

Full Length Research Paper

The effect of blog use on self-regulatory learning of prospective German language teachers

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The purpose of the study was to examine the effect of blog use on self-regulatory learning of prospective German language teachers. The study is semi-experimental. Pretest-posttest, experiment control model was used. Blog activities were conducted as extensive beyond classroom activities only for the experiment group. As the data collection tool Motivated Strategies for Learning Questionnaire scale was used. During the data analysis Mann Whitney U-Test for Independent Samples and Wilcoxon Signed Rank Test for Paired Samples were used. Although, at the initial stage of the study both groups were at similar self-regulatory learning level, at the end of the study it was found that blog use influenced self-regulatory learning of the experimental group in terms of intrinsic goal orientation and task value. Moreover, a significantly positive difference was found among pretest-posttest results, intrinsic goal orientation and time and study environment dimensions of prospective German language teachers. The findings of the study revealed that a learning process supported by blog use applications positively influences various self-regulatory learning dimensions of prospective teachers.

Keywords: Self-regulatory learning, Blog, motivation, learning strategies.

INTRODUCTION

Learning is considered as a life-long process and thus, alternative theories, strategies and applications that support and ease learning are put into practice. One of these applications is self-regulatory learning which is accepted as an efficient factor in the learning process. Self-regulatory learning, which is considered in the context of social learning theory, is described as the proper and focused use of incentive, cognition, and behavior of students (Garvalia and Gredler, 2002; Senemoğlu, 2007; Zimmermann, 2000). Especially recent research on self-regulatory learning has demonstrated its effects on motivation and learning strategies (Clearly and Zimmermann, 2004; MacKenzie et al., 2012). Bandura (1986) argues that individuals who have self-regulatory learning skill can construct self-learning strategies, organize cognitive behaviors, become active in the

learning process, and control learning processes. Pintrich (2000) and Zimmermann (2000) who define self-regulatory learning as a dynamic process point out the importance of planning, observation and self-control while helping students gain self-regulatory learning. Therefore, in order to develop self-regulatory learning in learning teaching environments, activities, plans, feedbacks, controls, and applications that will improve learning responsibilities of students should be implemented (Ramdass and Zimmermann, 2011; Senemoğlu, 2007).

Motivation and learning strategies which are components of self-regulatory learning contribute to independent learning of the individual and promote active learning (Wuttke, 1999). Learning strategies are defined as strategies and routes (Harmanli, 2000; Pintrich et.al., 1993), behaviors and thinking processes (Arends, 1997;

Tay, 2005; Zhang and Sternberg, 2001), and methods of benefiting effective learning skills (Riding and Rayner, 1998) that students use in order to learn something. Students can use more than one or different strategies according to their interest, learning speeds, habits, and abilities.

Besides these factors, an individual should have motivation in order to actively participate during the learning process. "Motivation is a process whereby a certain amount of instigation force arises, initiates action, and persists as long as no other force comes into play to weaken it and thereby terminate action, or until the planned outcome has been reached" (Dörnyei, 1998:118). Analogous to the learning strategies, motivation also differs from individual to individual and it is influenced by personal, social and affective factors (Riemer, 2001). The more educators are aware of the factors that influence students' motivation in educational contexts, the better students can be motivated. Studies conducted in line with technological innovations show that information and communication tools are important factors that increase students' motivation.

Nowadays, different information and communication tools are used in educational environments. One of the important options that information technologies present for education-teaching environments is internet. It can also be observed that blog which is a product of internet technology has becoming widespread recently. Blog is a webpage that can be constructed without a general knowledge of web design. In this sense, blogs enable authors reflect their ideas easily and rapidly, and provide them opportunities to access or connect to other web pages (Çuhadar, 2008; Rachael, 2005; Williams and Jacobs, 2004). Recent research on blogs has revealed their positive effect on education and teaching (Buffington, 2007; Churchill, 2009; Gleaves et al., 2008). Blogs in education present students the chance to mutually share information and make discussions (Makri and Kynigos, 2007). Teaching activities supported by blogs can not only provide students democratic environments where students freely present their ideas, but also make them reach continuous feedback on discussion topics beyond the classroom context. Another significant feature of blogs is their role in improving teacher-student and student-student interaction (Kuzu, 2007). According to Hsu (2007:78) "the common advantages of the use of blogs are reflection and critical thinking are encouraged, authenticity through publication, social presence, development of a learning community, active learning encouraged and ability to receive and respond to feedback". The benefits of using blogs mentioned on relevant research can be summarized as follows (Armstrong et al., 2004; Bell, 2009; Chu et al., 2012; Ellison and Wu, 2008; Shoffner, 2006; Yang, 2009):

- Extends the learning process beyond time and

classroom constraint,

- Enriches social interaction,
- Motivates learners,
- Makes student gain reading habits,
- Allows students to develop skill expertise,
- Provides discussion and feedback opportunities,
- Offers opportunities for group work,
- Facilitates assessment,
- Improves reflective thinking and stance, and motivates cooperative learning,
- Enriches the learning environment,
- Advances independent learning and motivates self-improvement,
- Enables students follow independent learning processes.

Especially in an era in which education has no boundaries due to the recent technological developments, internet and blog use in education becomes inevitable since they both create the benefits mentioned above.

In the light of the positive situations that self-regulatory learning and blog use in education create and stemming from the point that blog use can be an important factor in self-regulatory learning, this study examines the effect of blog use on self-regulatory learning of prospective German language teachers.

METHOD

Research model

The study was designed as semi-experimental. Pretest-posttest and experiment-control group model was used. Since this model provides the researcher abundant statistical data and enables the interpretation of the findings in terms of reason-result, it is described as a useful and influential model (Büyükoztürk, 2007). In this study, control and experimental groups were exposed to a pretest before the education process was conducted. Following the education process both groups were exposed to a posttest. Finally, the effects of the experimental study were analyzed and evaluated.

The participants

The study group includes 31 (26 female, 5 male) third year students (teacher trainees) who were studying German Language Teaching at Trakya University, Faculty of Education during the fall semester of 2011 to 2012 academic year. A written consent was gathered from all participants before the study was conducted. The reason for choosing third year students as participants in this study was; students were taking the Teaching Methods I course. The participants were grouped randomly. The experimental group includes 17 and the control group includes 14 teacher trainees. The participants' age ranged from 21 to 31 and the mean of their age was $\bar{x}=23.06$.

Data collection tool

As the data collection tool, the Motivated Strategies for Learning

Table 1. The content and subject of weekly activities.

Week	Activity content	Purpose
Week 1	Finding a title for a text and identifying key words	Summarizing
Week 2	Presenting examples and explanations related to a topic	Comparison and signification
Week 3	Comparing contrary examples	Pointing out and examining prior knowledge
Week 4	Interpreting and identifying the theme of a caricature	Reminding and signification
Week 5	Short and silent movie screening, interpretation of the content of the movie, and its setting	Pointing out, motivating, and signification
Week 6	Watching the silent movie on week 5 with voice	Defragmenting, re-signification, metacognition
Week 7	Choosing the most appropriate title for a text among 4 titles provided	Distinguishing ideas
Week 8	Writing contrasting examples for the given concepts	Reminding, improving comprehension, comparing
Week 9	Identifying the intercultural problem in a dialogic text	Pointing out, signification
Week 10	Filling in a table related to a text	Summarizing, reorganizing information
Week 11	Reflecting on the activities performed hitherto	metacognition, summarizing, pointing out

Questionnaire (MSLQ) scale which was developed by Pintrich et al. (1991) and adapted to Turkish by Büyüköztürk et al. (2004) was used. MSLQ scale includes two main sections which are motivation and learning strategies. The scale composed of a 6-factor motivation subscale and a 9-factor learning strategies subscale. The 81 items of the MSLQ are scored on a 7 point Likert scale, from 1 (not at all true for me) to 7 (very true for me). The motivation section consists of 31 items and the learning strategy section includes 50 items. Motivation section includes intrinsic goal orientation (.59), extrinsic goal orientation (.63), task value (.80), control of learning beliefs (.52), learning and performance, self-efficacy for learning and performance (.86,) and test anxiety (.59) subsections. The learning strategies section includes rehearsal (.62), elaboration (.74), organization (.61), critical thinking (.74), metacognition (.75), time and study environment (.61), effort management (.41), peer learning (.46), and help seeking (.49) subsections.

Application procedure

The study was conducted during the fall semester of 2011 to 2012 academic year, in the Teaching Methods I course of German Language Teaching Division. Classroom 3A (experimental group) and 3B (control group) participated in the study. In both classes the content, purpose, processing, and evaluation process of the Teaching Methods I course was handled similarly. Blog activities were only used by the experimental group as out of classroom activities.

In order to form the blog related to course, Wordpress which is an open resource coded and cost free software was used. After loading the blog software on web server and initiating the start set up, blog interface and menus were created. Main page, About, Activities and Chat and Communication plug in were added to the blog's main page. Students were provided with the opportunity to have interaction about the course topics and other daily subjects irrelevant to the course content both in German and Turkish. With the purpose of making students access the blog, the web name <http://www.almancaogretimi.info> was obtained.

Following the formation of the blog, the students in the experimental group were registered as users to the blog. By using the registered user accounts, only the students in the experimental

group and the instructor were given the chance to have access to the blog. Subsequently, the participants in the experimental group were trained by the instructor on how to access the blog, use the blog, leave comments, respond to the comments, and write announcements.

The activities on the blog continued for 11 weeks. These activities were designed with the purpose of improving student-student and instructor-student interaction. Another purpose was to provide students continuous feedback related to the discussion topics. The content and subjects of the activities differed every week. These subjects and activities are summarized as shown in Table 1.

Data analysis

Data gathered before and at the end of the study with the MSLQ scale were analyzed by SPSS 17.0. During the data analysis, arithmetic means of the groups and standard deviations were calculated. Mann Whitney U-Test was conducted in order to identify the homogeneity of the groups. Wilcoxon Signed Rank Test for Paired Samples was used with the purpose of identifying pretest and posttest arithmetic differences.

RESULTS

The analysis of the scores obtained from the pretest which was done with the purpose of examining the similarity between self-regulatory learning levels of the experimental and control groups are shown in Table 2.

As it can be seen in Table1, no significant difference was found between experimental and control groups' MSLQ pretest results ($p < 0.05$). Considering the pretests of the groups, the results obtained from the mean ranks in Table 2 show that the participants in both groups were at similar self-regulatory learning levels before blog use application.

Following the blog activity, Mann Whitney U-Test for

Table 2. Pretest Mann Whitney-U results of experimental and control groups' self-regulatory learning levels.

	Group	N	Mean Rank	Sum of ranks	U	p
Control of learning beliefs	Control	14	16.46	230.50	112.50	.794
	Experimental	17	15.62	265.50		
Intrinsic goal orientation	Control	14	16.29	228.00	115.00	.873
	Experimental	17	15.76	268.00		
Extrinsic goal orientation	Control	14	19.11	267.50	75.50	.083
	Experimental	17	13.44	228.50		
Self-efficacy for learning and performance	Control	14	15.68	219.50	114.50	.858
	Experimental	17	16.26	276.50		
Task value	Control	14	13.86	194.00	89.00	.229
	Experimental	17	17.76	302.00		
Test anxiety	Control	14	18.36	257.00	86.00	.189
	Experimental	17	14.06	239.00		
Rehearsal	Control	14	13.64	191.00	86.00	.188
	Experimental	17	17.94	305.00		
Organization	Control	14	12.61	176.50	71.50	.057
	Experimental	17	18.79	319.50		
Elaboration	Control	14	13.64	191.00	86.00	.188
	Experimental	17	17.94	305.00		
Critical thinking	Control	14	14.64	205.00	100.00	.488
	Experimental	17	17.12	291.00		
Help seeking	Control	14	16.43	230.00	113.00	.811
	Experimental	17	15.65	266.00		
Peer learning	Control	14	13.89	194.50	89.50	.239
	Experimental	17	17.74	301.50		
Metacognition	Control	14	12.96	181.50	76.50	.091
	Experimental	17	18.50	314.50		
Effort management	Control	14	13.89	194.50	89.50	.239
	Experimental	17	17.74	301.50		
Time and study environment	Control	14	12.96	181.50	76.50	.090
	Experimental	17	18.50	314.50		

*p<0.05.

independent samples analysis was done in order to identify the difference between MSLQ posttests of the experiment (Table 3).

The findings in Table 3 show that according to experimental and control groups' MSLQ posttests, a significant difference on behalf of the experimental group was found in the items intrinsic goal orientation, and time and study environment (U intrinsic goal orientation = 69.50; p<0.05;

U time and study environment = 36.00; p<0.05). This motivation and learning strategies difference between the experimental and control groups can be identified from the mean ranks in Table 2. According to the MSLQ posttests of the teacher trainees in the experimental group, their intrinsic goal orientation level is higher than the control group (MR_{control} = 12.46; MR_{experiment} = 18.91). Likewise, the mean rank of the experimental group (MR

Table 3. Mann Whitney U-Test results according to experiment and control groups' posttests.

	Group	N	Mean rank	Sum of ranks	U	p
Control of learning beliefs	Control	14	16.71	234.00	109.000	.690
	Experimental	17	15.41	262.00		
	Total	31				
Intrinsic goal orientation	Control	14	12.46	174.50	69.50	.048*
	Experimental	17	18.91	321.50		
	Total	31				
Extrinsic goal orientation	Control	14	19.36	271.00	72.000	.061
	Experimental	17	13.24	225.00		
	Total	31				
Self-efficacy for learning and performance	Control	14	13.46	188.50	83.500	.158
	Experimental	17	18.09	307.50		
	Total	31				
Task value	Control	14	14.07	197.00	92.000	.277
	Experimental	17	17.59	299.00		
	Total	31				
Test anxiety	Control	14	16.46	230.50	112.500	.796
	Experimental	17	15.62	265.50		
	Total	31				
Rehearsal	Control	14	14.61	204.50	99.500	.436
	Experimental	17	17.15	291.50		
	Total	31				
Organization	Control	14	12.86	180.00	75.000	.078
	Experimental	17	18.59	316.00		
	Total	31				
Elaboration	Control	14	14.11	197.50	92.500	.288
	Experimental	17	17.56	298.50		
	Total	31				
Critical thinking	Control	14	13.89	194.50	89.500	.240
	Experimental	17	17.74	301.50		
	Total	31				
Help seeking	Control	14	17.68	247.50	95.500	.349
	Experimental	17	14.62	248.50		
	Total	31				
Peer learning	Control	14	15.29	214.00	109.000	.690
	Experimental	17	16.59	282.00		
	Total	31				
Metacognition	Control	14	13.11	183.50	78.500	.107
	Experimental	17	18.38	312.50		
	Total	31				
Effort management	Control	14	16.11	225.50	117.500	.952
	Experimental	17	15.91	270.50		
	Total	31				
Time and study environment	Control	14	10.07	141.00	36.000	.001*
	Experimental	17	20.88	355.00		
	Total	31				

*p<0.05.

Table 4. Wilcoxon signed rank tests for paired sample results according to the pretest and posttest results of experiment and control groups.

	Control group				Experimental group				Pretest-Posttest	
	Pretest		Posttest		Pretest		Posttest		Control	Experimental
	Mean rank	Std. deviation	Mean rank	Std. deviation	Mean rank	Std. deviation	Mean rank	Std. deviation	Z	Z
Control of learning beliefs	22.0000	3.80283	22.4286	4.34501	21.4706	2.64853	22.4706	2.96052	.938	1.173
Intrinsic goal orientation	23.0714	2.89467	21.8571	5.11193	22.8235	3.55730	24.8824	2.49706	1.167	2.929*
Extrinsic goal orientation	18.9286	5.23985	19.1429	4.86522	16.1176	3.99816	15.8235	4.65343	.053	.658
Self-efficacy	42.5000	6.47777	41.6429	7.43802	43.2353	6.09846	45.0588	6.86905	.441	1.245
Task value	35.7143	5.78364	36.6429	5.40096	38.1765	3.00490	39.6471	2.14887	.362	.2498*
Test anxiety	22.7857	5.42329	22.6429	8.16754	20.0000	6.70820	22.2353	7.27607	.929	1.168
Rehearsal	22.1429	3.25475	22.2143	3.70402	23.8235	3.60963	23.3529	2.93558	.622	.526
Organization	22.6429	3.24884	22.6429	3.17701	24.9412	3.45454	24.5882	2.50147	.937	.434
Elaboration	34.9286	4.64864	36.0000	4.97687	36.1176	5.81896	37.7647	4.11597	.385	1.220
Critical thinking	26.5000	3.41377	25.9286	5.28371	27.3529	3.67323	28.1765	3.92485	.972	1.069
Help seeking	21.5714	5.31636	22.2143	4.45798	21.7059	4.44079	20.8824	4.35721	.555	.666
Peer learning	12.2857	3.79126	12.2143	3.72473	14.0000	3.96863	12.7059	3.93327	.888	1.115
Metacognition	57.2143	6.51836	59.2143	6.20395	61.3529	6.88242	63.1176	5.47588	.363	.688
Effort management	19.6429	5.00165	19.9286	3.47440	21.6471	3.06066	19.6471	3.69021	.755	1.567
Time and study environment	36.1429	6.76936	35.3571	4.93975	40.1176	4.45649	41.4706	3.10479	.600	1.270

*p<0.05.

experiment = 20.88) is higher than the control group (MR control = 10.07) when time and study environment is considered.

With the aim of finding the effects of the applications on experimental and control groups, the significant difference between the teacher trainees' pre and post self-regulatory learning levels were examined. Thus, both groups' arithmetic means and standard deviations were calculated according to the pretest and posttest. Wilcoxon Signed Rank Tests for paired samples was conducted since groups were small (Table 4). Table 4 shows that although no significant

difference was found between the MSLQ pretest and posttest results of the control group, a significant difference was found between the pretest and posttest results of the experimental group in terms of intrinsic goal orientation and task value ($z=2.929$, $p<0.05$; $z=.2498$, $p<0.05$). According to Wilcoxon Signed Rank Test for paired samples results, when the mean ranks of the difference scores are considered, the observed difference is on behalf of the posttest results and in a positive direction. This difference of the experimental group displays that there is a positive increase in the motivation of the

participants.

DISCUSSION AND CONCLUSION

This study examined the effect of blog use on self-regulatory learning of Prospective German Language Teachers. The semi-experimental research revealed a significant difference on behalf of the experimental group in the items intrinsic goal orientation, and time and study environment. These findings shows that blog use as an internet product is significantly and positively related to

self-regulatory learning in terms of intrinsic goal orientation which is a motivational dimension, and time and study environment which is related to learning strategy use. Pintrich et al. (1991) argues that intrinsic goal orientation has an important influence on students' beliefs and interests. According to Bembenutty and Zimmerman, (2003) students with high intrinsic goal orientation are academically better than students with low intrinsic goal orientation when long term studying and focusing are considered. Therefore, considering the findings of the current study it can be argued that the participants in the experimental group have higher interest, belief, and motivation compared to the control group.

Studies by Pintrich et al., 1991; Pintrich 2000, demonstrate that when students have high goal orientation, they can use cognitive, planning, monitoring, and control and organization strategies and processes efficiently. As a matter of fact, the participants in the experiment group of the study whose education was supported by blog use displayed better use of time and study environment use compared to the control group. This finding is parallel to Haşlamam and Aşkar's (2007) research which argues that efficient use of time has a positive and significant impact on student achievement. Students who have high levels of time and study method strategies are proficient in programming, planning, and using time efficiently (Pintrich et al., 1991, 1993). In light of the research findings, it can be argued that blog applications contribute to time and study environment management of prospective German language teachers.

Research on self-regulatory learning shows its cognitive, strategic, and motivational effects on students' learning processes (Cobb, 2003; Hofer et al., 1998; Schunk and Ertmer, 2000). Similarly, the current study also shows that a learning process which is supported by blog use has positive effects on several dimensions of prospective teachers' self-regulatory learning. The idea that educational contexts should motivate students, be different, and make students active (Zimmerman, 2008; Üredi and Üredi, 2007) also came out in the current study. Ramdass and Zimmermann (2011) state that improving student behaviors related to homework effects how students gain self-regulatory learning skills. Moreover, their study displays a positive relationship between doing homework and self-regulatory learning. Likewise, the current research reveals that blog use, which presents the opportunity to become active beyond the classroom context and makes students gain self-learning responsibilities, is an important activity.

In addition to high goal orientation, blog use positively affected and increased task value of prospective German teachers. This finding shows that the students in the experimental group had higher belief and interest towards a subject that was aimed to be learned than the participants in the control group. Trautwein and Köller's

(2003) research displays that there is a significant relationship between doing homework and self-regulatory learning which means doing homework is related to valuing. In the current research, the value endowed to the blog applications was influential in improving students' motivation.

Numerous studies have demonstrated that using technological innovations in educational contexts contributes to individual's learning. Blog use which is one of these technological innovations is not only considered as a useful and supportive tool in education (Zeng and Harris, 2005; Xie et al., 2008; Coutinho, 2007), but also a motivating factor (Stiler and Philleo, 2003; Farmer et al., 2008; Shoffner, 2006; Xie and Sharma, 2004) which is also presented in the current research. Self-regulatory learning, which is a socio-cognitive model, takes the learner's learning strategies, beliefs, and social environment into consideration (Bandura, 1986; Pintrich, 2000; Schunk, 2001; Zimmermann, 2000). Blog applications helps the students self-monitor and provide feedback during the self-regulatory learning. In this context, this study creates an awareness of how blog use contributes to self-regulatory learning, motivation, and learning strategy use. The finding of the study is limited to the research groups and cannot be generalized. However, the effects of blog use can be studied on different target groups with different variables. Moreover, the duration of blog use applications can be extended and similar applications can be generalized and their effects of self-regulatory learning can be examined. Moreover, similar future research on prospective teachers can use qualitative inductive methods such as action analysis or case analysis in order to display self-perception of students towards self-regulatory learning.

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