

Comparing Web Pedagogical Content Knowledge of Turkish and English Language Teaching Department Students¹

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ABSTRACT

In today's information age, with the developing of technology, the Internet is now used in nearly every field. The Internet, which makes the accessing and sharing of information easier, has become the most used technology of our age. As a result of the Internet's effect on every sector, the education sector has also witnessed many changes, with technology having affected the education through new teaching approaches and technological tools in education have become widespread. Accordingly, teachers need to make use of the web technologies actively and effectively. Teachers' development on web usage skills for teaching purposes should start from the pre-service period. From this aspect, besides the content knowledge and pedagogical formation, teachers should have technological, especially Internet knowledge before graduating and should be able to integrate these knowledge areas into their lessons. Especially nowadays, considering the fact that pre-service and in-service education is provided through the Internet, teachers' web pedagogical content knowledge increases in importance. In consideration of the literature, it was seen that studies on web pedagogical content knowledge increased day by day. However, there has been no comparison between departments which aim to teach languages. Therefore, it was considered that research on language teaching departments' web pedagogical content knowledge would contribute to the field. In this study, web pedagogical content knowledge of students who studied Turkish and English Language Teaching at Sakarya University's Faculty of Education in Turkey during the 2014-2015 Spring semester was examined in terms of several variables.

Key Words: Technology, Web pedagogical content knowledge, Web pedagogical content knowledge scale

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INTRODUCTION

With globalization, changes have occurred in many areas under the influence of external sources, and education systems are also affected by these changes. It is a necessity that education institutions reconstruct educational environments according to the needs of the new generation in this technological age. On the subject of transferring, sharing and accessing information, the Internet is the primary factor. Usage of the Internet is becoming widespread in nearly every field and the number of Internet users continues to increase day by day.

With technology having become so advanced, today's teachers are among the most important constituents of the education system, and face new roles with their knowledge, skills and proficiency more important than ever. Therefore, besides content and pedagogical knowledge, teachers today should have technological knowledge in order to make the classroom environment more efficient.

In the period in which teachers' content knowledge was important and pedagogical knowledge was neglected, Shulman's (1987) study stands out with adding pedagogical knowledge to content, creating an integrated structure of pedagogical content knowledge. Over time, with the idea that technology should be part of this structure, a framework which emphasized technological pedagogical content knowledge (TPCK) was created (Koehler & Mishra, 2005, 2009). In TPCK, a seven-dimensional structure comprised of three basic components stands out. These seven dimensions are content, pedagogy, technology, pedagogical content, technological content, technological pedagogy, and technological pedagogical content knowledge (Koehler, Mishra, & Cain, 2013).

Considering the literature, TPCK as a model has become a structure which has been quickly accepted by educators and used to measure the knowledge, skill, and self-efficacy of teacher candidates (Öztürk, & Horzum, 2011). Besides the usage of the TPCK model across different fields, the usage in which it is specialized in terms of different technologies can also be seen. Foremost among these are the Internet and web technologies (Horzum, 2011).

Over time, due to the positive and integrated features which include other technologies of the Internet/web, the model has become directed towards web-based technological content knowledge. Accordingly, based on Shulman's (1986) pedagogical content knowledge and Mishra and Koehler's (2006) technological pedagogical content knowledge, web pedagogical knowledge was defined and created for the web (Lee, & Tsai, 2010; Lee, Tsai, & Chang, 2008).

This structure was considered as web pedagogical content knowledge and created to include five components. The first of these components is general web knowledge. This component includes general knowledge of the web and self-efficacy. The second component is the communicative web, which includes knowledge of the communicative usage of the web and self-efficacy. The third component is web content knowledge, which includes knowledge of the usage of the web on a subject and information of the websites regarding the subject and self-efficacy. The fourth component is web pedagogical content knowledge (WPCK). This component includes integrating the web with the pedagogy and content on the subject. The last (fifth) component is attitude toward web-based teaching.

Considering the literature, among the scales with regards to the WPCCK, the “WPCCK Scale” which was developed by Lee et al. (2008) has been used in several studies. Adaptation of this study into Turkish was achieved by Horzum (2011). It is possible to come across many studies on the WPCCK.

In order to learn the influence of the WPCCK for students on web-based learning, Horzum (2012) examined students’ success in class and their general satisfaction. As a result of the course given according to the results of the pre- and post-tests on study and control groups, it was proven that the WPCCK of the study group was higher than that of the control group. Horzum and Güngören (2012) studied a model on science and technology teacher candidates for their attitude toward web-based teaching, tool acceptance level and WPCCK. They found that the students’ attitude toward web-based teaching affected their acceptance rate of web-based teaching, and that their tool acceptance level on web-based teaching affected their WPCCK. In Horzum’s (2013) study where he studied students’ WPCCK in terms of their gender and department, the results emphasized that the sub-dimensions of WPCCK were important determiners based on gender and department. Akgün (2013) examined the relationship between teacher candidates’ WPCCK and the perception of teachers’ self-efficacy and found a positive correlation. Hiğde, Uçar, and Demir (2014) studied science and physics teacher education students’ WPCCK in terms of their habit of using the Internet and found differences regarding their usage of the Internet. Kavanoz, Yüksel, and Özcan (2015) examined the students of an English language teaching department in Turkey with regard to their WPCCK and perception of self-efficacy and found that their general web knowledge was high and that their communicative web and WPCCK was low. Besides, they stated that there was no important difference regarding gender or age.

Erişti, Şişman, and Yıldırım (2008) investigated elementary subject-matter teachers’ views on web-based education and concluded that they had positive views in general; however, there were no meaningful differences between the views regarding gender, experience, or subject-matter. In studies in which they examined the perception levels of WPCCK among teacher candidates, Arabacıoğlu and Dursun (2015) found meaningful differences in favor of senior students at the faculty of education and students who owned a personal computer and often used the Internet. In Gülten’s study (2013) conducted with mathematics teacher education students, which examined views on distance education and WPCCK, the results showed that the students believed distance education would negatively affect learning compared to traditional education, and that distance education would not be as effective as in-class education. However, it was emphasized that those interested in computers and the Internet were more positive about distance education. Also in this study, Gülten (2013) stated that there was no meaningful difference between the general web and communicative web.

Gömleksiz and Fidan (2011) examined the perception of self-efficacy regarding WPCCK of pedagogical formation program students and reported that students felt themselves to be efficient. In another study in which the perception of web self-efficacy of teacher candidates was investigated, Gömleksiz and Erten (2013) found that male teacher candidates’ level of self-efficacy regarding the web was higher than that of their female counterparts, and that the self-efficacy level of Computer Education and Instructional Technology students was higher than that of other departments’ teacher candidates. Also, the results displayed that self-efficacy level of science

department graduates was higher than that of other departments' graduates; the level of those who connected to the Internet from home was higher than for those who connected to the Internet from other places, and the self-efficacy level of those who connected to the Internet often in a week was higher than for those who rarely connected to the Internet.

It was noticed that each day, the number of studies regarding the WPCK are increasing in the literature. However, the studies were either conducted as scale research or scale application on teachers or teacher candidates of science-oriented subject-matter areas. There was limited research found which studied and compared language-teaching subject-matter areas (Kavanoz et al., 2015). This study aims to examine whether or not the WPCK of students from English and Turkish language teaching departments differ according to grade and department. Accordingly, it is expected that this study will contribute to the literature, and be of special interest to the instructors, teachers, and students of English and Turkish language teaching departments.

METHOD

Model

In the study, the cross-sectional survey model, which is one of the general survey models, was used. This model was preferred as the WPCK of the students from the Turkish and English language teaching departments at Sakarya University's Faculty of Education could be measured at the same time.

Study Group

The study group was made up of 263 students who studied at Sakarya University's English Language Teaching and Turkish Language Teaching departments in during the 2014-2015 spring semester. In choosing the students for the study group, convenience sampling method was employed. 196 (74.5%) of the students who participated in the study were females; and 67 (25.5%) of them were males. 160 of the students were students of the Turkish Language Teaching Department and 103 were from the English Language Teaching Department. 63 (24.0%) of the students were studying in the 1st grade, 87 (33.1%) in the 2nd grade, 65 (24.7%) were 3rd grade, and 48 (18.3%) of them were 4th grade students. When asked how much time they spent on the Internet in a day, 38 (14.4%) of the students stated that they spent one hour; 70 (26.6%) spent two hours, 77 (29.3%) spent three hours, 66 (25.1%) spent four or more hours, and 12 (4.6%) of them stated that they never connected to the Internet. When asked about their usage of the Internet, 56 (21.3%) of the students stated that it was very good, 120 (45.6%) stated it was good, 78 (29.7%) stated it was average, three (1.1%) stated it was bad, and six (2.3%) stated that it was very bad. And when asked whether they had received web-based education, 88 (33.5%) answered yes and 175 (66.6%) answered no.

Instruments

In this study, the WPCK scale and demographic information survey were used as data collection tools.

WPCK Scale. In this research, the scale developed by Lee et al. (2008) and adapted to Turkish by Horzum (2011) was used to measure WPCK. The scale consists of 30 items under five factors, which are; web general (seven items), web communicative (four items), web content (five items), web pedagogical (eight items), and attitude towards web-based instruction (six items). The levels of participation of the scale are marked from “1- I do not agree” to “5- I fully agree”.

In the validity reliability studies of the scale, explanatory and confirmatory factor analyses were performed with linguistic equivalence. In the exploratory factor analysis, five factors were found. The variance explained by the structure of the scale was found to be 75.8%. According to confirmatory factor analysis results, fit indexes were found to be $\chi^2/df=2.80$, SRMR=0.10, RMSEA=0.07, NFI=0.89, CFI=0.91, and NNFI=0.91. For the 30-item scale, Cronbach’s Alpha consistency index of the scale is .94. The total score of the scale can be between 30 and 150. As scores from the scale increase, self-efficacy for each dimension and self-efficacy of web pedagogical content knowledge in total increases.

Demographic Information Survey. In the study, a survey was created in order to obtain the demographic information of the participant teachers. The survey included questions about the teachers’ gender, department, and grade; the hours they spend on the Internet, their level of Internet usage, and whether or not they had received any web-based education.

Data Collection and Analysis

The WPCK scale and demographic information survey were put together and applied after being distributing by hand. They were then collected and descriptive statistics data analysis and two-way MANOVA analysis performed.

FINDINGS

Out of the WPCK self-efficacy perception scale factors, general web scores of the students who took part in the study were between 7 and 35 (\pm SS; 30.16 ± 6.05); their web content scores, between 5 and 25 (\pm SD; 21.31 ± 4.01), their WPCK scores, between 8 and 40 (\pm SD; 33.16 ± 7.41), and their attitude toward web-based education scores were between 6 and 30 (\pm SD; 25.61 ± 4.86). Whether the students displayed any difference in pedagogical content knowledge scale factors according to their departments and grades was examined with two-way MANOVA. Descriptive statistics which were obtained as a result of the analysis are presented in Table 1.

Table 1. Descriptive statistics of WPCCK scale factors according to department and grade

Department	Grade	n	GW		CW		WC		WPC		ATWBT	
			X	S	X	S	X	S	X	S	X	S
Turkish	1	41	29.78	6.75	15.48	4.24	21.51	3.55	32.34	6.42	24.60	3.92
	2	43	27.90	6.42	14.58	3.91	19.34	4.28	30.55	6.42	23.90	5.71
	3	43	29.44	5.72	15.23	3.30	20.65	3.29	32.11	5.77	25.16	4.64
	4	33	28.18	8.23	15.09	3.93	19.90	5.16	31.75	8.32	24.69	6.45
	Total	160	28.85	6.73	15.09	3.83	20.36	4.11	31.68	6.67	24.58	5.17
English	1	22	32.40	2.46	15.63	3.48	21.77	2.86	30.95	5.75	24.68	4.91
	2	44	31.50	5.38	17.00	2.72	22.13	4.27	34.31	6.40	27.31	3.67
	3	22	33.36	2.40	17.63	3.04	23.81	1.76	37.54	3.31	28.31	2.58
	4	15	32.20	3.23	18.26	2.12	24.53	1.30	39.06	2.21	28.93	2.12
	Total	103	32.19	4.07	17.02	2.98	22.76	3.37	34.98	5.88	27.20	3.84
Total	1	63	30.69	5.74	15.53	3.96	21.60	3.30	31.85	6.18	24.63	4.25
	2	87	29.72	6.15	15.80	3.56	20.75	4.47	32.45	6.65	25.63	5.06
	3	65	30.76	5.18	16.04	3.39	21.72	3.22	33.95	5.67	26.23	4.31
	4	48	29.43	7.26	16.08	3.75	21.35	4.83	34.04	7.76	26.02	5.79
	Total	263	30.16	6.05	15.85	3.64	21.30	4.00	32.97	6.56	25.61	4.86

Key: GW= General Web, CW= Communicative Web, WC= Web Content, WPC= Web Pedagogical Content, ATWBT= Attitude Toward Web-Based Teaching

When Table 1 is examined, in which the descriptive analyses are presented, it can be seen that while the general web self-efficacy score mean of the participant students was 30.16, general web self-efficacy scores of the students from the English Language Teaching Department (O= 32.19, S=4.07) was higher than the scores of the students from the Turkish Language Teaching Department (O= 28.85, S= 6.73). The students' web score mean was 15.85, their web content score mean was 21.30, the WPC score mean was 32.97, and the attitude toward web-based education was found to be a mean of 25.61. Similarly, communicative web (O= 17.02, S= 2.98), web content (O= 22.76, S= 3.37), WPC (O= 34.98, S= 5.88), and attitude toward web-based education (O= 27.20, S= 3.48) means of the students from the English Language Teaching Department was higher than communicative web (O= 15.09, S= 3.83), web content (O= 20.36, S= 4.11), WPC (O= 31.68, S= 6.67) and attitude toward web-based education (O= 24.58, S= 5.17) score means of the students from the Turkish Language Teaching Department. Although the change in WPCCK scale factors differs according to the grades, it was observed that the scores of the students from the English Language Teaching Department were higher than the scores of the students from the Turkish Language Teaching Department.

In the study, whether or not Turkish and English Language Teaching Department students' perception of self-efficacy regarding their WPCCK differed according to their department and grade was examined via two-way MANOVA analysis. As a result of the analysis, while the basic effect of studying at the Turkish or English Language Teaching departments [$\lambda = .886$, $F_{(5-251)} = 6.489$, $p = .000$, $\eta^2 = .114$] or grade [$\lambda = .839$, $F_{(15-693)} = 3.040$, $p = .000$, $\eta^2 = .057$] on their perception of self-efficacy scale factors regarding WPCCK was meaningful, the shared effect of the department and grade [$\lambda = .915$, $F_{(15-693)} = 1.518$, $p = .093$] on their perception of self-efficacy scale factors

regarding WPCK was not meaningful. Results of the two-way MANOVA analysis are shown in Table 2.

Table 2. General linear model, multivariate two-way MANOVA analysis results

Independent Variables	Dependent Variables	F	p	η^2
Department (Turkish/English)	GW	20.767	.000	.075
	CW	19.060	.000	.070
	WC	29.298	.000	.103
	WPC	13.043	.000	.049
	ATWBT	19.407	.000	.071
Grade (1/2/3/4)	GW	1.232	.299	.014
	CW	1.196	.312	.014
	WC	2.411	.067	.028
	WPC	4.533	.004	.051
	ATWBT	2.656	.049	.030
Department (Turkish/English) * Grade (1/2/3/4)	GW	.159	.924	.002
	CW	1.873	.135	.022
	WC	2.950	.033	.034
	WPC	2.972	.032	.034
	ATWBT	2.113	.099	.024

When Table 2 is examined, it can be observed that the basic effect of the department variable was meaningful in all of the factors of general web ($F=20.767$, $p<.05$), communicative web ($F= 19.060$, $p<.05$), web content ($F= 29.298$, $p<.05$), WPC ($F= 13.043$, $p<.05$), and attitude towards web-based education. As a result of the Bonferroni multiple comparison test, which was applied in order to observe the source of the difference, the English Language Teaching Department students' general web ($X= 32.19$), communicative web ($X=17.02$), web content ($X=22.76$), WPC ($X= 34.98$), and attitude toward web-based education scores were quite a lot higher than Turkish Language Teaching Department students' general web ($X= 28.859$), communicative web ($X= 15.09$), web content ($X= 20.36$), WPC ($X= 31.68$), and attitude toward web-based education ($X= 24.58$) scores.

It was found that the effect of the students' grades variable on WPC ($F=4.533$, $p<.05$) and attitude toward web-based education ($F=2.656$, $p<.05$) factors was statistically meaningful. On the other hand, it was found that the basic effect of the grade variable on general web ($F=1.232$, $p>.05$), communicative web ($F=1.196$, $p>.05$) and web content ($F=2.411$, $p>.05$) factors was not statistically meaningful. As a result of the Bonferroni test, which was applied in order to see which grade caused the difference in WPC and attitude toward web-based education factors, it was discovered that self-efficacy perceptions of WPC of the 3rd grade ($X= 33.95$) and 4th grade ($X= 34.04$) students were significantly higher than perceptions of the 1st grade ($X= 31.85$) and 2nd grade ($X= 32.45$) students. When the source of the difference between the scores of attitude towards web-based education factor were examined, it was found that the attitudes of the 3rd grade ($X= 26.23$) and the 4th grade ($X=26.02$) students toward web-based education were significantly higher than the attitudes of the 1st grade students ($X= 24.63$).

It was also found that the interaction effect of the department and grade variables of the students who participated in the study were statistically meaningful in web content ($F=2.950$,

$p < .05$) and WPC ($F=2.972$, $p < .05$) factors. However, the interaction effect of the department and grade variables was not statistically meaningful in general web ($F=0.159$, $p > .05$), communicative web ($F=1.873$, $p > .05$) and attitude toward web-based teaching ($F=2.113$, $p > .05$) factors. Bonferroni multiple comparison test was run in order to see from which grade the difference between web content and WPC factors stemmed. The results of the Bonferroni test are shown in Table 3.

Table 3. Results of multiple comparison test of self-efficacy perception toward web content and WPC variance according to department and grade

Dependent variable	Independent variable 1	Independent variable 2	Average Difference	SH	p
Web Content	Turkish Grade 1	English Grade 1	-.261	.997	.794
	Turkish Grade 2	English Grade 2	-2.788*	.809	.001
	Turkish Grade 3	English Grade 3	-3.167*	.989	.002
	Turkish Grade 4	English Grade 4	-4.624*	1.175	.000
	Turkish Grade 1	Turkish Grade 2	2.163	.824	.090
	Turkish Grade 1	Turkish Grade 3	.861	.824	.297
	Turkish Grade 1	Turkish Grade 4	1.603	.883	.071
	Turkish Grade 2	Turkish Grade 3	-1.302	.814	.111
	Turkish Grade 2	Turkish Grade 4	-.560	.873	.522
	Turkish Grade 3	Turkish Grade 4	.742	.873	.396
	English Grade 1	English Grade 2	-.364	.986	.712
	English Grade 1	English Grade 3	-2.045	1.138	.073
	English Grade 1	English Grade 4	-2.761*	1.264	.030
	English Grade 2	English Grade 3	-1.682	.986	.089
	English Grade 2	English Grade 4	-2.397*	1.128	.035
	English Grade 3	English Grade 4	-.715	1.264	.572
	WPC	Turkish Grade 1	English Grade 1	1.387	1.879
Turkish Grade 2		English Grade 2	-3.760*	1.525	.014
Turkish Grade 3		English Grade 3	-5.429*	1.864	.004
Turkish Grade 4		English Grade 4	-5.824*	2.214	.009
Turkish Grade 1		Turkish Grade 2	1.783	1.552	.252
Turkish Grade 1		Turkish Grade 3	.225	1.552	.885
Turkish Grade 1		Turkish Grade 4	-.901	1.663	.588
Turkish Grade 2		Turkish Grade 3	-1.558	1.534	.311
Turkish Grade 2		Turkish Grade 4	-2.684	1.646	.104
Turkish Grade 3		Turkish Grade 4	-1.126	1.646	.494
English Grade 1		English Grade 2	-3.364	1.857	.071
English Grade 1		English Grade 3	-6.591*	2.144	.002
English Grade 1		English Grade 4	-8.112*	2.381	.001
English Grade 2		English Grade 3	-3.227	1.857	.083
English Grade 2		English Grade 4	-4.748*	2.126	.026
English Grade 3		English Grade 4	-1.521	2.381	.523

* There is a significant difference in level .05

When Table 3 is examined, it can be seen that the self-efficacy perceptions of web content and WPCK of the 2nd, 3rd, and 4th grade English Language Teaching students were higher than those of the Turkish Language Teaching students, and that there was no difference seen between the 1st grades. In addition, it was observed that there was no difference between the 1st, 2nd, 3rd, and 4th grade Turkish Language Teaching students' perception of self-efficacy toward web content and WPCK. However, it was discovered that 4th grade English Language Teaching students' scores of self-efficacy toward web content and WPC were significantly higher than those of 1st and 2nd grade students. Besides, 3rd grade English Language Teaching students' scores of self-efficacy perceptions toward WPCK were significantly higher than those of 1st grade students.

RESULTS, DISCUSSION and CONCLUSION

In the study, the conclusion that self-efficacy of general web, communicative web, web content, WPC, and attitude toward web-based education of the English Language Teaching Department students were found to be statistically and significantly higher than those of the students from the Turkish Language Teaching Department.

The fact that the Internet technology continues to advance using English as the dominant international language, with innovations announced first in English and new information mostly presented in English, may well be the reason that web self-efficacy of the English department students is higher. When web content was examined, while 11.8 million results were returned when the word "okuma" was searched for using the Google search engine, 1,490 million results were returned found when the word "reading" was searched. Although 0.1 million results were returned when the word "okuma" was searched for on Google Scholar, which is used for scientific article searches, 4.2 million results were returned when the word "reading" was used. When the results are analyzed, it is seen that students of English Language Teaching Department have a much larger repository of data when compared to the students of the Turkish Language Teaching Department.

The English Language Teaching Departments' students attitudes toward web-based education was higher than for the Turkish Language Teaching Department students. Regarding this result, the fact that activities such as educational applications, preparing programs, publishing and presenting are mostly conducted through English language programs should be emphasized. Since English is an international language, most computer programs and websites are presented in English. In addition, social media websites such as Facebook, Twitter, Instagram; educational websites such as Moodle, Prezi, Ilias, Open Journal System, Comtasia, Adobe Captive, Hot Potatoes, Web Quest, Quizworks, Thatquiz, Animato, Quibble, Edmodo, Proprofs and Google Forms primarily have English language support. While some of these computer applications have later added Turkish language support, not all have. It is therefore easier for English Language Teaching Department students to use these programs and websites than for the Turkish Language Teaching Department students.

It can be said that opportunities of receiving and giving education in English are easier than in Turkish. Although 0.3 million results are returned when the words "kavram öğretimi" were searched for on the Google search engine, 397 million results were returned when "concept teaching" was searched for. While the students of the English Language Teaching Department

have a larger field in receiving and giving education on the Internet and can reach more examples, students of the Turkish Language Teaching Department have a much more limited area. It can be said that this positively influences the attitudes of the English department students toward web-based education.

The reason that there is a difference between the English Language Teaching Department students and those from the Turkish Language Teaching Department in terms of their self-efficacy toward the web may be due to the curriculum of the respective departments. When the curriculum of Sakarya University's English Language Teaching Department, which is within the Faculty of Education, is examined, it is observed that "BTE 202 Instructional Technology and Materials Development, ENF 201 Basic Information Technologies, and ELT415 Materials Evaluation and Design for Language Teaching" classes are taught. When the curriculum from the same faculty's Turkish Language Teaching Department is examined, it is seen that "ENF Basic Information Technologies, and BTE210 Instructional Technology and Materials Development" are the only relevant classes taught. Unlike the Turkish Language Teaching Department, the English Language Teaching Department additionally has "ELT415 Materials Evaluation and Design for Language Teaching" class. It can therefore be said that the English applications of technological innovations are introduced, taught and practiced in a separate class which increases the students' WPCK.

A difference was found in the students' attitudes toward WPC and web-based teaching based on their grades. As the grades advanced, an increase in the students' attitudes toward WPC and web-based teaching was observed. There was no difference found between the grades on attitudes toward general web, communicative web, and web content. It was found that web pedagogical perception of 3rd and 4th grade students were higher than the perceptions of 1st and 2nd grade students. The conclusion is that the attitudes of the 3rd and 4th grade students toward web-based teaching were higher than those of the 1st grade students. On the 1st and 4th semester syllabuses, 1st and 2nd grade students take more general classes; whereas, pedagogical and area-specific classes were given in the 5th and 8th semesters. Accordingly, since knowledge and grades are directly proportional, it is expected that the attitudes of 3rd and 4th grade students toward web-based teaching will be higher.

Self-efficacy perceptions toward web content and WPCK of the 2nd, 3rd, and 4th grade English Language Teaching Department students were higher than those of Turkish Language Teaching Department students; however there was no difference between the 1st grades from each department (Kavanoz et al., 2015). While there was no difference between the self-efficacy perceptions of Turkish Language Teaching Department students toward web content and WPCK in 1st, 2nd, 3rd, and 4th grades, the self-efficacy perceptions of the English Language Teaching Department students toward web content and WPCK at 4th grade were higher than the 1st and 2nd grades. Also, it was found that the self-efficacy perception scores of the 3rd grade English Language Teaching Department students were higher than those of the 1st grade students. Accordingly, because of the fact that English resources are the most predominate on the web, educational programs and materials are mostly found to be in English, and unlike the Turkish Language Teaching Department, the ELT415 Materials Evaluation and Design for Language Teaching class is also taught in the English language Teaching Department, the English Language

Teaching Department students have higher self-efficacy perceptions toward web content and WPCK than Turkish Language Teaching Department students.

The addition of a new course in the mother tongue (Turkish), such as material evaluation and development similar to the one offered in the English Language Teaching Department may help the students in the area of integrating technology and education. Besides, since there is a limited number of programs on teaching Turkish to be found on the Internet, an interdisciplinary study may be developed or Turkish language-based programs may be developed. As a result, field discipline observation and self-efficacy perceptions toward the web may increase with the use of these programs in classes.

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