International Journal of Human Sciences
ISSN:1303-5134

Volume: 7 Issue: 1 Year: 2010

Investigation of college students' intrinsic motivation in project based learning

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Abstract

The purpose of this research is to examine the impact of project-based learning on the students' intrinsic motivation in a college level course. Research using qualitative and quantitative techniques together was conducted within a period of 14 weeks. As a means of data collection, Kempler (2006)'s adaptation of the Internal Motivation Measurement Survey was used for the quantitative research. Besides, a questionnaire consisting of open-ended questions related to intrinsic motivation components were conducted for the qualitative part. Research results revealed that there was a positive and significant relationship between components of the learning environment and interest. Also, a moderate and significant relationship was found between components of the learning environment and cognitive engagement. Findings indicated that there was no meaningful relationship between components of the learning environment and academic efficacy. The important results from the study showed that courses will be treated as project-based learning needs careful design and good way of planning. Prepared learning environment was seen as a social learning environment by the students. Academic pressure on students occurred very often and development of information exchange was observed more frequently.

Keywords: Project-based learning, intrinsic motivation, computer hardware, group work

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Ocak, M.A. & Uluyol, Ç. (2010). Investigation of college students' intrinsic motivation in project based learning. *International Journal of Human Sciences* [Online]. 7:1. Available: http://www.insanbilimleri.com/en

Introduction

Compared to classical learning environments, learning environments prepared according to constructivist theories are seen more to increase student participation, interest and motivation (Guthrie, Wigfield & Vonsecker, 2000; Hickey, Moore & Pellegrino, 2001). Because of students' interest and group work prepared for a purpose, it is certain to increase more success in the tasks. Situations where students interact with each other and the students' choices are available give more creative and reasoning abilities. Research reveals that high level learning and motivation is more apparent in the learning environments where student's active participation and chance of choice rate is higher (Holbrook & Klodner, 2000; Barron, Schwartz, Vye, Moore, Petrosino, Zeche & Bransford, 1998).

Project-based learning has the attributes of constructivist learning environments and can be defined as "around a question or problem, to ensure finishing established the set of activities and after the end of these activities, the emergence of an end product (model) is targeted" (Bluemenfeld, Soloway, Marx, Krajcik, Guzdial & Palincsar, 1991). Project-based learning is at the forefront of the student's initiative and gives more responsibility to the students in the learning environment and that is a process that takes a longer time.

Examining literature review, it is seen clearly that project-based learning influences student motivation positively (Boaler, 1999). Thomas (2000) noted project-based learning increased students' critical thinking, problem-solving skills and impacted lifelong learning positively. Gultekin (2005), in the study conducted with about 40 fifth grade students in social studies courses, investigated students in experimental group to complete a project for natural disasters of the society and to present in the classroom setting, while he just lectured the control group students on the same topic in traditional classroom setting. Results showed that experimental group students' academic success was higher than students in control group and the students' ability to explain learned materials and the level of information persistence in experimental group showed higher rate. Similarly, in studies about how project-based learning improve students' motivation (Liu, 2003; Doppelt, 2003), the students' cognitive and creative thinking skills and motivation of students in the project group were observed higher than students in other groups. Moreover, in one study related to the benefits of the group work which was one of the requirements for project-based learning (Tsai and Lee, 2004), a project assignment related to Internet use was given to four formed groups. While one of the groups was in heterogeneous structure and had students with different learning

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styles, the other three groups of students were in the homogeneous structure and were created in a similar way. According to the results of the study, the student group formed with the different learning styles was the most successful group in the last exam. Pitts (2006), in the project-based study using two seventh grade classes taught by different science teachers, found that students' papers produced based on their research increase learning experiences and students' attitudes and motivations were affected in a positive direction. From a different angle, Welsh (2006), in his study that used two schools in which project-based learning approach was implemented frequently, specified the implementation problems related to project-based learning, and found that, in particular, these problems were more apparent where evaluation and assignment process was enforced rigorously. Additionally, in this type of environment, to be successful, students should have the highest level of motivation and cognitive engagement (Kempler, 2006). Especially, learning is directly affected by providing motivation, because many students who have interest and academic effectiveness provide more willingness on behalf of cognitive engagement (Pitrinch & Schunk, 2002). Students whose cognitive engagement and motivation are provided properly also perform high critical thinking skills such as good evaluation of given task, analysis, planning and developing methods of self-regulation (Kempler, 2006).

In general, the studies related to motivation are grouped under two main headings. The first one is so-called extrinsic motivation and that is the kind of motivation in which we face with behavioral approach in the form of reward or punishment. Deci and Ryan (1985) identified extrinsic motivation as students' detection of a given stimulus and exhibition of expected behavior. Mostly, researchers such as Skinner (1953) and Pavlov (1927), studying the external motivation, adopted this kind of behavioral approach to show that learning can occur by controlling the reward or punishment for a certain behavior. The second one is called intrinsic motivation and this kind of motivation is affected by environmental stimuli and the change of stimulations (Hunter, 1976).

Research clearly favors intrinsic motivation and sees it as more important and effective than extrinsic motivation (Kohn, 1993). Boggiano and Pitmann (1992) compared intrinsic motivation with extrinsic motivation and found that long-term motivating was not possible by ensuring students' extrinsic motivation; for students whom external motivation was provided performed less complex strategies to learn, and were less successful in tests compared with students whom internal motivation was provided regularly. Toci (2000), in

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his study with the fifth and sixth grade students, examined the impact of technology-supported learning environment prepared according to eight-month project-based learning on students' motivation. During the experiment, students worked on variables of intrinsic motivation, such as inner impulse, interest, independent study, independent decision-making, academic effectiveness and other internal criteria variables. Study results showed properly designed project-based learning environment increased intrinsic motivation positively. Findings were important for students' preparation of tasks based on real-world connection and their task-based solution strategies in the prepared environment. Similarly, Kempler (2006), in science and technology courses prepared according to project-based curriculum, observed 1360 seventh grade students to see how change in motivation occurs by looking at the motivation components in the class setting. Students were allowed to make research, to collect data, to interpret and to produce three-dimensional material in the prepared environment. In the research, relationship between environmental components such as students' real-world access, collaborative work, academic pressure, and motivational components such as interest and the internal effectiveness were investigated. The learning environment prepared in this manner was observed six times within a unit determined by 23 teachers. Observation results showed that students' interest and academic effectiveness increased more, especially when the teacher provided real-world problems.

One of the studies investigating the impact of learning environment on the intrinsic motivation was Hilker (1993)'s study in which the relationship between intrinsic motivation and the teaching environment was investigated in social studies lesson. A group of students involved in the project work to support a two-week intrinsic motivation course, while other group operated on two weeks of the award and penalty methods to address the external motivation. Study results indicated no significant difference between groups. Results indicated that in order to see the changes in students' intrinsic motivation, more complex environments (Spiro, Feltovich, Jaconson & Coulson, 1991) and long-term work needs to be emphasized. From another angle, Rezabek (1995), to determine the level of the students' intrinsic motivation, collected participants randomly in three groups. Chosen topic was presented to the first group in a linear way, to second group via multi-media and to third group in the form of the simulation. Hypothesis of the study indicated that intrinsic motivation level of third group would have been higher. Study results found that the learning environment designed to increase intrinsic motivation needed careful design in teaching

strategies and longer time was emphasized to provide intrinsic motivation. Deci and Ryan (1985) indicated that students' cognitive flexibility, creativity, self-confidence and understanding ability were related to increase intrinsic motivation.

The studies related to the motivation of the students remain limited to examining the relationship between achievement, academic effectiveness and students' motivation in traditional classroom environment. Considering constructivist learning environments, such as project-based learning, to what extent students' interests and academic effectiveness increase was not investigated fully (Urdan & Turner, 2005). For example, the studies conducted in the teacher-centered classroom environment, showed that interest increases students' intrinsic motivation clearly (Rieber, 1991). In addition, complex tasks presented to students cannot be said for certain to impact the students' cognitive engagement positively (Wolters, 2004). Academic effectiveness, since dealing with cases that concerning how much students trust themselves while doing their work and their perspectives of events throughout the course (e.g., "I am willing to do even the most difficult work in this course"), is a factor related to intrinsic motivation (Midgley, Kaplan, Middleton, Maehr, Urdan, Hicks & Anderman, 1998). Additionally, cognitive engagement become associated one-on-one with project-based learning since it is determined by asking questions related to mental effort, authentic and meaningful learning when complex tasks are given to students (Stoney & Oliver, 1999). However, the relationship between students' interest, academic effectiveness and cognitive engagement and the properties of the environment was not fully clear in these studies.

This study was prepared to investigate in what direction features of a project-based learning environment influence components of intrinsic motivation (interest, academic efficacy and cognitive engagement). The studies related to internal motivation did not take intrinsic motivation components as a whole; cognitive engagement was often ignored while interest and academic effectiveness were taken into account substantially. Another aim of the study was to look deeply at the changes occurred in components of intrinsic motivation by using the properties of prepared environment. In summary, considering the project-based learning environment and intrinsic motivation components together, this study tried to find answers to the following questions:

1. In which way, the project-based learning used in computer hardware course for college students is effective in developing intrinsic motivation?

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2. How the features of project-based learning environment (work norm, academic pressure, real-world connection and group work) affect components of intrinsic motivation (interest, academic effectiveness and cognitive engagement)?

Method

Sample

This research was executed on 55 students of "Computer Hardware" course in Gazi University, in the fall semester of 2008-2009 academic year. Students were, in total, divided into thirteen groups, one of which consisting three students and others four students. Instructor did not intervene with formation of groups, but in the process of group creation, students formed their own groups. Research design selected for this study was a type of one-shot case study. Because a single measurement on the dependent variables was conducted and a single group of students were exposed to a special treatment prepared by researchers, one-shot case study was essential step and more appropriate for exploratory investigation. Although the sample may seem small, since research requires deep investigation for a particular purpose (Miles & Huberman, 1996), it can be considered to represent the population.

Learning environment

The most prominent feature of the computer hardware field is its complex nature. Many hardware components should work with each other; but each one has different and complex working principles and models. This indicates that the field is irregular. Additionally, this area is constantly changing depending on the technology. In unstructured irregular areas (ill-structured) such as the field of computer hardware, over-simplification of the content leads misunderstandings and the lack of the development of different perspectives on the content (Spiro, Feltovich, Jaconson & Coulson, 1991). Project-based learning approach requires improving students' different perspectives to obtain meaningful information, and this information can be used in different situations.

During the experimental process, students followed a teaching process enhanced with the characteristics of project-based learning environment, prepared by the teacher. In this study, a real-life project consisting of features of project-based learning work was given to second-year college students at the beginning of the semester and expected to complete the

project until the end of the semester. Project topic was selected by reviewing "the computer hardware and the components of hardware". Besides, classroom activities such as group work, independent study, face to face interaction and personal responsibility were frequently applied, and students had the opportunity to work with groups they identified themselves. Learning environment was also a computer lab by which students found the opportunity to use computer and Internet to do research.

Data collection

In this study, as a means of data collection, the Internal Motivation Measurement Survey adapted by Kemp (2006) from Midgley, Maehr, Hruda, Anderman, Anderman, Freeman, Ghee, Kaplan, Kumar, Middleton, Nelson, Roeser and Urdan (2000) and Pintrich, Smith, Garcia and McKeachia (1993)'s work related to intrinsic motivation was used. Survey was given to three field expertise and expected them to validate the survey. Feedback from the three field experts was taken into account and the survey has been restructured to validate its scope. Before starting the experimental process, survey was applied to a group of students and item analysis was conducted for test reliability. The original survey Cronbach's alpha values and Cronbach alpha reliability test results are presented in Table 1. The survey has a total of 30 questions, consisting of Likert-type questions to measure characteristics of learning environment and intrinsic motivation. For each question, students were asked to choose one of the digits, from 1 to 5 (5 = definitely true, 4 = partly true, 3 = undecided, 2 = partially not true, 1 =not true). Since two of the questions have negative meaning, scoring for those questions was made in opposite direction. While applying the survey, participants were given directive to answer to every question.

Table 1. Cronbach alpha values for the original study and for this study

	Kempler(2006)	**Research conducted**
Intrinsic motivation components		
Interest	.82	.68
Academic effectiveness	.67	.73
Cognitive engagement	.74	.73
Learning environment components		
Work norm	.78	.62
Academic press	.63	.69
Real world connection	.64	.79
Group work	.57	.77

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For qualitative part of the research, a questionnaire consisted of 10 selected open-ended questions on the basis of Intrinsic Motivation Inventory was prepared. IMI is a comprehensive survey consisting of six sub-headings from where the questions in accordance with research purposes were adapted directly. After receiving the views of experts in the field, survey was given to its final version. Internal Motivation Measurement Survey and open-ended questions made up from IMI were administrated to students simultaneously in the last week of semester.

Research Pattern

By applying quantitative and qualitative research techniques together, the data obtained simultaneously was controlled to see whether data compromise and match (triangulation) with each other. Multiple regression analysis for the quantitative portion of the study was performed. To understand exactly how a relationship between dependent and independent variables exists, it was important to use this research pattern. The independent variables of the research were the properties of the learning environment that were work norm, academic press, real-world connection and group work. Interest, academic efficacy and cognitive engagement (the components of intrinsic motivation) were the dependent variables of the study. As regards the internal validity of study, it might create a potential threat, because of not a random selection of participants. In addition, because a high relationship formed between dependent and independent variables might occur, causality fully may not be possible.

Data Analysis

Standard multiple regression analysis was conducted to understand the relationship between dependent variables (interest, academic efficacy and cognitive engagement) and independent variables (work norm, academic press, real-world connection and group study). To test the accuracy of regression assumptions, SPSS 13.0 was used. As a result of regression assumptions, methods such as skewness reduction, extreme value (outlier) reduction, normality, increasing of residues' variability for linearity and dependent variables were considered for the transformation of variables. In the distribution of variables, no problem was seen for unevenness values in the distribution for the residues and a quadratic

or logarithmic transformation was not needed. According to the value for p <.05, looking at the Mahalabonis, extreme value was unprecedented.

Interest

Table 2 shows correlations between interest and independent variables, unstandardized regression coefficients (B), standardized regression coefficients (β), partial correlations, R^2, and adjusted R^2. Correlation (R) demonstrates a positive and significant relationship between independent variables and interest, F (4, 30) = 2.79, p <.05. In other words, the regression model used for four independent variables and interest was statistically important. In this model, none of the four independent variables of the model alone, however, cannot be considered to contribute to description of the model (p> .67, p> .07, p> .17, p> .74). So, none of the arguments used for the variable of interest was not significant itself. According to this model, work norm, academic pressure, real-world connection, and group work explained only 30% of the variance in interest.

When multiple and partial correlations were examined between independent variables (work norm, academic pressures, real-world connection, group work) and interest, the low level of relationship between interest and work norm was found (r =.34), but when other variables were controlled the correlation between two variables decreased dramatically (r =.08). Similarly, between interest and academic pressure, real-world connection and group work, the low-level relationship was found (r =.47, r =.38, r = .19), but considering along with other variables, the relationship decreased (r =.34, r = .26, r =.06).

Table 2. Standard multiple regression analysis of independent variables on interest

Variable	B	Standart Error B	β	t	p	Multiple r	Partial r
Constant	4.70	5.83	-	.80	-		-
wnorm	.11	.26	.08	.42	.67	.34	.08
apress	.39	.21	.35	1.86	.74	.47	.34
rworld	.32	.22	.25	1.40	.17	.38	.26
groupw	.06	.20	.05	0.32	.74	.19	.06
			R^2=	.30			
			AdjR^2	=.19			
			R=	.55**			

** *p <0.05*

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Academic efficacy

According to work norm, academic press, real-world connection, and group work, the multiple regression analysis results related to interpretation of the academic efficacy are given in Table 3. When multiple and partial correlations were examined between independent variables and academic efficacy, a positive and low level relationship was found between work norm, real world connection and academic efficacy (r = 0.45; 0:38; 0.34), but when other variables were controlled, correlation between the variables correlated decreased and partial regression between group work and the academic effectiveness turned to negative direction (r =. 028; 0:22; -0.08).

According to table 3, between independent variables (work norm, academic press, real-world connection and group work) and academic efficacy, there was no significant relationship, R = 0.53, R^2 = 0.28, p> 0.05.

Table 3. Standard multiple regression analysis of independent variables on academic efficacy

Variable	B	Standart Error B	β	t	p	Multiple r	Partial r
Constant	-	4.67	-	.67	-		-
wnorm	3.13	.21	.29	1.52	.13	.45	.28
apress	.32	.16	.22	1.17	.25	.38	.22
rworld	.19	.18	.18	1.03	.30	.34	.20
groupw	-.07	.16	-.07	-.44	.66	.05	-.08
			R^2=	.28			
			AdjR^2	=.17			
			R=	.53			

Cognitive engagement

According to work norm, academic press, real-world connection and group work, the results of multiple regression analysis related to interpretation of the cognitive engagement are given in Table 4. When multiple and partial correlations were examined between independent variables and cognitive engagement, a positive and moderate relationship was seen (r = 0.46, 0.49), but other variables were checked, correlation decreased (r = 0.22; 0.20).

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Low-level and positive correlation between cognitive engagement and group work (r = 0.15) turned into negative direction (r =- 0.08), when other variables were taken into account.

Moderate and significant relationship between cognitive engagement and work norm, academic press, real-world connection and group work was found, R = 0.61, R2 = 0.38, p <0.05. Independent variables together can explain 38% of the variance in the cognitive engagement.

According to standardized regression coefficient (β), sequence of the importance of the independent variables on cognitive engagement is real-world connection, academic press, work norm and group work. When t-test results concerning the significance of regression coefficients (Table 4) were examined, the real-world connection and academic pressure can be considered as significant variables on cognitive engagement.

Table 4. Standard multiple regression analysis of independent variables on cognitive engagement

Variable	B	Standart Error B	β	t	p	Multiple r	Partial r
Constant	-	4.03	-	2.43	-		-
wnorm	-.17	0.18	-.17	-0.95	0.34	.17	.28
apress	.34**	0.14	.42	2.33	0.02	.46	.22
rworld	.40**	0.15	.43	2.57	0.01	.49	.20
groupw	.01	0.13	.02	0.09	0.92	.15	-.08
			R^2= $AdjR^2$ R=	38[a] =.28 61**			

** *p <0.05*

Qualitative analysis

Considering components in intrinsic motivation inventory, a coding scheme was prepared. According to this coding scheme (Table 5), the effect of learning environment prepared based on project-based learning was grouped under seven specific categories. For coding reliability, two independent coders coded data. Firstly of all, coders, by reading students' answers together, categorized the scripts. Then, coders, working independently, classified the responses divided into categories according to the coding schema. After the coding process, the answers in categories were controlled and non-similar codings were solved with cooperation. According to the answers, students' perceptions about the learning

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environment were analyzed and increasing or decreasing impact of the learning environment on intrinsic motivation was identified.

Table 5. Coding schema to determine the properties of the learning environment

Features of learning environment	**Coding**	**Samples**
Collaborative work	GC	"We made collaboration in the whole process." "I resolved problems encountered by consultation with my friends."
Interesting aspects	EY	"To learn something new to develop yourself, to find new ideas by discussing within the group and to prepare project presentations by making the rehearsal was fun." "At the end of the project, doing my own presentation and watching the presentation of others was fun." "I worked outside of the traditional style that I was familiar." "When presenting project, it was interesting to be in instructive model."
Work norm	IN	"I tried to get accurate information from different sources by in-depth review of topic." "While presenting in front of my class, with "my stance, my tone, my interaction", I gained an important experience in class management." "I have not done this much research from various sources."
Independent work	BC	"To work independently was productive for me, to select subject myself increased my self-confidence, and I worked more disciplined."
Academic press and social returns	SG	"Learning how I should speak in front of the community helped me to overcome my excitement and my courage increased." "The project presentation gives a sense of "You have growth, and have a voice in society". "Project work helped me to take responsibility and to be disciplined."
Permanence	KA	"To benefit from various sources and contacts make the learned information more permanent." "I guess I forget too late what I have learned from this lesson."
Real-world connection	GD	"At the end of the research, I put out a product, and it was very important to prepare for business world." "As a teacher candidate, thanks to this presentation that I will be able to speak properly and more effective "

Effects of prepared project-based learning environment on students' intrinsic motivation are presented in Table 6. According to the coding results, work norm in computer hardware course and interesting aspects of the class setting came at the beginning of this

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effect (respectively 35.57% and 21.14%). Detailed investigation of the topic, usage of different sources and technologies, disciplined and responsible work throughout the study, improvement for sense of class management properties, and openness to trying to develop different ideas were among the common answers given by the students.

Table 6. The number and percentage of coding to determine the properties of the learning environment

Properties of the learning environment	**Coding**	**Number of codings**	**Percentage of codings**
Work norm	IN	175	35.57
Interesting aspects	EY	104	21.14
Academic press and social returns	SG	94	19.11
Collaborative work	GC	47	9.55
Independent work	BC	33	6.71
Permanence	KA	24	4.88
Real-world connection	GD	15	3.05

The students' social returns and the pressure of doing work (academic press) were in the second rake with 19.11%, affecting students' intrinsic motivation. Considering Vgotsky (1978)'s social learning theory, the findings supported this theory that learning was the result of the shared knowledge and mutual exchange of ideas in the social environment. Results indicated that students' information exchange has to be in the social environment; because students' active participation had a positive impact on cognitive engagement.

Students did not only perform their individual tasks, but also combined their individual tasks with group' task and tried to finish the project collaboratively. Moreover, students took other students' works into account and had to learn other groups' subjects. Additionally, not only learning the new things from projects but also thinking how to present the projects were seen as triggering factors for academic pressure and cognitive engagement. Especially, for students, presenting projects in the classroom caused an academic pressure. Trying to make their best and to be responsible against the other students in the group were seen important factors in the codings. Answers like "*I tried to make my best since I am responsible on behalf of myself and my friends.*", "*Each student's unique presentation and expression of his own interests and sharing our thoughts was another aspect.*", "*I feel students' consecutive*

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questions will challenge me." implied what kind of constraints students encountered because of their project work.

From codings, some of the academic pressures of project-based learning on students can be listed as follows:

• Presentation of projects is a difficult task.

• Before presentation of project, it is needed to rehearse the presentation in order to get feedback.

• Governing group members to get common consensus on decisions is difficult.

• To do research in project-based learning takes time and is very stressful.

• Project-based learning requires sacrifice and self-confidence, and the results of individual work affect not only the individual but whole group.

While doing project work, students' information exchange and assistance to each other were recorded frequently. Students who had high level information had a tendency to complete the project faster and to help other students. A student's answer, "*For me, the most important thing in the group work is to support each other and to complete missing parts by giving helping hand*" supports this view better. Results clearly showed that the students faced with different impediments while working with each other. Mostly, doing the project needed co-ordinated work and many students saw the project as a first time experience. The impact of students' group work included 9.55% of the codings. Considering 6.71% of independent study component, the students' desire of individual task completion was seen as a detector of low group work. The reason of why group study had low impact on the intrinsic motivation can be explained by individual efforts to finish the given projects. Another reason was that students were mostly forced to act working together to complete the project.

On the other hand, in codings, why students liked group work and how it affected students' intrinsic motivation can be sorted as following:

• Group work brings in experience

• Group work increases interaction

• Group work makes up for the lack of information

• Group work saves time in collecting information

• Group work gives responsibility

• Group work requires discipline

• Group work requires coordination and cooperation

Permanence was found as another component affecting students' intrinsic motivation. According to Table 6, of the coded responses 4.88% showed that students used knowledge in different cases and examples and this was an indicator of permanence. In students' answers, the permanence is deemed to be important factor on behalf of gaining experience and self-efficacy.

Discussion

In this study, the effect of a computer hardware course components prepared according to project-based learning environment was examined on students' intrinsic motivation. According to the results of the study, computer hardware course based on project-based learning positively affected college students' cognitive engagement and interest in class. From the quantitative analysis, it was clear that the students liked the activities of computer hardware course, saw the course as a social learning environment, and learned interesting things. In addition, results of this study clearly showed students involved in more research to do the assigned tasks and tried to find information from different sources. This result was also supported by the analysis of qualitative data. Accordingly, the work norm created in the computer hardware course was deemed to be an important factor that affected the students' intrinsic motivation. On the other hand, according to the features of computer hardware course designed with project-based learning environment, academic efficacy was not a significant factor emerged from the analysis of quantitative data.

Analysis of qualitative data showed that students doing group work encountered with different problems. This was because students could not fully engage in collaboration, and problems among the students in the distribution of subjects were seen as the reason that negatively affected intrinsic motivation. Project-based instruction will be used in courses, therefore, require very good planning and organization.

The results of this study indicated that created learning environment put pressure on students' efforts on finishing projects and lead to develop information exchange more frequently. The computer hardware course triggered peer learning. Students' ability of accessing information was seen a factor to create an academic pressure on students. In fact, this result was previously supported by results of some studies (Ryan & Deci, 2000). According to these studies, situations where the learning environment was seen as a social environment increased students' intrinsic motivation and features such as students' effort,

high-quality work and connection to learning environment developed more. As a social learning environment, in computer hardware course, students were forced to complete activities in a competitive environment, so quality of product and work increased and the good work was seen as the model.

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