

## OWN EXPERIENCE WITH THE PROJECTS UNDER THE PROJECT COURSES TECHNICAL DOCUMENTATION

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### **Abstract:**

Anyone who wants in their activities to improve results, it must seek to reflect on the effectiveness of the methods used and work processes. Among those who do not are the exception and teachers. Their basic objectives should include the acquisition of broad competencies achieving students, for use in their further professional life. For your own knowledge and skills with the use of frontal teaching methods is beneficial to increase the illustration. However, for really effective and long-term knowledge, it is necessary to involve as many senses and include student activity form of teaching in groups and work teams. The problem is one of their own teaching project management of individual projects. In the contribution I want to just share the experience with one of the possible solutions to their own contracts management of projects under the technical documentation of teaching the subject at university.

**Keywords:** The project, project teaching, technical education, management, teaching project management, project

Time when the former function of written texts, which provide basic information for individuals and society, incorporating images. The new structure of information storage media have a decisive influence on human life and its form. Expel If images, text, the experience, know and evaluate the world and themselves differently than they did in the past. Each of the teaching aids has its specific characteristics which determine its use with regard to the ability of pupils. Suitability of its use must therefore correspond to the level of education, psychological status and social conditions across the group or society. The task of the current teachers, teaching is always to find methods and forms of teaching. As shown by the results from abroad and split the results in our country, may be between these methods and forms of law to include a teaching project.

Motto:

*"Young people learn that lesson is doing something, make mistakes, or imitate an activity which leads to better results. This view clearly indicates that young people prefer to do something, before the adoption of new facts. In other words, learn creative work (learning by doing)"*.

Roger C. Schank (ředitel, The Institute for the Learning Science, Northwestern University, New Jersey)

Definition of project teaching is not yet completely uniform. Kilpatrick identifies each project as planned and a separate action, which addresses a role for its resolution. Richards and Bossing you think again when defining the concept of project teaching exclusively or

mainly for the production of material products or solutions to practical problems. In general, however, prevails in teaching the public the view that the hallmark of the projects is the relevance of social group work, but for the recognition of individual approaches. Work on the school project has a specific position among the subjects taught. It is an activity which has peacefully combine theoretical knowledge of pupils in their confrontation with possible future practice, namely the practical application of previously acquired theoretical knowledge. The whole teaching process is substantially based on the activity of pupils and their separate functions. The project can not be understood as an isolated element of pedagogical action, it can not be assumed that there exists in isolation. Taking into account the educational system as a base then perform the project in this system, different functions. These functions can be added as the project method, instrument, device, environment strategy. Experience with project management course in the teaching process, shows that appropriately selected and properly classified projects may become one of the means which enable the specific lessons to induce optimal climate to create room for the development of student / 3 /.

If the problem is solved in the project of teaching actually mezipředmětovým, which often is the input, the subsequent evaluation of solutions and also carried out by cooperating teachers in the team. For a typical example of this is the main teacher cooperation project with the science teacher, if the processing of the project required the use of computers. Use information and communication technologies is a necessary condition for a solution while the majority of the defined projects. If we take the technical documentation on the subject of our university, the award of projects designed for the following parts:

- the processing of 3D and 2D drawings
- processing techniques
- processing of the calculation
- processing results
- the final presentation.

When teaching design, as can be another important benefit from the possibility of extending the current phenomenon of time and to the Internet. Use of the Internet in the context of student projects can be legitimately arrange between the desirable and constructive methods.

Since a number of years teaching the subject technical documentation at a university in Kunovice, I am looking for and trying to improve on the results of their work. I try to think about the effectiveness of methods eaten and working practices in teaching. As a responsible approach to the control-term work contracts, and not just a formal work, so I can say that one of the difficult part is the management of contracts semester projects in a class. We therefore search for different ways to the specified project tasks within the semester of work to drive. From my point of view can be semester projects include the so-called small-scale projects. In comparison with large scale projects, small projects have their advantages and disadvantages.

Among the issues that are their own small projects include:

- short time to deal with them
- A small team (sometimes i can see the advantage)

The pozitivum small projects, in particular:

- an easier understanding of the award
- less likely to get the solution to problems

The basic requirements before starting work on the project is to create a team. The experience of both my and other authors, the best team that works well. In such a functioning team, however, need to let each member to excel in what they can. The compilation of a balanced group can help distinguishing the different team roles. Each member of the team in their specific role. The role is usually not strictly intended. When team roles can be, for example, adhere to the breakdown of prof. Meredith Belbina (supervisor, draftsman, innovator, upozornovatel) used in the field of management. Organizing the project of teaching at university, where the attempt to enter more teachers to organize the evaluation process difficult. Short-term project tasks can be tackled in the order of a few weeks. These projects are generally the following:

- analyzing the problem, motivating
- master plan solution
- implementation of the various stages of addressing
- evaluation.

In determining the appropriate project task is the integration of individual subjects in solving the problem presented, identify educational objectives and their fulfillment konkrétného. The project presents the students one or more concrete and real tasks. Their aim may be to create a reasonably complex and exit either in the form of the product, finding the most appropriate option or formulating their own opinion. In the course of their project management tasks, at the beginning of the semester provides students with the teams. It is always determined by one manager and team members. The choice is left to the students. Teams are entered in the following table (see Figure 1).

Číslo projektu:	2
Zadání projektu:	Zpracujte studentský projekt kolíčku na prádlo
<b>Pracovní tým</b>	
vedoucí:	Apolenář Pavel
člen:	Šťastný Erik
člen:	Kraváčková Jaroslava
člen:	Trnka Lumír
<b>tým 1</b>	
vedoucí:	Šťastný Erik
člen:	Trnka Lumír
člen:	Apolenář Pavel
člen:	Kraváčková Jaroslava
<b>tým 2</b>	
vedoucí:	Apolenář Pavel
člen:	Šťastný Erik
člen:	Kraváčková Jaroslava
člen:	Trnka Lumír
<b>tým 3</b>	
vedoucí:	Apolenář Pavel
člen:	Šťastný Erik
člen:	Kraváčková Jaroslava
člen:	Trnka Lumír
<b>tým 4</b>	
vedoucí:	Trnka Lumír
člen:	Šťastný Erik
člen:	Apolenář Pavel
člen:	Kraváčková Jaroslava

obr. 1 – zápis týmů

Řídicí list projektu	
Číslo projektu:	2
Zadání:	Zpracujte studentský projekt kolíčku na prádlo
úkol:	opracujte řešení k danému problému
opracujte technická řešení	
opracujte 3D model sestavy a jednotlivých částí	
opracujte 2D výkresovou dokumentaci	
opracujte kvalifikační výrobku	
zpracujte podklady pro návrhové informační systém (dát)	
zpracujte prezentaci svého výrobku, DTPM, nebo PowerPoint	

obr. 2 – řídicí list projektu

Head of the team is given responsibility for timely submissions unfinished tasks, but also the possibility of evaluation of own work team max 10b. Figure 2, we have the opportunity to see one of the possible award of the project task, including its development. When management is elected by a broadly available a simple system tables and their mutual connections

PLÁN PROJEKTU A ČASOVÝ HARMONOGRAM KONTROL											
ČÍSLO PROJEKTU:		2									
NÁZEV PROJEKTU:		Zpracujte studentský projekt kolíčku na prádlo									
TÝM ČÍSLO	ZODPOVÍDÁ	KONTROLA 1			KONTROLA 2			KONTROLA 3			POSTIH CELKEM
		PLÁN	SKUT.	POSTIH	PLÁN	SKUT.	POSTIH	PLÁN	SKUT.	POSTIH	
tým 1	Apolenář Pavel	2.2.08	2.2.08	0	1.3.08	1.3.08	0	30.4.08	30.4.08	0	0
tým 2	Šťastný Erik	2.2.08	4.2.08	-10	2.3.08	3.3.08	-5	30.4.08	30.4.08	0	-15
tým 3	Kraváčková Jaroslava	3.2.08	3.2.08	0	1.3.08	1.3.08	0	3.5.08	3.5.08	0	0
tým 4	Trnka Lumír	2.2.08	6.2.08	-20	1.3.08	1.3.08	0	30.4.08	30.4.08	0	-20

LEGENDA:

- NEVYPLŇUJE SE
- VYPLŇUJE STUDENT
- VYPLŇUJE UČITEL

poznámka:  
pozdní odevzdání ke kontrole o 1 den = ztráta -5b. V celkovém hodnocení projektu.

obr. 3 – plán kontrol

in MS Excel. In managing the sheet, students identified a body solution that they were obliged to connect knowledge from several subjects studied, or were forced to seek information from multiple sources. At the beginning of the semester in addition to the creation of a team and enter the project management tasks to set intermediate deadlines sheets checks. Date of inspection is determined on the basis of agreed leadership team and teachers. If the deadline of submission is assigned a team of criminal points. Plan and timetable of interim controls is shown in Figure 3 Is to be subsequently reflected in the final points deduction. One day late submission of the project task for the control is equal to the loss of 5b. of the total

General conclusions, as I tried to obtain some existing software products that are

Číslo projektu:	2								
Název projektu:	Zpracujte studentský projekt kolíčku na prádlo								
Tým číslo:	tým 1								
	HODNOCENÁ ČÁST								
ÚKOL	PRÁCE S INFORMACEMI	KREATIVITA	FUNKČNOST	ÚPLNOST ŘEŠENÍ	PEČLIVOST ZPRACOVÁNÍ	POČÍTAČOVÁ GRAFIKA	EKONOMIKA	CIZÍ JAZYK	CELKOVÉ
zpracujte rešerši k danému problému	9	-	-	-	-	8	-	7	24
zpracujte technické řešení	-	9	8	10	9	-	-	-	36
zpracujte 3D model sestavy a jednotlivých dílů	-	10	9	9	8	7	-	-	43
zpracujte 2D výkresovou dokumentaci	-	-	10	10	10	8	-	-	38
provedte kalkulaci výrobku	-	-	-	10	10	-	9	-	29
pro podporu prodeje navrhnete informační leták (A4)	-	8	-	-	8	9	-	6	31
navrhnete prezentaci nového výrobku (HTML nebo PowerPoint)	-	10	10	10	10	10	-	9	59
	HODNOCENÍ VEDOUCÍHO TÝMU								10
	POSTIH								0
	SOUČET								270
	HODNOCENÍ CELKEM								2B

obr. 4 – celkové hodnocení týmu

specifically targeted in nature to the management of small projects (I mean student projects), I had no luck. Therefore, if we want these projects to drive a special software to designated, it would be necessary to create it. However, even without the software management can be concluded that the benefit of the project is to improve the ability to formulate their own opinion, to discuss substantive solutions to the problem, find possible solutions technology options in relation to economic evaluation. If any given project meets the terms of the adequacy of the age and knowledge, the integration of various school subjects, to be relevant to practice, then practice fully meets the requirements of the school. No system of instruction should not allow the devaluation of education a mere mechanical knowledge of performance measurement. Generally the output should be a man thinking, creative, harmonically advanced and socially adaptive, which is able to apply lessons learned in life.

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