The Effect of School and Teacher Themed Movies on Pre-service Teachers' Professional Attitudes and Perceived Self-Efficacy

Alper KAŞKAYA
Gazi University

İhsan ÜNLÜ [a]
Erzincan University

M. Said AKAR
Erzincan University

Meryem ÖZTURAN SAĞIRLI
Erzincan University

Abstract

The aim of this study is to investigate the effects of school and teacher themed movies on pre-service teachers' attitudes towards their profession and their perceived self-efficacy. As qualitative and quantitative research app-roaches were employed during data collection procedure, mixed methodology was adopted in this study. In the study, one of the mixed research designs, explanatory design model was used. The study was conducted with 102 second grade students who were enrolled to education faculty's primary education departments such as Primary, Mathematics, Social Sciences and Science Teacher Training Divisions. As quantitative data collection instruments, "Teacher Profession Attitude Scale" developed by Çetin and self-efficacy scale developed and its validity and reliability study conducted by the researchers were used in data collection process. In qualitative data collection procedure, semi-structured interview form prepared by the researchers and the letters written by the students after the study were used. In the study, a six-week different movie presentation activity and dis-cussions about the movies were conducted. At the end of the activity, interviews were carried on and letter appli-cation was performed. Obtained data analysis revealed that educational movies affected meaningfully students' attitudes towards teacher profession and their perceived self-efficacy in a positive side. In the attitudes towards the profession, it was seen that students progressed in "love, value, and adaptation" dimensions. In addition, po-sitive advances were seen in students' perceived self-efficacy beliefs. Studies aimed to be conducted on this is-sue are significant for the use of educational movies in teacher training institutions.

Key Words

Teacher Education, Popular School Films, Self-Efficacy Belief, Professional Attitude.

The significance attributed to the duties and re-sponsibilities of teaching profession by the social life which gets more complicated is increasing every passing day. These duties and responsibilities can become even more dominant during the ear-liest and subsequent years of the profession. This situation can, as stated by Veenman (1984), give way to temporary or permanent "reality shock"

that certain teachers experience in their early years of teaching once they fail to provide solutions to the problems they face.

The real problem is related to the fact that those prospective teachers who actually possess quite limited amount of real-life professional teaching experience have rather minimum amount of real teaching experience in solving the problems that emerge (Veenman, 1984). In the stage of problem solving, individuals may attempt to create a solu-tion process by imagining the problem under the circumstances of a known case, by making com-parison between two events and grasping the in-terrelations (Genter & Holyoak 1997). Hence it is considered that in order to prevent the emergence of "reality shock" and negative attitude towards the profession, it would be logical to benefit from re-

a   PhD. İhsan ÜNLÜ is currently a Research Assis-tant at the Department of Social Sciences Edu-cational. His research interests include Social Science Education and Teacher Education. *Cor-respondence*: Research Assistant. İhsan ÜNLÜ, Erzincan University, Faculty of Education, De-partment of Social Science Education, Erzincan/ Turkey. E-mail: iunlu@erzincan.edu.tr Phone: +90 446 2240089/1335.

flective teaching practices in teachers' training. Reflection is recognized as a tool in the professional preparation of prospective teachers (Tan, 2006; Ünver, 2003). Reflective teaching on the other hand is the combination of a questioning approach foregrounding care for others' feelings and constructivism in teaching and the inclusion of creative problem- solving activities (Henderson, 1996 cited in Bölükbaş, 2004). Consequently a reflective teacher is the one who cultivates his/her skills according to students' needs (Darling-Hammand, 2000). Pennington (1992 cited in Vitonova & Miller, 2002) has reported that reflective teaching plays crucial role in both teaching and learning activities.

One of the effective methods of elevating reflective skill within prospective teachers is employing movies in stimulating students' attention, motivation, and comprehension (Tan, 2006). In that sense, it is believed that prospective teachers' interaction with the characters, situations, or dilemmas in movies would be influential in their professional attitude and perception of self sufficiency. One of the concepts best illustrating this interaction is the concept of self-sufficiency that occupies a major place in social cognitive theory of Bandura. This concept which is related to a person's faith in his/her own success in any given profession refers to self-trust concept, but it also relates to one's faith in creating the desired teaching outcomes, capacity of affecting students' performance, their faith in providing effective teaching and training (Ashton, 1984; Atıcı, 2000; Bandura, 1997; Guskey & Passaro, 1994; Pajares & Schunk, 2001; Schunk, 1988; Tschannen-Moran & Hoy, 2001).

Taking into account the fact that faith in self-sufficiency may be influential in teacher behaviors such as effort, feedback, and field training provision (Enochs & Riggs, 1990; Gibson & Dembo, 1984), it can be argued that the higher faith of self-sufficiency is significant in elevating the quality of training rendered by prospective teachers.

The relevant studies in literature related to the concept of self-sufficiency are mostly centered around the relationship of prospective teachers' self-sufficiency faith to variances such as gender, age, academic success, class (Akbaş & Çelikkaleli, 2006; Coşkun & Ilgar, 2004; Gerçek, Yılmaz, Köseoğlu, & Soran, 2006; Kahyaoğlu & Yangın, 2007; Keskin & Orgun, 2006; Mirzeoğlu, Akdağ, & Boşnak 2007; Pamuk & Peker, 2009), the impact of 'School Experience I' course on self-sufficiency (Otacıoğlu, 2008), the effect of problem-based learning approach on self-sufficiency faith level in science

teaching (Altunçekiç, Yaman, & Koray 2005; Yaman & Yalçın, 2005), the impacts of instructional games, e-learning, cognitive style, computer-based concept maps and learning on self-sufficient perception (Güngör & Aşkar, 2004; Tzeng, 2009; Yağız, 2007). On the other hand, the number of researches on the effect of movies on teachers' professional self-sufficiency perception is limited, even missing. There are however certain studies analyzing the effect of movies on teaching and teachers' training but these researches are not exclusive to self-sufficiency perception. Besides, these studies are not yet sufficient in number (McCormick, 2007).

As reported by Cohen (1999 cited in Trier, 2002) movies are potentially more powerful and effective than printed texts in transferring the ideas and knowledge. Wenger (1943) also regards that movies are essential to ensure success in teaching and they also act as vital materials in teachers' training.

When certain relevant studies in international literature are analyzed, it appears that in these studies movies are examined with respect to professional prejudices, emotional impact created by the scenes, interaction between professional life and personal life, image of school on screen, undesired behaviors at school, image of popular teacher etc. (Brunner, 1994, 1998; Considene, 1985; Giroux, 1994; Mitchell & Weber, 1999; Robertson, 1995; Trier, 2002). On the other hand, it is realized that these researches on the whole spare no place to perception of professional self-sufficiency. Furthermore, as national literature is analyzed, it also surfaces that the researches dwelling on the effect of movies are limited, even missing. In this context, it is believed that use of real-life movies in teachers' training programs via reflective practices may be effective in the professional attitude and self-sufficiency perception of prospective teachers.

Research Objective

The aim of present research is to analyze the effect of school and teacher-centered movies in the professional attitude and self-sufficiency perception of prospective teachers.

Method

Research Pattern

In research process, mixed method where quantitative and qualitative approaches are handled in unity has been employed. In this research, explanatory design model- one of the designs of mixed method

designs, has been used. Explanatory design requires the use of qualitative data to support, clarify and reinterpret quantitative data (Patton, 2002).

Study Group

The research has been conducted amongst 102 randomly selected 2nd year students (sophomore) studying at Erzincan University, Faculty of Education Department of Primary Education Teaching Class Teaching, Primary Education Mathematics Teaching Departments, Science Teaching and Social Sciences Teaching Departments.

Data Gathering Process

In order to detect students' attitudes towards teaching profession and perception of self-sufficiency, a pre-test has been employed. Later, prospective teachers' have been invited to watch six relevant movies illustrating the appropriate context (The Chorus, School of Life, Emperors' Club, Dead Poets' Society, Freedom Writers and 50 Brave Violinists). After each single movie, prospective teachers have been allowed to discuss for a few hours about the movie and teaching profession. Following this 6-week, 30-hour lasting implementation and discussion process, a scale practice in the form of final-test has been executed to detect professional attitude and perception of self-sufficiency of prospective teachers. Additionally amongst 16 prospective teachers who were selected randomly and in equal numbers from each department, interviews have been conducted via semi-structured interview forms. Furthermore volunteering prospective teachers have been asked to narrate in a letter their own feelings on the movies to faculty director.

Data Gathering Tool

In the research qualitative and quantitative date gathering tools have been employed as data gathering tools. As qualitative data gathering tool, "Teaching Profession Attitude Scale" with 35 items and 3 sub-factors developed by Çetin (2006) has been used. The scale consists of sub-factors namely "love", "value", "harmony". Internal consistency coefficient of scale has been found as α=0.89.

In order to designate self-sufficiency perception of prospective teachers, the researchers have developed "Teaching Profession Self Sufficiency Scale". Following scale reliability analyses, the scale which originally consisted of 25 items have been reduced to one-factor structure with 17 items. Internal consistency coefficient (Cronbach's alpha) of scale has been found as α=0.89. It has been realized that Cronbach's alpha value likely to emerge in case of item elimination cannot exceed α=0.89. According to these findings it can be argued that internal consistency of items is high, this consistency is likely to decrease once the items are eliminated; hence the scale is accepted to be sufficiently reliable.

In factor analysis applied for validity tests, in order to test the appropriateness of scale, the value of the employed Kaiser-Mayer-Olkin Test (KMO) Measuring the Appropriateness of Sampling Adequacy value should not be less than .50; the closer this value to 1 is, measurement appropriateness of the survey is considered to be higher (Kalaycı, 2006). According to the results of analysis, KMO (Kaiser-Mayer-Olkin) coefficient of scale is 0.82 which indicates that measurement appropriateness of the survey is quite sufficient. Besides, Barlett's test of homogeneity has been detected as 775,771 and significance level as .00 which points to the fact that survey items have gathered under shared factors. On the other hand it has been realized that scale items are within 41% level of the total variance explained under one single factor. According to Büyüköztürk (2010), in one-factor scales, 30% or higher amount of explained total variance is sufficient in one-factor scales. It has also been witnessed that factor load values obtained by scale items under one factor are between 0.77 and 0.46 which proves that applied survey hereby is valid and reliable.

Semi-structured interviews formed by the researcher after receiving expert views and the letters written to school director by participant students have been used as qualitative data gathering tool. During the process of qualitative data gathering, 4 different experts (Psychological Consulting and Guidance, Teaching Programs and Training, Measurement and Evaluation) have been asked to review the interview form. The conformity of the scale's language to Turkish has been checked according to the views taken from an expert in the field of Turkish Teaching. Three of the experts are already PhD graduates, one is currently writing his/her PhD thesis. Feedbacks shared on the web and received from measurement tool have been compared with the experts; subsequent to required changes, language compatibility of the scale has been examined and required changes have been performed.

Data Analysis

In data analysis SPSS15 package program and Nvivo 7 package programs have been employed. In data analysis, t-test, one-way variance analysis, LSD test, Wilcoxon signed ranks, Kruskal Wallis H, Mann Whitney U tests have been used. In the analysis of qualitative data on the other hand, Nvivo7 package program has been utilized. Qualitative data obtained throughout research process has been classified via coding method. These classifications have given way to more generalized classifications and findings have been gathered thereby. During the process of qualitative data analysis, triangulation method has been adopted. Codings created by two different researchers have been compared with the codings of researchers and required corrections have been actualized.

In the analysis of qualitative data, context analysis approach has been followed. Context analysis comprises of the processes of combining similar data around certain concepts and themes and interpreting after organizing them in a way comprehensible to the reader (Yıldırım & Şimşek, 2005). Hence the method aims to be safe from subjective factors in understanding and interpreting the discourse (Bilgin 2006).

Results

The results of pre-test conducted amidst prospective teachers to detect their attitudes towards teaching profession have manifested that with respect to love factor, there is a meaningful difference in favor of social sciences teachers compared to science and class teachers. The general total of test data has demonstrated that compared to science teachers there is a meaningful difference in favor of mathematics, class and socials sciences teachers.

Subsequent to pre-test, school and teacher centered movies have been presented. Final test results have demonstrated no significant differentiation. According to pre-test and final-test results t-test analysis results, school and teacher centered movies practice has created a meaningful differentiation in favor of final test in the general total as well as "love" factor of prospective teachers' attitude towards the profession.

Following the presentation of school and teacher centered movies prospective teachers' have been asked whether any changes happened in their thoughts towards profession compared to previous year and it has been found out that prospective teachers' thoughts as regards teaching profession have changed in the desired way with respect to factors love, value, harmony and self-trust and data obtained from interviews have centered around these concepts. Besides, teachers' views submitted certain data compatible with "Teaching Profession Attitude Scale" sub-dimensions; however "self-trust" feeling emerging from student views demonstrated a different structure not similar to the scale. Pajares ve Schunk (2001) report that although self sufficiency concept evokes self-trust concept, it covers a kind of self trust specific to learning more exclusive duties.

Additionally, during the interviews conducted amongst prospective teachers following the presentation of school and teacher centered movies, prospective teachers reported that the most effective factor that has the potential to alienate them from teaching profession would be feeling of uselessness (insufficiency) for their students. Besides they expressed that practicing teaching profession created an intense feeling of "excitement". Prospective teachers have also reported that possessing teacher identity created an intense responsibility of "role-modeling" in their minds.

It is considered that the intense feeling of "role-modeling" associated with the future plans of prospective teachers is closely related to the perception of self sufficiency obtained by teachers. According to results of pre-test Kruskal Wallis Test conducted after the presentation of school and teacher centered movies to detect the self-sufficiency perceptions of prospective teachers, there has been no meaningful differentiation amidst groups. According to inter-group Kruskal Wallis test final test results, subsequent to the presentation, there has been no meaningful differentiation amidst groups with respect to their professional self-sufficiency perceptions.

In the practice, according to pre-test, final-test Wilcoxon signed ranks test results, there is a meaningful differentiation between pre-test and final test scores from "Teaching Profession Self Sufficiency Scale" obtained by participant prospective teachers, z= -2.42, $p<0.05$. Taking into account the rank average and sum of differential scores it is realized that observed difference is in favor of positive ranks; final test score in other terms.

The letters written by prospective teachers have shown that teachers' professional self-sufficiency perceptions were on the whole lower than the level before watching the movies. Prospective teachers have particularly emphasized the significance of movies in realizing the potential problems they can face during actual teaching process.

Discussion

In the light of data gathered from the responses rendered by prospective teachers to relevant scale items following the presentation of school and teacher centered movies throughout 2009–2010 fall academic term, the interview reports, discussion surveys conducted after each movie show, letters written by prospective teachers to school director it can be argued that school and teacher centered movies have a desirable effect on the attitudes of prospective teachers towards teaching profession.

In comparison to previous year, professional perceptions of prospective teachers have performed an improvement with respect to dimensions "love", "value" and "harmony". In addition to all, prospective teachers have reported that with respect to "self trust" dimension, they acquired different thoughts from the previous year. The emergence of change particularly in "love", "value" and "harmony" dimensions is noteworthy since they prove the existence of compatibility with the data gathering tool used in current research.

Prospective teachers have reported that on accounts of several reasons they would possibly feel alienated from teaching profession which they attribute various meanings in love, value, harmony and self trust dimensions; these problems are low salaries, terrorist activities, monotony in profession, the fear of failing KPSS (Public Personnel Selection Examination), substructure, environmental conditions, inattention of families and in particular the feeling of insufficiency towards students. Despite all, teaching profession has created an intense feeling of "excitement" amidst prospective teachers. This finding may be indicative of the fact prospective teachers' attitude towards teaching profession has developed in the desired way because regardless of all negations the profession itself achieved to create such intense feeling of "excitement" amidst prospective teachers. Additionally hope, assistance, curiosity, happiness, pride and responsibility are the rest of feelings created by teaching profession amidst prospective teachers. Another noteworthy point focused during the interviews is the emphasis attributed by prospective teachers to the concept of professional responsibility. It has been underlined by prospective teachers that as a teacher one must particularly possess the feature of "role modeling" in addition to responsibilities such as "self improvement", "gaining self trust", "being useful". The teachers have reported that the most touching scene in the movie shows was related to the traces of "teachers on their students" which can be taken as a sign of the professional responsibility awareness amidst prospective teachers. Besides, prospective teachers have stated that they were also greatly impressed by the scenes focusing on "teachers' ambition", "teachers' faith in their students" and "altruism of teachers".

It has been detected that prospective teachers' perceptions of professional self-sufficiency were also positively affected from the practice. The expressions found in prospective teachers' letters in particular are supportive of this finding. It can be argued that prospective teachers' self-sufficiency perceptions have improved significantly in terms of in-class communication, interaction and effect on students which is attributed to the "legendary teacher" model employed in movies. Prospective teachers have reported that facing actual teaching situations furnished them professionally and also eliminated their worries regarding the profession. In that sense it can deduced be suggested that school and teacher centered movies shall be positively effective on the professional attitudes of prospective teachers. The findings obtained from the applied scale and received letters can also be categorized as supportive views of the previous deduction.

References / Kaynakça

Akbaş, A. ve Çelikkaleli, Ö. (2006). Sınıf öğretmeni adaylarının fen öğretimi öz-yeterlik inançlarının cinsiyet, öğrenim türü ve üniversitelerine göre incelenmesi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 2* (1), 98–110.

Altunçekiç, A., Yaman, S. ve Koray, Ö. (2005). Öğretmen adaylarının öz-yeterlik inanç düzeyleri ve problem çözme becerileri üzerine bir araştırma (Kastamonu ili örneği). *Kastamonu Eğitim Dergisi, 13* (1), 93–102.

Ashton, P. T. (1984). Teacher efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education, 35,* 38–32.

Atıcı, M. (2000). *İlkokul öğretmenlerinin sınıf yönetiminde yetkinlik beklentisi rolünün İngiltere ve Türkiye'de seçilen bir araştırma grubu üzerinde incelenmesi.* www.yok.gov.tr/egfak/meral.htm, adresinden 4 Mayıs 2003 tarihinde edinilmiştir..

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W. H. Freeman and Company.

Bilgin, B. (2006). *Sosyal bilimlerde içerik analizi teknikler ve örnek çalışmalar.* Ankara: Siyasal Kitabevi.

Bölükbaş, F. (2004). Yansıtıcı öğretim ile yabancı dil olarak Türkçe öğretimi. *Dil Dergisi, 126,* 19-29.

Brunner, D. (1994). *Inquiry and reflection: Framing narrative practice in education.* NewYork: Suny Press.

Brunner, D. (1998*). Inquiry and reflection: Framing narrative practice in education.* New York: State University of New York Press.

Büyüköztürk, Ş. (2010). *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni, SPSS uygulamaları ve yorum.* Ankara: PegemA Yayınları.

Considene, D. (1985). *The cinema of adolescence.* Jefferson and London: McFarland & Company, Inc.

Coşkun, S. ve Z. Ilgar. (2004, Temmuz). *Rehberlik ve psikolojik danışmanlık deneyimi çalışmalarının adayların öz-yeterlilik algılarına etkisi.* XIII. Ulusal Eğitim Bilimleri Kurultayı'nda sunulan bildiri, İnönü Üniversitesi Eğitim Fakültesi, Malatya.

Çetin, Ş. (2006). Öğretmenlik mesleği tutum ölçeğinin geliştirilmesi (geçerlik ve güvenirlik çalışması). *Gazi Üniversitesi Endüstriyel Sanatlar Eğitim Fakültesi Dergisi, 18,* 28-37.

Darling-Hammand, L. (2000). How teacher education matters. *Journal of Teacher Education*, *51* (3), 166-173.

Enochs, L. G., & Riggs, I. M. (1990). Further development of an elementary science teaching efficacy belief ınstrument: A pre-service elementary scale. *School Science and Mathematics*, *90* (8), 694-706.

Genter, D., Holyoak, K. J. (1997). Reasoning and learning by analogy. *American Psychologist*, *52* (1), 32-34.

Gerçek, C., Yılmaz, M., Köseoğlu, P. ve Soran, H. (2006). Biyoloji eğitimi öğretmen adaylarının biyoloji öğretiminde özyeterlik inanışları. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 39* (1), 57-73.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, *76*, 569-582.

Giroux, H. (1994). *Disturbing pleasures.* New York: Routledge.

Guskey, T., & Passaro, P. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal, 31*, 627–643.

Güngör, C. ve Aşkar, P. (2004). E-öğrenmenin ve bilişsel stilin başarı ve internet öz-yeterlik algısı üzerindeki etkisi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *27*, 116-125.

Kahyaoğlu, M. ve Yangın, S. (2007). İlköğretim öğretmen adaylarının mesleki öz-yeterliklerine ilişkin görüşleri. *Kastamonu Eğitim Dergisi*, *15* (1), 73-84.

Kalaycı, Ş. (2006). *SPSS uygulamalı çok değişkenli istatistik teknikleri.* Asil Yayın Dağıtım, Ankara.

Keskin, G. ve Orgun, F. (2006). Öğrencilerin öz etkililik-yeterlilik düzeyleri ile başa çıkma stratejilerinin incelenmesi. *Anatolian Journal of Psychiatry*, *7*, 92-99.

McCormick, P. (2007). *Film school: Teacher-student relationships in movies can be inspirational or downright creepy. but as catholics it's up to us to help each other learn and grow.* U.S. Catholic, http://www.thefreelibrary.com/Film+school%3a+teacher-student+relationships+in+movies+can+be...-a0162470179 13.03.08

Mirzeoğlu, D., Akdağ, I. ve Boşnak, M. (2007). Beden eğitimi öğretmeni, öğretmen adayı ve beden eğitimi ve spor yüksek okullarında görev yapan öğretim elemanlarının mesleki yeterlik duygusunun karşılaştırılması. *Hacettepe Spor Bilimleri Dergisi*, *18* (3), 109-125.

Mitchell, C., & Weber, S. (1999). *Reinventing ourselves as teachers.* Philedelphia: Falmer Press.

Otacıoğlu, S. G. (2008). Müzik öğretmenliği okul deneyimi I uygulamalarına katılan öğretmen adaylarının öz etkililik-yeterlilik düzeylerinin incelenmesi. *Çanakkale Üniversitesi Sosyal Bilimler Dergisi*, *32* (1), 163-170.

Pajares, F., & Schunk D. H. (2001). Self-belifes and school success: Self efficacy, self-concept, and school achievement. In R. Riding, & S. Rayner, (Eds.), *Perception* (pp. 239-266). London:. Ablex Publishing.

Pamuk, S. ve Peker, D. (2009). Turkish pre-service science and mathematics teachers' computer related self-efficacies, attitudes, and the relationship between these variables. *Computers & Education, 53*, 454-461.

Patton, Q. M. (2002). *Qualitative research and evaluation methods.* New Delhi: Sage.

Robertson, J. P. (1995). Screenplay pedagogy and the ınterpretation of unexamined knowledge in pre-service primary teaching: Taboo. *The Journal of Culture and Education 1*, 25–60.

Schunk, D. H. (1988). Teaching elementary students to self-regulate practice of mathematical skills with modeling. In B. J. Zimmerman, D.H. Schunk (Eds.), *Self-regulated learning and academic achievement. theoretical perspectives* (pp. 137-159). New York: The Guilford Press.

Tan. C. (2006). Philosophical reflections from the silver screen; Using films to promote reflection in pre-service teachers. *Reflective Practice*, *7* (4), 483-497.

Trier, J. (2002). Exploring the concept of "habitus" with preservice teachers through the use of popular school films. *Interchange, 33* (3), 237-260.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education, 17,* 783-805.

Tzeng, J. (2009). The impact of general and specific performance and self-efficacy on learning with computer-based concept mapping. *Computers in Human Behavior*, *25*, 989-996.

Ünver, G. (2003). *Yansıtıcı düşünme.* Ankara: PegemA Yayınları.

Veenman, S. (1984). Perceived problems of beginning teachers. *Rewiev of Educational Research*, *54* (2), 143-178.

Vitonova, G., & Miller, A. (2002). Reflective practice in pronunciation learning. *The Internet Tesl Journal, 7* (1). Retrieved March 15, 2008 from http://iteslj.org/Articles/Vitanova-Pronunciation.html.

Wenger, R. (1943). Motion pictures in teacher education. *Educational Research Bulletin*, *22* (4), 90-96.

Yağız, E. (2007). *Oyun-tabanlı öğrenme ortamlarının ilköğretim öğrencilerinin bilgisayar dersindeki başarıları ve öz-yeterlik algıları üzerine etkileri.* Yayımlanmamış yüksek lisans tezi, Hacettepe Üniversitesi Fen Bilimleri Enstitüsü, Ankara.

Yaman, S. ve Yalçın, N. (2005). Fen eğitiminde probleme dayalı öğrenme yaklaşımının problem çözme ve öz- yeterlik inanç düzeylerinin gelişimine etkisi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, *29*, 229-236.

Yıldırım, A. ve Şimşek, H. (2005). *Sosyal bilimlerde nitel araştırma teknikleri.* Ankara: Seçkin.