considered multiplication.

The right to multiplication is interpreted by law as the exclusive right of the author to multiply his or her work and to give permission to other persons to multiply it.

Especially printing, mechanical-, film- or magnetic- recording or copying of a work are considered multiplication as well as, producing audio- or image- recording, and their transmission to the public by way of broadcast of cable, and storing it a digital form on an electronic tool for the purpose of transmitting it to the larger public, as well as the material reproduction of works transmitted through computer networks in material form. In the case of architectural works constructing and additional building of the product stated in the architects plan/design is also considered multiplication.

6.3.9 The right to circulation of the product

It is the exclusive right of the author to publish/disseminate or circulate his or her work, and to give permission to others to do so. The circulation of the original work or its multiplied copies in order to make it available to the larger public by way of commercialization or by offering it for commercialization is considered circulation.

Circulation involves transfer of the right to the number of copies of the work and its licensing, as well as the import of the master copy of the

work into the country for commercial purposes. Holding a copy of the work produced by illegal methods with the intention to commercialize it is also considered violation of the law provided the owner of the illegally produced copy is aware of or should know on the basis of due care that means.

6.3.10 The right to public lectures

His or her work publicly, and to give permission to other people to do so. We call lecture the presentation of the work in order to make it perceptible for the public present at the lecture. Among others, the following belong to this category:

Presenting the work in the company of the audience by way of personal artistic achievement, for example performance on the stage, concert, reciting, or reading of the work („live presentation");

Making perception of the work accessible by the help of any technical tool or method, like presenting a movie, presenting the wok transmitted for the public or (art copy) circulated with the help of loud speaker, or screen.

A lecture can be considered to be public if it is presented in a place which is accessible to the larger public, or on settings where other people than the author's family, acquaintances are gathered or can get together.

The regulations stated in the previous paragraphs are not applicable in the case of literary works, musicals or short scenes from the above, which were written for presentation on the stage, or their cross sections, as well as in the case of special literature and longer works not meant for theatrical presentation (e.g. novels).

6.3.11 The right to transmit the work to the larger public, the right to circulate a work

It is the exclusive right of the author to transmit his or her work by broadcast, and to give permission to others to do so. Broadcasting is rendering perceptible voices, images and audio materials, or their technical visualization by way of cables or other similar tools to the larger public.

It is the author's exclusive right to broadcast his or her work to the public by way of broadcasting it and to give permission to other to do so.

It is also the exclusive right of the author to give permission for the simultaneous, integral broadcasting of his or her work to radio-or television organizations, and to broadcast his or her own programme

transmitted to the larger public by a mediator, or transmitted through cable or any other way – withe interpolation of other organizations.

6.3.12 The right to revision

It is the exclusive right of the author to revise his or her work or to give permission to another person to do so. Revision is the translation of the work, its revision to film or its dramatization, musical revision, film adaptation, the adaptation of a film and any other changes to the work, as a result of which a new work is created on the basis of the original work.

6.3.13 Works created by employees or by authors of other similar legal standing

The property rights obtained on the basis of the above the rights of the employer are transferred onto the legal heir of the employer in case of the change in employers. The author is entitled to due/appropriate retribution in case the employer gives permission to other persons to use the respective work or if it transfers the financial rights related to the work to another party. The author remains entitled to retribution in case of the rights acquired by the employer, to which he or she remains entitled by the law following the transfer of the right to use the respective work as well. If creating the work is the obligation of the author on basis of the work contract, handing over the work to the employer should be considered his or her consent to its publication. In case of retraction of the author's consent the employer is obliged to avoid publication of the author's name. The employer also has the obligation to avoid mentioning the name of the author if it implements changes on the basis of its legal rights as employer, and the author does not agree with the respective changes or alterations. The legal standing with regards to the work created by the author under the conditions of employment has to be specified in the form of a written document. The regulations regarding the works created by employees as part of their agreed tasks have to be applied into practice appropriately, if the author is a public servant, or employed of the public sector, or is a member of a cooperative employed in a legal frame similar to employment.

6.3.14 The period of protection

Copyrights can be exercised and provide protection during the author's lifetime and for seventy years following his or her death. The seventy years period of protection should be calculated from the first day of the year following the author's death and in the case of co-authorship from the first day of the year following the death of the last co-author to

die. Should it be impossible to establish the identity of the author, the period of protection should be calculated as the seventy years period following the first publication of the respective work. In the case of works published in more parts the date of the first publication should be calculated by each and every part.

The protection period of a jointly created work is seventy years calculated from the date of the first publication of the respective work.

The protection time of films should be calculated from the last author to die.

If the period of protection should not be calculated from the first day of the year following the death of the last author, or the first day of the year following the death of the co-author, and the work is not published in the seventy years following the first day of the year following its creation, the work is not entitled to the protection of copyright.

6.4 SUMMARY, QUESTIONS

6.4.1 Summary

The primary aim of this chapter was to introduce the students to the basic legal matters related to copyright. The theme occasioned the discussion of works entitled to copyright and the works not entitled to copyright. We examined the question of who is entitled to copyright, and what regulations are in force with respect to copyright in the case of independently collected works.

In the second part of the lesson we mentioned some of the general rules regarding the handling of rights related to personality and property laws. The theme imposed the discussion of the question of multiplication, dissemination, the right to public lecture, and the right to transfer to the greater public of the work as well as the right of adaptation of the work. We introduced the students to the question regarding works written by employees under the force of work contracts and other similar legal standings and the characteristics of the period of protection provided by copyright.

6.4.2 Self-assessment questions

1. What is the essence of copyright?
2. What works fall under the protection of copyright?
3. What works do not fall under the protection of copyright?
4. Who is entitled to copyright?

5. What do you know about the copyright of collections of individual works?
6. Introduce he rights related to personality!
7. Introduce the general rules regarding property rights!
8. What do you know about the legal standing of works created under terms of employment or amidst similar legal statuses?
9. What do you know about the period of protection?

7. LESSON: PERSONALITY RIGHTS AND CREATIVE COMMONS

7.1 AIMS AND COMPETENCIES

In this unit we are going to continue our legal expertise. We are going to introduce the students to the limits of free use and copyright. We are going to discuss some cases of free use, the right of non-profit institutions to produce copies, the recording of temporary programme recordings. We are going to examine the cases of free use in the case of audio visual media services, the presentation of works in the educational process, in research and learning.

We are going to say a few words about the protection of copyright related rights, and the protection of performing artists. We are going to touch upon the protection of producers of audio recordings and the protection of copyrights of radio and television organizations as well. The chapter will also occasion the discussion of the relationship between copyright and related rights, and we discuss some aspects of the period of protection as well.

We are also going to examine the attempts incorporated by the Creative Commons which attempts to regulate the creative use of art works.

We are going to inform the students about the basic elements of personality right and the rights linked to good reputation and possible legal solutions.

7.2 STUDY MATERIAL

- Free use and other limits of copyright
- Cases of free use
- Rights of non-profit institutions to producing copies
- Temporary recordings, recordings within free use
- Free use in audio visual services
- Free use works in school lecturing
- Free use in research and learning
- Protection of rights related to copyright; protection of performing artists
- Protection of producers of audio recordings
- Protection of radio and television organisations

- The relationship between copyrights and related rights
- The period of protection
- Creative Commons
- Personality related rights
- Basics of personality related rights
- The protection of good reputation
- Legal procedures for the protection of personal rights
- Summary and appendix to the discussion of personal rights

7.2.1 Free use and other limits of copyright

Free use is free of charge and there is no need for the consent of the author. Only works which have already been published can be used freely under the prescriptions of the law.

On the basis of the prescriptions the use of the work is only permitted, and free, if it does not harm the normal use of the work and it does not violate the lawful rights of the author, if it meets the expectations of equity and is not aimed at goals which are incompatible with free use.

Rules regarding free use cannot be extended to other cases.

From the point of view of this chapter the use of a work supports the activity of schools if it is performed in kindergarten education, primary school education, in kindergarten education, primary school education, secondary school education, technical secondary school education, vocational secondary school education, basic art secondary school education, or it is performed according to the law regarding higher education for the creation of curriculum or the specification of training requirements.

7.2.2 Cases of free use

A part of the work can be quoted by anybody– in extent supported by the size and character of the respective work and with fidelity to the original – but the source and the name of the author have to be specified.

On condition that the work used does not serve business interests excerpts of already published works belonging to the realm of literature, music, film, shorter work of this kind, furthermore works of fine arts, architecture, applied arts, images of designs of industrial constructions or artistic photography can be used for the purpose of illustration in education, and they can be taken over in adequate length/size for the sake of scientific research if the name of the author and the source are

adequately specified. We consider adoption when the material taken over from the original exceeds the size of a proper quotation.

For the non-commercial multiplication of the work above mentioned there is no need for the approval of the author if the resulting work is declared a textbook or handbook by the respective regulations and laws and the title page specifies that it is aimed at supporting school education.

The work can be adapted for educational purposes in the course of school activities. The reformulated work can only be used if the author of the original work consents to it.

Natural persons can make a copy of the work for his or her own self, if it does not serve commercial purposes in a direct or indirect way. This regulation does not affect works of architecture, technical establishment, software and database or computers, or audio, or audio visual recordings of the public performance of the work.

Entire books or journals can only be copied for private purposes only by hand or typing machine.

It cannot be considered free use- even if it serves private use- if the copy is made by another person with the help of a computer or electronic data carrier.

7.2.3 The right to produce copies of non-profit institutions

Libraries providing public services, institutions which serve the aim of school education, museums, museum-like institutions, archives, and public collections of image-, and audio archives can make copies of the work if does not serve commercial purposes

a) It is needed for scientific research or archivation,

b) It is produced for the purpose of providing public library services,

c) It is produced for the interior purposes of the institution using a smaller section of an already published work, or a newspaper or journal article, or

d) It is permitted by a separate law under specified circumstances.

Certain sections of an already published book, as well as articles from newspapers or journals can be copied for the purpose of school education in numbers identical with the number of pupils in a class, or in the number needed for preparation for exams in higher education.

7.2.4 Temporary recordings of performances, recordings entitled to free use

Free use is the temporary recording of the author's own performance of a legally usable work produced by a radio or television organization according to the respective legal conditions. If the contract regarding the broadcast does not specify it in other ways, the recording has to be destroyed within three months following the day of its recording, or it has to be deleted. Yet, from among these recordings the ones, which have extraordinary documentation values, are image- or audio- materials which can be considered items of public collections can be preserved in archives without limitations of time?.

7.2.5 Free use in the case of audio visual services

Any work belonging to the category of the fine arts, photographic art, applied arts, industrial design or plan can be used as props freely by the audio visual services. Mentioning the name of the author is not required in such cases.

Works which were created for the purpose of props or costumes can only be used by the audio-visual services if the name of the author is mentioned.

7.2.6 Free use works in school performances

If the performance does not serve income earning or increasing of earnings directly or indirectly, the works can be presented in the following cases:

a) In the case of dramatic works performed by amateur drama groups on the bases of published texts or legally employed manuscript, provided it does not contravene international contracts,

b) For the purpose of school education and on school celebrations,

c) In the case of social and old age care organizations,

d) In the case of national holidays and celebrations,

e) Religious celebrations and services of churches, or other organizations performing basic religious activities,

f) For private use, and occasional restricted gatherings.

7.2.7 Free use in research and learning

Should there be no other agreement the libraries providing public services, institutions which provide educational services, museums, ,

archives, works which constitute part of the collections of image or audio archives in the rooms of the respective institutions, and on the screens of the computer terminals set up for the purpose of scientific research or individual learning can be made accessible for some members of the public freely, and in order to achieve this – under the methods and conditions separately specified by law – can be freely transmitted to the already mentioned members of the public, rendering the material accessible for the public included, provided the use of the material does not serve financial benefits directly or indirectly.

National libraries can lend the individual copies of the work for a certain sum. This decree does not affect software and database functioning on computing bases.

Copies resulting from free use cannot be circulated without the permission of the author with the exception of loans between libraries.

Cases when the work is used for handicapped people exclusively and is meant to satisfy their needs stemming directly from their condition and does not exceed the size justified by the aim stated can also be regarded free use.

7.2.8 The protection rights related to copyright; the protection of the rights of performing artists

Should the law not specify it in a different way there is need for the consent of the performing artist in the following cases:

a) To have his or her non recorded performance recorded;

b) To broadcast his or her non recorded performance or to transmit it to the wider public in any other way, with the exception of the case when the performance being broadcast or is being transferred to the wider public, is already broadcast;

c) To multiply his or her recorded performance;

d) To circulate his or her recorded performance;

e) to make public the record of his or her performance by way of cable or any other tools in a fashion which allows the members of the wider public to choose the time and place of access to the material individually.

In the case of companies of performing artists the contributors can practice their above mentioned rights through their representative.

Should the performing artist consent to the recording of his or her performance on film, through this consent – if there is no other term

mentioned – he or she transfer the financial rights mentioned in the first paragraph on the producer of the film.

The performing artist is entitled to remuneration for the use mentioned in the first paragraph if the law does not specify it otherwise.

In the case of uses mentioned in the first paragraph the performing artist is entitled to se of uses mentioned in the first paragraph the performing artist is entitled to the personal right, to have his or her name mentioned according to the character of the use. In the case of companies of performing artists the right to have names mentioned is applicable to the company, the leader of the company and the main contributors.

The personal right of the performing artist is violated by any distortions, mutilation or any other changes implemented to his or her performance which can be harmful for the honour or good reputation of the performing artist.

7.2.9 Protection of producers of audio recordings

If the law does not specify it in other terms, there is need for the consent of the producer of the audio recording in the following cases:

a) Multiplication;

b) Circulation;

c) to make it accessible by way of cable or any other way for the public, or to allow the members of the public to decide the time and place of accessibility.

The producer of the audio recording is entitled to remuneration for the uses mentioned in the first paragraph if the law does not state it other ways.

In the case of using audio recordings published for commercial purposes or for the use of the respective material for any other kind of transfer to the public the user is supposed to pay an extra remuneration besides the copyright fee, which – should there be no different agreement between the parties – is shared in fifty-fifty proportion between the producer of the record and the performing artist.

The entitled parties can enforce their claims to fees through their legal organizations, and can refrain from their fees following the date of their agreement, and only with reference to their shares.

For the public loaning of the copy of an audio recording – besides the consent of the author of the work incorporated by the audio recording

there is need for the consent of the producer of the recording, and in case of the recording of a performance, there is also need for the consent of the performing artist.

For the use mentioned in the previous paragraph remuneration is due, which is shared in equal proportion by those in right, if there is no other agreement. The authors and the performing artists can enforce their claims through legal organizations and can refrain from their fees following the date of their agreement, and only with reference to their own shares.

The producer of the audio recording is entitled to the right to have his or her name mentioned on the audio recording.

7.2.10 The protection of radio and television organizations

If the law does not state it differently, there is need for the consent of the radio and television organizations in the following cases:

a) To allow other radio and television organizations, organizations which transfer to their public materials by way of cables or other methods;

b) To have them recorded;

c) To multiply their material in case the recording was effectuated without their consent,

d) to make the material accessible to the public by way of cable or any other tools or methods, so as to allow the members of the public to decide freely on the time and place of accessibility.

If the law does not specify it in any other way, there is need for the consent of the television organization to have its programme broadcast for the public in a place where it is accessible for the public for a certain entrance fee.

For the two usages mentioned in the last two paragraphs, if the law does not regulate in other ways – fee has to be charged.

In the case of the uses mentioned in the previous paragraphs the radio or television organization, the organization transferring an own programme by way of cable to the public is entitled to the right to have its name mentioned.

There is need for the consent of the producer of the film to

a) Multiply the film;

b) Circulate the film, public loan included;

c) Make it accessible for the public through cable or any other tools or methods so as to allow the public to decide where and when they want to access it on an individual basis.

For the uses mentioned in the former paragraphs fee has to be paid, should the law not state it differently.

7.2.11 The relationship between copyright and related rights

The protection of the rights regulated in this chapter does not affect the protection of copyright of literary, scientific and art works in force.

There is no need for the consent of the person entitled to related rights in cases when the law does not demand the consent of the author for the use of the work entitled to copyright.

7.2.12 The period of protection

The laws regulated in this chapter are entitled to the following periods of protection:

a) audio recordings and the performances recorded on them are protected for fifty years from the first day of the year following the first circulation of the audio recording, or from the first day of the year following the recording of the material, if the recording is not put into circulation;

b) The performances which are not recorded for fifty years from the first day of the year following the presentation of the performance;

c) broadcast own programmes or programmes transferred to the public by way of cable are protected for fifty years from the first day of the year following the first broadcast or transmission by cable;

d) Films are protected for fifty years from the first day following the year of their circulation, or for fifty years following the production of the film in case it is not put into circulation in the meanwhile.

(2) If the audio recording is not put into circulation in fifty years following the first day of the year of its production following its production it was transferred to the public the period specified in point a) of paragraph (1) has to be calculated with reference to the first year following its transfer to the audience.

(3) If the transmission of the film precedes its circulation the time period specified in point d) of paragraph (1) has to be calculated on the

basis of its first transmission to the public instead of the date of its circulation.

7.2.13 Creative Commons

We have to mention the movement called Creative Commons when speaking about copyright. The main aim of the organization established in 2001 under the leadership of Lawrence Lessig is to make possible the creative use of intellectual property free of charge, without the obligation to pay for the copyright. Instead of the traditionally formulated „all rights reserved" they follow the concept „certain rights reserved". Compared to the 1.0 variant published in 2002 today it is the directives of the 3.0 version that are valid.

The system symbolized by cc consists of three layers. The first layer uses strictly legal terminology and defines the legal standing of license in an accurate way. The second layer offers comprehensive information for people who are less conversant in legal terminology. The third layer formulates the most important aspects using the „language of computers" in such a way as to allow search programmes and software to use it.

CC lic licenses incorporate six kinds of license constructions:

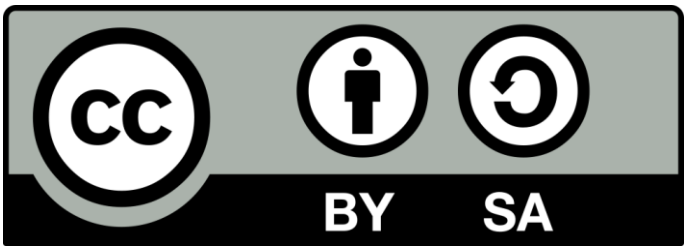
CC BY

The most permissive type of license, even allows for for-profit use and the adaptation of the work as well. In the case of this license the only prescription is that the name of the author (or of the legal owner) and the original title of the work have to be mentioned.

16. Figure: CC BY logo

CC BY-SA

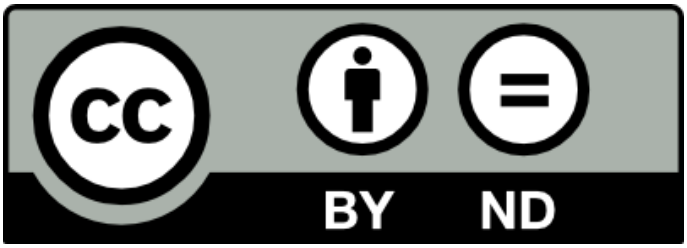
As compared with the former license the only prescription is that the work being created should also have a similar cc licence status. Wikipedia usually uses this form of licence. By analogy with „copyright" this licence is also called „copyleft".



17. Figure: CC BY-SA logo

CC BY-ND

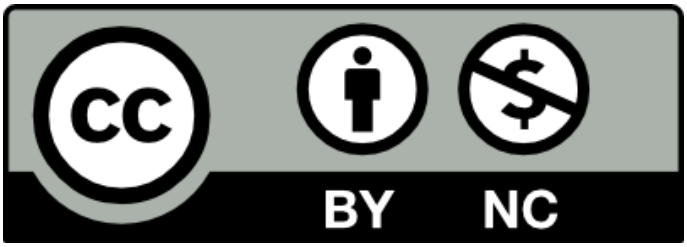
CC differs from BY license in that it does not allow changes to the licensed work.



18. Figure: CC BY-ND logo

CC BY-NC

CC differs from BY license in that it does not allow for the commercial use of the licensed work.



19. Figure: CC BY-NC logo

CC-BY-NC-ND

Joins the characteristics of the former two licenses, in that it does not permit changes to the licensed work and does not allow for the commercial use of the licensed work.

20. Figure: CC BY-NC-ND logo

CC-BY-NC-SA

Does not permit the commercial use of the licensed work and the work being created has to be of the similar cc license type.

21. Figure: CC BY-NC-SA logo

7.2.14 Personality related rights

When preparing a portfolio we often produce audio, visual and audio visual records in school environment to document different activities. It is important to pay attention not to hurt other people's personal rights while preparing our records, especially the rights linked to images. The statements regarding personal rights are included in chapter/act VII the IV.Law/1959 in 1959 edition of Civil Law. It can help us in orientation if we highlight some of the statements of the above mentioned law.

7.2.15 The basics of rights related to personality

Everybody is obliged to observe personal rights. These rights are protected by law. Regulations regarding personal rights have to be extended to legal persons as well, except in cases when – due to its

character- it is only applicable in the case of private persons. Regulations which refer to the protection of rights related to personality have to be applied in the case of legal persons as well, with the exception of cases when it only refers to private persons due to its character. Personal rights are not violated by attitudes to which the author consented, provided that the consent does not violate, or endanger social interests. Contracts or unilateral declarations which violate personal rights are cancelled.

Violation of the requirements of the right to equal treatment, of the freedom of conscience and the limitation of the right to freedom, of physical integrity, of health, of honour and of human dignity are cases of violation of personal rights.

7.2.16 The protection of good reputation

The protection of personal rights includes the protection of good reputation as well.

If somebody spreads harmful stories, falsified facts, rumours, presents real facts in falsified contexts it can be considered to be the violation of the right to good reputation of the respective person.

Any abuse of the image or audio record of another person means the violation of personal rights. The publication of an image or audio record imposes the consent of the person involved – with the exception of public performances. Images (or audio recordings) of missing persons or persons prosecuted by law on the basis of severe criminal acts can be used for the sake of equitable private interests with the permission of the authorities.

Handling and revision of the database by way of computers or by other ways should not violate personal rights.

Information regarding recorded data – with the exception of the person involved – can only be provided for the authorities or persons entitled to it.

Should any fact or data in the register not match reality, the person involved is entitled to request the desired corrections in way expressly specified by the law/legislation.

7.2.17 Legal remedies in cases of rights related to personality rights

A person, whose rights related to his or her personal rights are violated, can raise the following claims on the basis of the civil law in accordance with the circumstances of the respective case as follows:

a) Can claim that the court declares the fact of the respective violation of the law;

b) Can claim the cessation of the illegal act and the prohibition of the person who violated the law from its further illegal activity;

c) Can claim that the violator should provide compensation in appropriate way, and that suitable publicity should be provided for the compensation by the violator, and on his or her expenses;

d) can claim that the harmful situation be ceased, and the situation preceding the violation of the law should be reinstated on behalf of and on the expenses of the violator, and can claim the destruction of the thing resulting from the violation of the law;

e) Can claim compensation in accordance with the regulations of responsibilities of the civil law.

Should the sum to be paid not be in proportion with the severances of the culpable attitude, the court can sentence the violator to fine which can be spent on public aims.

Personal rights can be vindicated only personally with the exception of the items specified in paragraphs (2) and (3). Partially physically handicapped persons can stand up for their personal rights in person as well.

The personal rights of disabled people who are not capable of acting can be represented by their legal representative, in the case of people whose whereabouts is unknown can be represented by its relatives or their guardians.

In the case of violation of the memory of a deceased person the relative of the deceased person or the person for whom the deceased person provides allocation in his or her last will can turn to court for remedy. If the attitude violating the memory of a deceased person (expired legal person) opposes public interest, the public prosecutor also has the right to implement its private rights.

If the possibility of the violation of the law is stated and the delay can result in unredeemable damage, the court can decide on temporary acts as well; in the course of this procedure the court can decide on sequestration of the tools employed as well.

7.2.18 Summary and appendix to rights related to personal rights

To sum up we can state that the subject of an image or recording has to consent to it in writing. Consent is also needed with respect to the publication of the record, and we can only use the record for purposes

included in the respective agreement. We cannot make public an image if it can involve undesired consequences for the subject (it makes the subject ridiculous etc.) even if we are in possession of both permits. We have to be extremely careful in school environment, where we can produce and make public records only with the parents' consent.

We are exempt of the obligation of consent if we show a group of people as a crowd on our images, or in case of public appearances.

7.3 SUMMARY, QUESTIONS

7.3.1 Summary

In this chapter we continued our legal outlook. We introduced the students to the limits of free use and other limits of copyright, and we mentioned the cases of free use, the rights of non-profit organizations to produce copies, the recording of temporary recordings. We examined the cases of free use in audio visual media services, the presentation of works in schools, research and learning.

We mentioned the protection of laws related to copyright laws and the protection of performing artists. We also discussed the copyright protection of producers of audio recordings, and radio and television organizations as well. In this chapter we also mentioned the relationship between copyright and related laws and the protection period.

In the course of our discussions we mentioned the ambitions of the Creative Commons to regulate the creative use of works of art.

We informed the students about the basics of personal rights and laws related to the right to good reputation and legal a procedures and compensation as well.

7.3.2 Self-assessment questions

1. Speak about the cases of free use!
2. Introduce other limits of free use and copyright!
3. Introduce the right to produce copies of non-profit organizations!
4. Introduce the characteristics of free use in the case of school performances!
5. Introduce the characteristics of free use in research and learning!
6. What do you know about the laws related to copyright?
7. What do you know about the Creative Commons movement?
8. Introduce the basics of personal rights!
9. What does the protection of good reputation mean?

8. THE USAGE OF ELECTRONIC PORTFOLIO AT UMEA UNIVERSITY

8.1 AIMS AND COMPETENCIES

Following the theoretical interpretation of the topic, the aim of the lesson is to describe an institution of higher education where they have been using the electronic portfolio for a longer period in the educational process. It is also the aim of this unit to introduce the students with the possibilities of interpreting the concept of the portfolio and the most important characteristics of putting it into practice, with particular emphasis on its formative and quantitative evaluation possibilities and the applications of the portfolio in the process of accumulating knowledge.

8.2 STUDY MATERIAL

- Introduction
- The circumstances of the expertise
- The concept of the portfolio on the basis of the teachers' opinions
- The portfolio as a digital achieve
- The e-portfolio as a tool for evaluation
- The portfolio as the tool for acquiring knowledge and assessment
- Summary

8.2.1 Introduction

Following the theoretical discussion of the portfolio it seems worth examining institutions of higher education, which have been using the portfolio for a shorter or longer time in the educational process, as one or two good ideas, or successful patterns of application sometimes can prove more useful than a number of theories.

The first case study we are going to examine is in fact a survey/research which shows the usage of electronic portfolio at the Swedish Umea University (http://www.umu.se) between 2002 and 2009. The university introduced the electronic portfolio together with the introduction of open learning teacher training course in 2002 and it was integrated into the educational frame system used by the university. They did not use either paper based or electronic portfolios in teacher training earlier. Starting with 2002 they taught all the students of the university

how to use an electronic portfolio, and their aim was to be able to document the educational process with the help of the portfolios.

The results of using the portfolio were examined in 2008-2009: with the help of structured interviews they examined the opinion of 25 teachers who regularly used portfolios in their teaching activity. The questions were mainly aimed at finding out how they would define the concept of the e-portfolio, what their experiences were regarding the use of the portfolio and what they thought the role of the portfolio was in teacher training. Besides the interviews the research included an electronic questionnaire as well, which contained similar questions and was filled in by 45 teachers.

8.2.2 The circumstances of the research/survey

Five departments took part in the survey, in the course of the interviews the teachers stated that they knew virtually nothing about the how the other departments were teaching and evaluating the activity of their students, and this was occasionally true within some departments as well. From the answers of the interviewed teachers it also turned out that there was no central regulation regarding the way in which they should teach or the way in which they should evaluate the activity of the students, but there is a traditional non formal method they use, and as a result the teachers handle the summative/quantitative method of evaluation as a priority, that is they concentrate on the products marking the meeting of the final requirements of the completion of the course and the process leading to them is less important. In the opinion of the teachers the students think exactly in the same way as well: for them meeting the requirements needed for the completion of the course are of major importance, but why should it be different, the teachers ask, as the students have been completing their studies in this way for years. In the opinion of one of the teachers the students are frustrated when they get questions requesting that they reflect on them, all they want to know is whether they passed or failed the subject.

8.2.3 The concept of the portfolio on the basis of the teachers' opinions

The opinions of the teachers questioned are not homogeneous at in with regards to what the essence of the portfolio is. Quite a variety of answers were given in the course of the questionnaire based data and the interviews. According to some of the answers the portfolio is simply a digital archive, while at the other extreme the answers suggest that the portfolio is a complex method of acquiring knowledge and evaluation. The answers suggested agreement in at least one thing, namely that the

portfolio is a tool, a digital storing space, which is accessible to both students and their teachers, but in the opinion of some of the teachers the portfolio is not more than that and so has not pedagogical implications.

The majority of the teachers have already met portfolios outside the world of education, but these were not evaluative portfolios, but collections, through which pupils could present their activities and creativity to their parents. According to Bernstein (2000), when the teachers reformulate the concept of portfolio in higher education they are influenced by their earlier experiences.

More than half of the teachers made a clear difference between the portfolio as an exclusively evaluative tool and the portfolio as the pedagogic method of acquisition of knowledge and assessment. As one of them put it: „the portfolio is the tool, which moulds previous knowledge, tasks, reflexions, group work into something new, some sort of novel knowledge. I do not want my students to react to only one task; I want them to have a larger perspective of the theme and to reflect on all the tasks. All the products included into the portfolio have to be used and re used/cycled, none of them should be wasted".

On the basis of the confessions of the interviewed teachers some of their colleagues in the department looked with contempt at those who were using the portfolio as a tool of acquisition of knowledge and methodological tool of evaluation saying that the portfolio is simply a fashion and it cannot be compared to traditional methods of evaluation, like theses. This opinion started changing when open university training was introduced into the institution, where the portfolio proved to be an extremely useful tool.

From the above it is obvious that the staff of the institution do not have uniform opinions about the e-portfolio. It can help us to some extent to understand the nature of the differences if we examine what the teachers are using the portfolios for.

8.2.4 The portfolio as a digital archive

When planning the course they did not take into consideration the possibility of using the portfolio so it is not part of the official course. Although they teach all the students how to use the portfolio in the first term, this certainly does not mean that they are going to use it while completing their studies and the course. More teachers teach the same subject and the pupils have the right to opt for the teacher they want, and there is no central regulation regarding the use of the portfolio, whether it should be used and if yes in what way. One of the teachers teaching

second year students told the interviewers that he did not know the students had an e-portfolio until the students told him. For this reason he did not have tasks that would have been built on the use of the portfolio.

8.2.5 The e-portfolio as a means of evaluation

Among the course of the university there are somewhere they only use the portfolio for summative assessment. The tasks are designed in accordance with the digital environment, the students usually have to prepare text based materials and multimedia files. Emphasis falls onto the assessment of the task closing down the course and the electronic portfolio is the surface for communication between the teachers and the students.

This type of evaluative portfolios can be found in individual courses and in those training programmes, which consist of more courses, following one another. One shared characteristic of these training programmes is that they are mainly run by small 2 to 6 teachers' teams, who planned their courses and the use of the e-portfolio together. As a teacher told the interviewer: „we decided to plan the teaching of our courses by this method, and if a new teacher was assigned to teach in this programme he or she would have to adjust to it". The teachers only agreed on the fact that they would use the e-portfolio for assessment purposes, but organically linked course would not build on the portfolios of the earlier courses.

8.2.6 The portfolio as the tool of acquisition of knowledge and assessment

A group of the staff have been using the e-portfolio for a relatively long time. These teachers worked out together the method by which they can employ the portfolio as a means of acquisition of knowledge and assessment. As one of them told the interviewer: „if we want our students to focus on the process of learning (to look back, to reflect on it etc.), we have to invent suitable tasks for them. Let us see some examples for this in the following.

The first task of the students during the course is to describe their personal/individual aims with the course, and then they are asked to comment on the work they are doing continuously during the course in the form of a personal dairy or blog. These documents are going to serve as basis for the reflexions on the learning process and on the course itself. At the end of the course the students prepare a final reflexion containing the individual and team activity achieved, personal comments, reactions to the reading experiences and all the impressions and experiences collected during the course and they have to compare these

with their aims described at the beginning of the course. The tasks to be achieved during the course naturally are selected in such a way as to support the reflective process, which the teachers are also expected to support, and finally the activity of the student will be assessed.

In the second example the students use another digital online tool besides the portfolio, the aim of which is to plan and to monitor the professional development of the student. During the course the student store, and make accessible their tasks through the portfolio, while their reflexions and the evaluation of their professional development will appear in the latter digital online tool.

At the beginning of the course the students describe on this online tool their previous knowledge related to the material of the respective course and what they would like to achieve in the course of their studies there, which influences the way in which they meet the requirements and tasks published in the portfolio as well. During the course they continuously compare the desired results with the actually performed activities. At the end of the course the students are required to prepare a self-assessment, in which they sum up their previous knowledge, the desired aims and the ones they really managed to accomplish.

The teachers support their students continuously with formative assessments, while at the end of the course they are going to offer their students a summative assessment. These teachers have been using the portfolio for years and they reckon that it took them a relatively long period to develop the methodology which could use the function of supporting the learning process of the electronic portfolio. As one of them told the interviewer: „it took us many years (working out the method), because we had to change our way of thinking regarding the learning process, the tasks of the students and the shared work”.

8.3 SUMMARY, QUESTIONS

8.3.1 Summary

In the first case study we examined the use of the electronic portfolio at the Swedish Umea University (http://www.umu.se). The analysis revealed that the opinion of the teachers consulted is not homogeneous at all with respect to the essence of the portfolio and to how it can be used in the process of education. Part of the teachers considers the portfolio to be a simple digital archive, a storing space, which has no pedagogical or technical significance. Another part of the teachers uses the electronic portfolio, but primarily with summative evaluative aim,

while a third group is capable of integrating the electronic portfolio into the educational process besides summative evaluation.

8.3.2 Self-assessment questions

1. Does the function of the electronic portfolio exceed its status as digital archive? Support your answer by arguments!
2. Why do you think electronic portfolios are not used during a course?
3. Why do you think the students who participated in the survey did not receive the assessments requiring reflexivity in a positive way?
4. Sum up the difference between the use of the electronic portfolio as a tool for formative and summative evaluation!

9. THE INTRODUCTION OF THE PORTFOLIO AT ESZTERHÁZY KÁROLY COLLEGE

9.1 AIMS AND COMPETENCIES

The aim of this unit is to guide the students through the process of creating a portfolio through a practical example, and to provide them information regarding the differences among portfolios. In the second part of the unit the students can get a glimpse into the structure and the basic knowledge necessary for using the open source coded Mahara e-portfolio system.

9.2 STUDY MATERIAL

- Preparing the introduction of e-portfolios
- The Mahara
- The title page
- The profile
- The portfolio
- Summary

9.2.1 Preparing the introduction of the portfolio

In the case of the portfolio we intended to introduce we tried to take into consideration the available results of earlier research and to develop an electronic surface which can provide up to date and efficient solutions. For this reason, in 2007 we created a group the members of which came from three areas: the first group consists of specialists in methodology for teacher training; their task is to work out the contents problems of contents of the portfolio. The members of the second group are computer specialists; they are responsible for the technical achievement. The third group consists of specialists conversant with the coordination of traditional or electronic portfolios, their task together with the other two teams is to design the optimal compromises between methodological expectations, technical possibilities and the characteristics expected from up to date electronic portfolios.

The financial background for the construction of the pilot portfolio system was provided by HEFOP 3.3.2. which included the planning and working out of and putting into practice of the basics of the students''

electronic portfolio in Eszterházy Károly College, from among which we prepared it for four master subjects[5] of the teacher training programme.

9.2.2 Technical background

The role of the technical background is to construct the adequate portfolio system informatics? And to render the work of the teachers and students easier. A little more comprehensively, this process includes the creation of the portfolio system, the specification of the tasks, the handling of rights and providing the adequate computer laboratory/room and technical assistance to evaluation and secure saving. Under optimal circumstances the teachers and the students should feel that handling of the system is simple and the services it provides compensate for the time and energy invested for tis creation.

Creating the portfolio system of the institution required high quality technical support and relevant financial resources. We dismissed the methods of creating off-line electronic portfolios (on CDs, DVDs, storing on pen drives, and transferring data), as this would have involved giving up reflection and all the advantages offered by on-line data storing (space independent accessibility, searcheability, sharing and recycling etc.) besides the limits in capacity and durability.

For this reason we thought of creating a portfolio accessible through the web, are constructed upon adequately structured and dynamic sites, and ensure easy accessibility for teachers and students even without high level competencies in informatics.

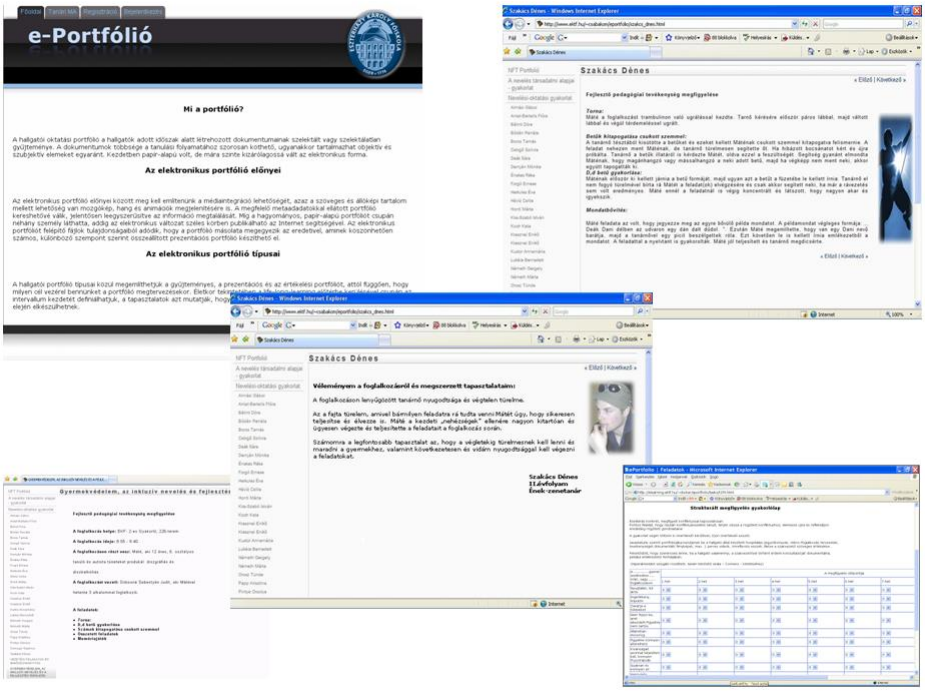
While creating the portfolio it occurred that we could use the services of a firm specialized in this service instead of creating our own variant, but neither the institution nor the students could assume its expenses.

Another option would have been using the free open coded systems, but back in 2007 we thought that though the direction of the developments was quite promising, yet these systems were not complete, they did not contain all the services we would have needed although there were no doubts about the fact that they could perform the basic functions (on-line storing of files, handling of user accessibility) in nearly all cases.

Finally we decided on a third solution, we decided that we were going to create our own system step by step, reacting to all the problems that arose, together with the members of the already mentioned groups. The portfolio system planned through joint effort and coordination with

[5] The subjects: Educational-teaching practice, Professional teaching practice in school, Continuous, individual professional practice, Professional methodology

the teachers in charge of the individual subjects was created in three months and besides the basic functions it made possible the use of forms the evaluation of which was carried out automatically and thus help was provided for the teachers in their work. The few students and teachers who participated in the experiment had positive views of the portfolio system, but we have to add that the questions of the analysis/examination approached the portfolio from a technical point of view and predominantly examined the simplicity of using it, and were less concerned with matters regarding contents.



22. Figure: The first portfolio system (pilot) of Eszterházy Károly College

Unfortunately by the end of the pilot period it turned out that our own system was suitable for testing the results of joint thinking, but it also became clear that our working method was not suited for dealing with the great numbers of students we had. For this reason on the basis of our experiences and expectations, in 2008 we decided to introduce the open coded Mahara system which was developed in New Zealand.

9.2.3 The Mahara

The Mahara was developed on request of the New Zealand government in 2006, and the name means in Maori „to think." The Mahara is an open coded, web-based electronic portfolio system and public site? If we intend to offer an extremely concise definition of its function we can say that its electronic portfolio section serves for the storing/storage of digital products created in the course of lifelong learning, while its public site section helps keeping in touch and online community building. The Mahara possesses a number of positive characteristics we are going to discuss in details later, but having in view the limited financial capacity of institutions of higher education we have to highlight two of its most important characteristics at this point: it can be used free of charge and it is compatible with the educational frame system most often used in Hungarian higher education the Moodle, which is also free. Educational frame system and the electronic portfolio are complementary in electronic learning environment: the frame system provides structured accessibility of the electronic educational system, through which students, teachers, assistants can access the subjects, the study materials, and the frame system renders other services accessible as well (e.g. communication, check-up etc.). The electronic portfolio complements the educational frame system by providing the possibility of creating online communities linked to education and systematic support for the products created in the course of the educational process, their publication as well as the visualization of reflexions.

Users have to register to gain the right of using the Mahara e-portfolio system. In the case of smaller number of users registration can be performed individually as well, but in the case of hundreds of users the procedure has to be effectuated on an automatic basis. Unfortunately the automatic learning systems used in higher education invoke copyright reasons and do not facilitate the process. Registered users can get access to the site in possession of a user name and a code. For users with no special rights (e.g. administrative) the site/portal consists of four main parts: homepage, the profile, the portfolio and links.

9.2.4 The title page

The greater part of the title page is occupied by the message board, form which the users can get information regarding the most important events linked to the portfolio (announcement of assignments, deadlines for handing them in, creation of groups etc.).

23. Figure: The title page of the e-portfolio of Eszterházy Károly College

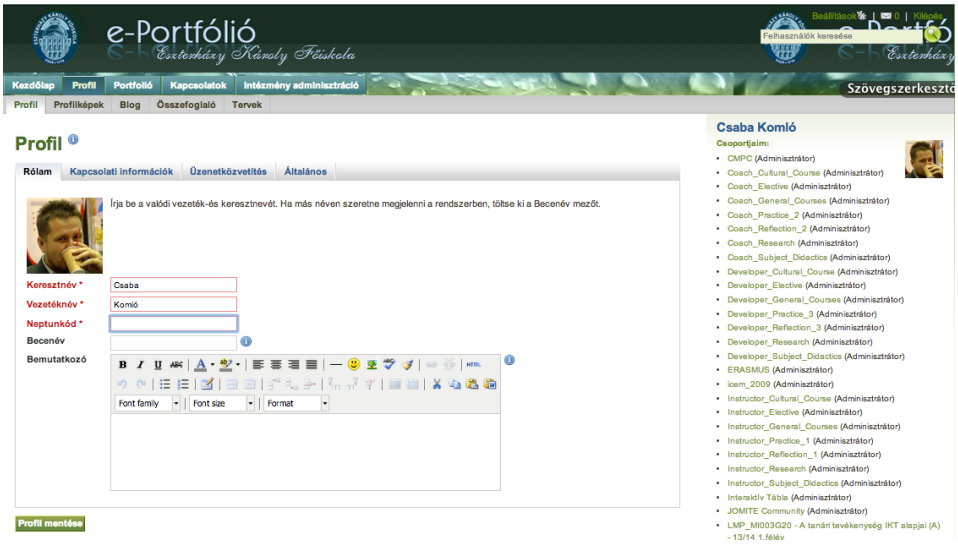
On the left side of the page we can find the lit of our groups. The user site of the Mahara was written originally in English and it was translated more or less precisely and understandably into Hungarian, but our views differ from that of the translators in some cases: for example elements which were identified as groups in our view mean or refer to subjects rather, as the creation of portfolios is linked to subjects in higher education, which means that in fact the students can see the list of the subjects which are related to the portfolio on the left side.

The opening page also contains the summary of their latest activities and the latest forum notes and we can assess directly the portfolios handed in for evaluation. The opening page also provides access to the sources (in the case of Eszterházy Károly College, texts, animations (cartoons), videos), which make the using of the portfolio easier and we can also get information regarding the users who have registered into the system.

9.2.5 The profile

The profile as an element contains five further elements: profile, profile- images, the blog, summary, plans.

The profile elements within the profile contain four further elements, which are: about me (name, Neptune code etc.), contact information (email address, postal address, personal websites, address of blogs), messages (codes of services providing instant messages), general (job, place of work).



24. Figure: The profile side of the e-portfolio of Eszterházy Károly College

Under the profile menu images we can upload maximum five images and we can choose from among these the basic one, the blog heading offers possibilities for writing the blog. The blogs can only be visited by the user initially, but it there is the possibility of sharing it within the blog, or they can even be made public.

The summary section should be called CV, as the elements included in it mainly refer to this area: introduction, education, results, aims, skills, fields of interest.

The name of the introduction menu is the best one, introducing oneself would be more informative though, as under this menu we can give the basic information about ourselves (time and place of birth, etc.) and it is here that we have the opportunity to produce a longer introductory text which could serve the role of the CV as well.

In the section entitled education and job we can write the data regarding our education (the name of the institution, year of graduation

etc.) and the most relevant information regarding our present and earlier jobs.

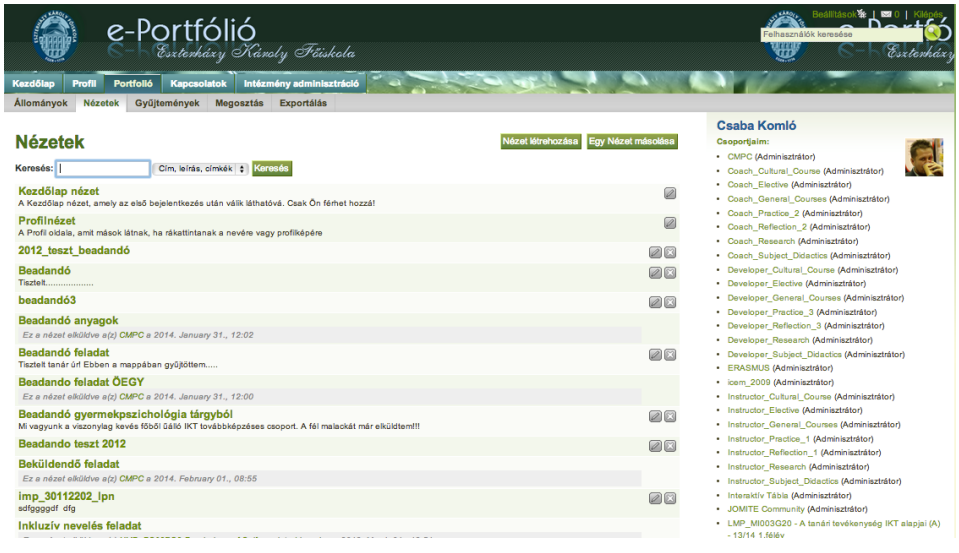
The results menu should be used for our publications and decorations and we can write about our membership in different professional organizations, while under the heading aims we can enlist our personal, scientific and career ambitions.

We should include all our skills and competencies which could be relevant for a potential employer and we could mention the areas outside the world of work we are mostly interested in, under the menu skills and interests.

The ear marked plans is the last element of the block and we can write here our short and long term professional plans.

9.2.6 The portfolio

The most important element of the Mahara from the point of view of the portfolio is the portfolio menu, which consists of five elements: files, views, collections, share, and export. If we choose the register menu we can produce the system of folders where we can upload and store the files. The uploaded files are only visible for the user and the server and in order to make it accessible to others as well as so called view has to be created, for which we have to click onto the view button. We are going to discuss it in the next lesson.



25. Figure: The portfolio block of the e-portfolio of Eszterházy Károly College

The next element of the portfolio block is the one called collections, this element helps us to create a collection of views by linking more views and to share it with other under a new name.

The “share it” element helps us to render our portfolio (view) or collections accessible for others as well (the portfolio belonging to a given subject has not got to be shared with other teachers as they can access it anyway). If we click the access element we can specify who and for how long can have access to our portfolio or collection. If we want a wider publicity than we have to click on the “public” element which means that the material will be open to anybody, while if we click on the registered user element we can narrow the list of those who can access it. We can further narrow the accessibility of the material if we choose the acquaintances element, but we can also share our portfolio with the members of our group if we click onto share with my group element. There is also the possibility to choose the users we want to share our material with one by one.

We can also specify whether the viewers of the portfolio can attach observations regarding our work in a moderate or freeway, or whether they can make their own copies (and all the files included into the portfolio).

The last element of the portfolio block is the export element. We can save the data of our portfolio on this surface: we have the option of saving the whole document, or only our views, or collections. We can choose from among two formats for saving the documents: one of them is the HTML website, in this case the saved portfolio can be read and we can take it with us everywhere. The other possibility is the LEAP2A format, the viewing of which is not as simple as that of the HTML version, but in the case of a possible change in institution all the elements of its portfolio can be “moved” without loss of information into the new system.

9.3 SUMMARY, QUESTIONS

9.3.1 Summary

In the case of the portfolio we intended to introduce we tried to take into consideration all our previous results and to create an electronic surface which can provide up to date and efficient solutions. The financial support of constructing the portfolio system was provided by an application, and it included creating the basic concepts of the application into practice of the students’ portfolios in the college, which courses. Weighing a number of possibilities we decided that together with the members of the four teams mentioned, we were going to work out our

systems step by step, closely observing the demands arising. The portfolio system thus created by way coordinated joint activity of the teachers teaching the respective subjects, besides the basic functions made possible the handling of questionnaires, which were automatically evaluated, thus supporting the activity of the teachers.

Unfortunately by the end of the pilot period it became clear that although our system was suitable for testing the results of our joint venture due to the great number of students the method of work was not adequate in our institution. For this reason and taking into consideration our experiences and expectation we opted for introduction of the open coded Mahara system developed in New Zealand in 2008.

The Mahara is an open coded, web based electronic portfolio system and community site. If we want to define its function briefly we could say that its electronic portfolio section serves digital products created along lifelong learning, while it community site supports contacting and online community building.

9.3.2 Self-assessment questions

1. Enlist the disadvantages of offline portfolios!
2. Give short characterization of the (source code, expenses etc.)!
3. Mention the larger elements of the title page block!
4. What do you think the role of Mahara blog service might be?
5. Sum up the possibilities offered by the Mahara for exporting user portfolios!

10. USING THE PORTFOLIO

10.1 AIMS AND COMPETENCIES

The aim of the present unit is to introduce the students to the basic knowledge needed for using the electronic portfolio. The students are going to get an idea of how the electronic portfolio is prepared for receiving the teachers and the students, what the meaning of the dynamics of the portfolio is and how to upload professional contents into the portfolio and we are going to say a few words about the role of reflection as well. In the second part of this unit we are going to say a few words about the way in which the portfolio can be used: how to upload files and organize them into maps and how to create suitable view and how to send them for evaluation. At the end of the lesson we are going to discuss briefly the steps of portfolio assessment.

10.2 STUDY MATERIAL

10.3 INTRODUCTION

- Training the students
- Filling the portfolio with professional contents
- Training the students
- The structure of the portfolio
- Editing contents
- Evaluation of the portfolio

10.3.1 Introduction

The use of the electronic portfolio increases the cooperation among the characters involved in using the portfolio. The first task is the registration of the participants in the portfolio, which is true for both the teachers and the students. Following registration the server of the portfolio announces the subjects, and renders the teachers and students to the subjects with suitable legitimation to them; from this point on the users have access to the portfolio.

Using the portfolio is technically simple, but previous training of the teachers and the students is indispensable. In the case of the teachers there is need for guidance with regards to basic technical knowledge (where can the portfolio be accessed, how to upload the tasks, how to write text based evaluation etc.). The dynamics of the portfolio should be

known to the teachers, which means that using the portfolio can be efficient if the students can start collecting their works from the beginning of the course, and to achieve this goal it is important that the description of the tasks and their deadlines should be accessible from the first day of the term. The teachers should have a clear idea of the kind of assessment they intend to use with regards to the tasks assigned, because if they want to achieve a formative method of evaluation as well besides the more general summative one, they have to take this into account in the moment they announce the tasks, as this has an effect onto the synchronization of the task and the tools employed as well (e.g. the students have to report in the form of a blog about their reflexions).

10.3.2 The training of the students

The training of the students with respect to how to use the portfolio can be divided into two parts. One is the transfer of professional, methodological knowledge, which is the task of the colleagues teaching special methodology professional methodologist, the other one is the technical part, which is performed by the specialists responsible for the technical operation of the portfolio. Chronologically the latter has to be achieved first, so as to enable the students to use the portfolio from the beginning of their studies.

10.3.3 Uploading professional contents into the portfolio

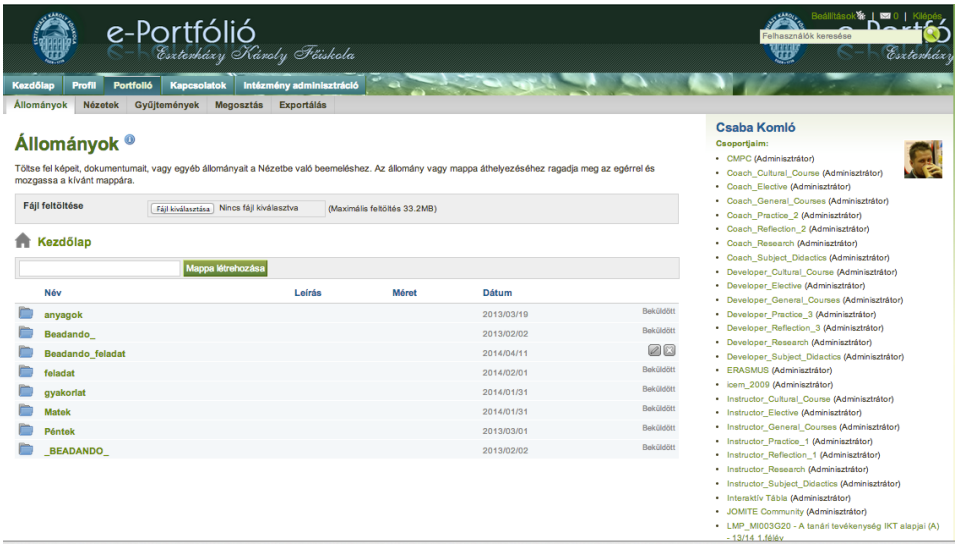
Under optimal conditions constructing the portfolio begins in the first term. Of course, using the portfolio in the course of the students' study is not compulsory in the case of all the subjects, but it is worth collecting all the documents linked to education and storing them in a portfolio. This is even more important as in those forms of training where presenting the portfolio is part of the final exam, these documents will be needed. In the case of these types of portfolios the student's task is to present the documents he or she considers relevant from a professional point of view, so as to document his or her professional development in the course of his or her studies. Reflectiveness is an indispensable element of the presentation, otherwise the portfolio is nothing else but an on line collection of electronic documents. As we mentioned earlier from the point of view of reflection the student has to consider the process of learning through a bifocal perspective while contraction the portfolio: on the one hand the student has to concentrate on daily tasks, but in the meanwhile he or she has to know the exit? Requirements, and should be aware of the role the task just being performed plays in reaching the aims of the entire training. Naturally reflection can contain something else as well, like in the pursuit of which task he or she performed the given activity, what solutions could be taken into consideration (if it was

possible to choose), on what grounds did he or she chose, following the completion of the task was the solution appropriate or not, what problems arose etc.

In the case of final examinations usually 3-5 documents are required per term, if possible they should be chosen from a wider selection/area. In the case of portfolios linked to teacher training the lesson plan of the final lesson of the teaching practice is given an emphatic role, in optimal cases the video recording of the final lesson or a section of it is also available, as well as the evaluation of the final lesson.

10.3.4 Downloading the files

For many students the concept and the use of the electronic portfolio are difficult to grasp at first sight. For this reason we introduce the use of the portfolio in an extremely simplified way in the course of the training and only concentrate on the elements which are indispensable for creating the portfolio.



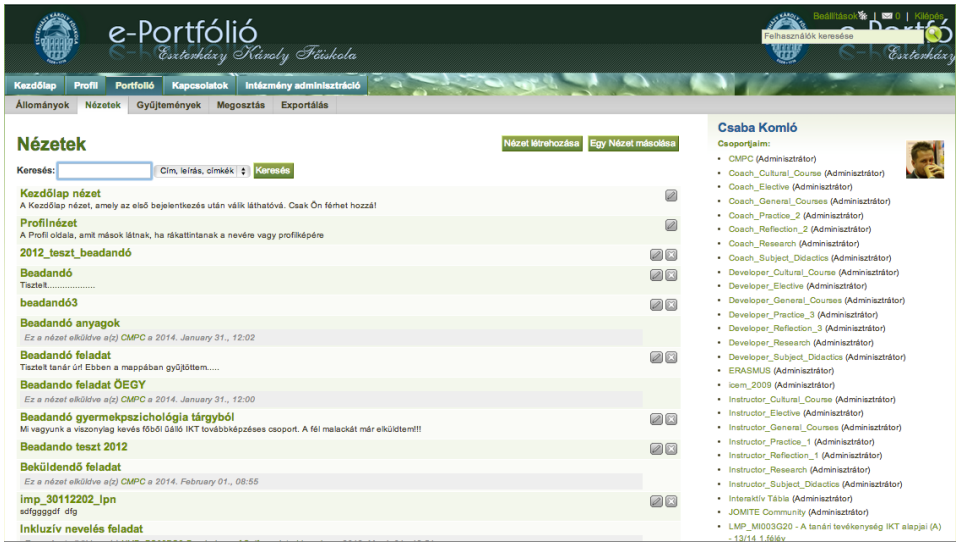
26. Figure: The uploading the file block

The first step of creating the portfolio is uploading the files, which is accessible within the portfolio block. Into the portfolio we can only include files which we uploaded previously. To upload we have to click onto the button choosing the file. Basically, the files which were uploaded can only be seen by the user, who uploaded them (and the server). For the sake of clear arrangement and storing the user can create an appropriate number of maps within the portfolio system. In the earlier version of the

Mahara users could only upload files if they clicked into the box to declare that they were the owners of the files form the point of view of copyright.

10.3.5 The structure of the portfolio

To create a portfolio the students are required to create a so called view (in the new version of the Mahara it is called site). The easiest way to imagine the view (page) if we think of a box, into which we can put everything we would like to show to those who evaluate the portfolio from among the files earlier collected and the elements available on the web. The Mahara makes possible the use of text based comments besides files and link sin the portfolio.



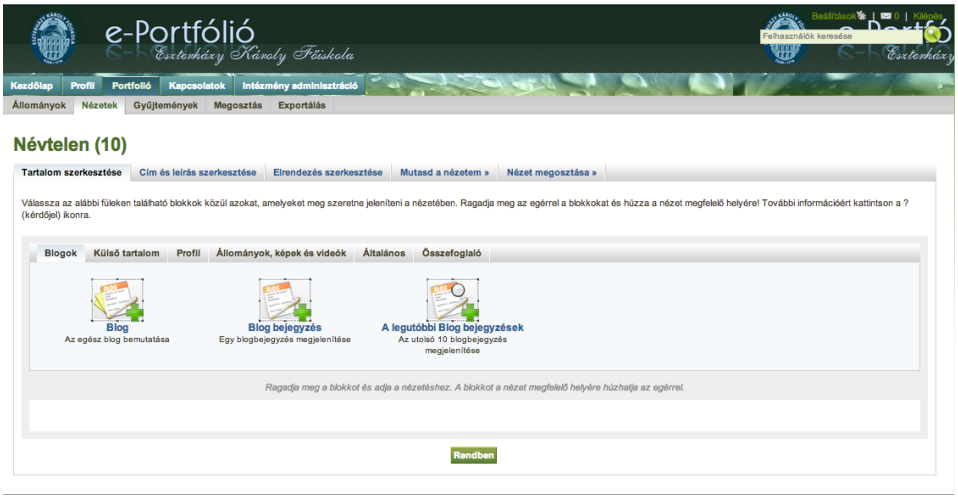
27. Figure: Creating the view

To create the view we have to choose the view element of the portfolio block, and then you have to click onto the button view to create the view. We are going to find five elements within the creating a view block. They are as follows: contents editing, editing title and description, editing arrangement, show my view and share view.

10.3.6 Editing of the contents

In the editing the contents section we can choose from among six elements which elements we want to upload into our portfolio. The first one is the blogs element, here we can opt for visualizing the whole blog, one element of a certain blog, or the last ten comments of the blog.

The name of the second element is: exterior contents and as its name shows it we can place into the portfolio the concise summary of elements which are to be found on websites exterior/outside the portfolio, e.g. news channel (RSS), which is used by websites which are frequently updated with new contents (articles, comments, observations). Besides the news channels there is the possibility of embedding YouTube and Google videos, as well as Google documents. With the help of the third elements we can attach links and profile information to our portfolio.



28. Figure: Editing the elements of view

The fourth element was given the name database, register, images, videos, and we can place here elements which if we click on them allow visitors of our portfolio to unload files specified by us. The next element is the map element, which is the type of portfolio element most favoured by students. The reason for this might be that the students got accustomed to storing their files organized in map during their studies, and this attitude prevails while constructing their portfolios as well. Within this same block there is the possibility of embedding HTML register, images and videos as well.

The fifth elements was given the name general, and we have the possibility of linking the? Creative Commons license to our portfolio, in which we can state whether we agree to the commercial use of our portfolio or we agree to the modifications to our work/product. The next element is the navigation, in which we can publish/visualize the collection of our views in the form of a simple list, while the plans element visualizes/shows/displays the list of tasks written onto the profile site/page of plan element. Within the general block we have the

possibility to visualize the latest forum messages belonging to a given team/group, and to place a textbox, with the help of which we can provide textual information (reflections, messages etc.) regarding our work. The last element of the view block got the name summary, we mentioned in the former chapter that this term was not perfect, and the naming autobiography would be a better definition. Accordingly we can chose from among elements of our curriculum vitae, but we can attach all the other elements of the work as well of we choose to.

After adjusting the contents we should be able to find out the most important information regarding the portfolio and its writer, which we can find in the blocks title and description. Beside the name of the portfolio we can also write a short description of our work, and we can regulate/direct the identification marks the teacher should be able to see when checking the portfolio: Neptune code, or both.

The third element of adjusting the view is editing of the arrangement. This block serves the adjustment of visualization of the portfolio: we can specify the number and size of the columns to be visualized.

From among the arrangements to the view perhaps the most important one is the show my view element. Within this block we have the opportunity for a final control/checking of the contents of the portfolio, and it is from this place that we can send our work to the teacher. To be more precise we can choose the subject (to use the term of the portfolio: the group), to which we want to address our portfolio and not the teacher. When we click onto the button send warning papers informing the student that if he or she sends the portfolio for evaluation he or she will not be able to modify its contents until the teacher hasn't seen or evaluated it. Following the confirmation of the student's intention to send the portfolio the system acknowledges its receipt through a message.

10.3.7 The evaluation of the portfolio

As mentioned earlier in the course of the process of education the assessment of the portfolio can be formative or summative. In order to be able to evaluate it, the teachers have to enter the e-portfolio and have to choose the group (subject) related to the portfolio from the column situated on the right hand side of the monitor. Following a click the description of the tasks to be performed by the students become visible and at the bottom of the monitor to the left under the heading views the teacher can find the portfolios sent by the students. The views contain the name of the sender and the time of sending. If you click onto the name of the view the work sent by the student appears, for the evaluation of which you have to click on the reply button. The teacher can write the mark here and there is also the possibility of offering a short

textual evaluation of the portfolio, but there is the possibility of offering a longer textual evaluation, or if needed the teacher can attach the corrected version of the work sent by the student to the evaluation by clicking on the browsing button next to the heading attached files. After selecting the file the teacher can attach further files by clicking on the sign +, or if he or she clicks on the reply and can send his or her evaluation to the student. We have already mentioned that the student cannot access the elements he or she sent for evaluation. The situation does not change automatically when we return it and send our evaluation to the student, in order to end the limitation we have to click on the button dissolving the view.

10.4 SUMMARY, QUESTIONS

10.4.1 Summary

The aim of the present chapter was to introduce the students to the basics of using the electronic portfolio. In the course of this chapter the students were provided an idea of how the portfolio is prepared for the reception of the students and the teachers, what the dynamics of creating a portfolio means, and how to upload professional contents into the portfolio, and we said a few words about the role of reflectivity as well. In the second part of the unit we discussed the way in which the portfolio can be used: how to upload files, and organize them into maps? And how to create a view suitable for sending and evaluating of the files and how to send them for evaluation. We also discussed the steps of portfolio evaluation as well at the end of the lesson.

10.4.2 Self-assessment questions

1. What do the dynamics of portfolio construction mean?
2. In which phase of the training should the students be introduced to the knowledge of using the portfolio?
3. Speak about the most important steps of constructing portfolios!
4. Explain the meaning of the term „view” in creating a portfolio!
5. Speak about the types of the elements situated in the portfolio!

11. SUMMARY

11.1 SUMMARY OF CONTENTS

Nowadays we hear more and more about the role of electronic portfolios in higher education. To sum up our material, the aim of the second chapter was to introduce the students to the emergence and the functions of traditional portfolios. We introduced the concept of the electronic portfolio, highlighted the theoretical background of traditional and electronic portfolios, the different names given to electronic portfolios, and practical approaches to the function of the portfolio. It was also our aim to introduce the students to the knowledge of the functions of the dedicated systems of portfolios, of the types of portfolios, and to have an idea about how to create a portfolio following the study of the themes of the chapter. We also provided the students with knowledge necessary to enable them to speak about web folios, static online folios and web2.0 online portfolios.

In the third chapter we introduced the students to the concept and the most important characteristics of dedicated educational e-portfolio systems. Among other things, we discussed the e-portfolio services used by teachers and students. In this chapter it was also our aim to introduce the students to establish the type of portfolios on the basis of the ownership of the portfolios (owned by students, teachers, faculty, and institution).

In the fourth chapter of our book the students were introduced to the advantages of using electronic portfolios and criticism formulated against the use of electronic portfolios. We mentioned the advantages which could be experienced by students, like individually tailored management of knowledge, development of aim-planning, understanding of relationships between learning experiences, the possibility of checking on previous personal study precedents. From among the critical attitudes against using electronic portfolios we mentioned the questions regarding time management and the opinions which question the evaluative function of electronic portfolios.

In the fifth chapter we introduced the reader to the role of reflectiveness in the context of electronic portfolios. In the course of our expertise we concentrated on students' reflexivity mainly, but we did not ignore the motivating and evaluative role of teachers' reflectivity. The chapter offered the discussion of the definition of the concept of reflectiveness and the role of students' reflectivity. We also discussed the dynamics of reflectiveness and the positive aspects of students' reflectivity.

The primary aim of the sixth chapter was to introduce the students to the basic knowledge of digital handling of data, which is indispensable for handling of the portfolio. We spoke about the characteristics of text based digital documents, digitalization and OCR techniques. We also mentioned the creation of digital still pictures, their characteristics and the digitalization of analogue still pictures. We spoke about the production of digital motion pictures and the digitalization of analogue motion pictures. From among the digital files we also examined the most important characteristics of digital voice/audio material (creating digital audio files, their types, digitalization of analogue voice/audio material).

In the second part of the unit we discussed the operations related to the handling of digital files, copying and storing of digital text based documents, digital still pictures and digital audio material included.

The main aim of the seventh chapter was to introduce the students to the knowledge of the basic laws linked to copyright. The theme occasioned the discussion of works entitled to copyright and those which are not entitled to copyright. We examined the question of who has the rights to benefit from copyright and what legislation and directives are applicable to copyright in the case of collections of different works.

In the second part of the lesson we said a few words about the practice of personal rights and general regulations regarding propriety, private property. The discussion of the theme included the examination of multiplication rights, the law regarding the right to circulation, the right to public lectures, the transfer of the work to the greater public and rights regarding adaptation. We introduced the students to legislation regarding the legal standing of works created by employees or similar legal contracts and the characteristics of the period of protection.

We continued the discussion of legal matters in the eighths lesson. We introduced the students to the limitations of free use and other limitations imposed by copyright, the right to multiplication non-profit institutions, and the recordings of recorded programmes. We examined the cases of free use in the case of audio-visual media services, the case of presentation of certain works in schools, research and learning.

We also mentioned the rights related to copyright and the protection of performing artists. We also discussed the protection of the rights of producers of audio recordings and the copyright of radio and television organizations. In the course of the chapter we also highlighted the relationship of copyright and related rights and said a few words about the period of protection as well. We also examined the Creative Commons the aim of which is to regulate the creative use of the works of art. We also informed the students about the basics of rights related to

personality and the right to good reputation as well as the possibilities of legal remedies.

In the third part of the book we dealt with case studies which could help the application in practice of the portfolio and we dealt with certain practical issues. The case study presenting the practice of using of the electronic portfolio released by the Swedish Umea University (http://www.umu.se) can be read in the eighth chapter. From the above it is clear that the opinion of the teachers interviewed was not homogeneous at all with respect to the essence of the portfolio and the way in which it can be employed in the educational process. In the opinion of one part of the teachers the portfolio is only a digital archive, a storing space, which has only technical relevance and no pedagogical significance. Another part of the teachers uses the electronic portfolio, but primarily with the aim of providing summative evaluation, while a third group of the teachers is capable of integrating the electronic portfolio into the process of education besides using it for summative evaluation.

In the ninth chapter we explained that we tried to take into account the available results of the research materials which could offer up to date and efficient solutions. The financial background of the pilot system which supported the creation of the portfolio system was provided by a successful application, on the basis of which we formulated the basics of creating the basic concepts of the application into practice of the students' electronic portfolios, and we managed to complete it for four teacher training master programmes. After having considered number of possibilities we finally decided on creating our own system together with the members of the earlier mentioned teams by strictly observing the needs which might arise step by step. The portfolio system was completed in three months, as the result of cooperation, where the specific problems of the different subjects were coordinated by the teachers who participated in the project. Beside the basic functions the portfolio system made possible the use of forms the assessment of which could be reached automatically, and thus they supported the activity of the teachers.

Unfortunately by the end of the pilot period it became clear, that our own system was suitable for testing our cooperative thinking, but it also turned out that it would not function when larger numbers of students are involved. In 2008, for this reason we decided on the introduction of the open coded Mahara system developed in New Zealand on the basis of our experiences and expectation.

The Mahara is an open coded, web based electronic portfolio system and community site. If we want to define its function in a concise way, we could say that its electronic portfolio part serves for the storing

of the digital products created during the process of lifelong learning, while its community site part supports keeping in touch and online community building.

The aim of the tenth chapter was to introduce the students to the basic knowledge of using electronic portfolios. In the course of the chapter the students got relevant information regarding the way in which the electronic portfolio can be prepared for the reception of the students and the teachers, what the dynamics and of creating portfolios means and how to upload professional material to the portfolio, and we said a few words about the role of reflectiveness as well. In the second part of the lesson we dealt with the way in which the portfolio can be used: how to upload files and how to arrange them into folders, and how to create suitable views and sending them for evaluation. At the end of the lesson we discussed the steps of the process of portfolio evaluation as well.

12. KIEGÉSZÍTÉSEK

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