Education in the Knowledge Society

journal homepage http://revistas.usal.es/index.php/eks/

Ediciones Universidad Salamanca

Television Series as a Didactic Tool in the Initial Training of Secondary School Teachers

Las series de televisión como herramienta didáctica en la formación inicial del profesorado de educación secundaria

Pablo Palomero-Fernández[a]*, Teresa Coma-Roselló[b], Tatiana Íñiguez-Berrozpe[c]

[a] *Educational Sciences Department, Faculty of Education, University of Zaragoza, Zaragoza, Spain.*
https://orcid.org/0000-0002-4706-6600 pabpalom@unizar.es
[b] *Educational Sciences Department, Faculty of Education, University of Zaragoza, Zaragoza, Spain.*
https://orcid.org/0000-0002-7439-8459 tcoma@unizar.es
[c] *Department of Psychology and Sociology, Faculty of Education, University of Zaragoza, Zaragoza, Spain.*
https://orcid.org/0000-0003-4530-9645 tatianai@unizar.es

ARTICLE INFO

Keywords
Television Series, Conflict Prevention and Resolution, Critical Thinking, Initial Teacher Training, Teamwork.

ABSTRACT

Within the context of Pre-Service Secondary Teacher Education, skills development (PSTE) requires, among other things, the cultivation of critical thinking among future teachers, who must also acquire conflict prevention and resolution skills. To this end, the students of a master's degree in Secondary School Teacher Training at a Spanish University were asked to analyse, in small groups, the conflicts featured in a television series. The research objective was to learn more about trainee teachers' opinions regarding this methodology. The results indicate that they had favourable opinions about this method and were highly satisfied with the learning process and with the teamwork. Significant differences according to sex and age were observed. This suggests that forming more heterogeneous work groups in the future would be a good idea. The results also suggest that critical thinking was a good predictor of student satisfaction with the methodology. It would, therefore, be a good idea to develop critical thinking in more depth during PSTE.

Palabras clave
series de televisión, resolución de conflictos, pensamiento crítico, formación inicial del profesorado, trabajo en equipo.

RESUMEN

El desarrollo de competencias en el contexto de la formación inicial del profesorado de educación secundaria requiere, entre otras cosas, cultivar el pensamiento crítico y las habilidades de prevención y resolución de conflictos de los futuros docentes. Con este fin, se planteó a los estudiantes del Máster de Formación del Profesorado de Educación Secundaria de una Universidad española que analizasen en pequeños grupos los conflictos que aparecían en una serie de televisión. El objetivo de la investigación fue indagar en las percepciones de los docentes en formación inicial acerca de dicha metodología, indicando los resultados obtenidos una valoración positiva de la misma, así como una elevada satisfacción con los aprendizajes realizados y con el trabajo en equipo. Se hallaron algunas diferencias significativas en la percepción de la metodología en función de las variables sexo y edad, lo que sugiere la conveniencia de formar equipos de trabajo heterogéneos en un futuro. Igualmente, se encontró que el pensamiento crítico actuó como predictor de la satisfacción de los estudiantes con la metodología, lo que sugiere la conveniencia de profundizar en el desarrollo de este durante la formación inicial del profesorado de educación secundaria.

(*) Autor de correspondencia / Corresponding author

Recibido, 02/09/2022. Revisado, 04/01/2023. Aceptado, 03/03/2023. Publicado, 18/03/2024
e-ISSN: 2444-8729

1. Introduction

The main goal of Pre-Service Secondary Teacher Education (PSTE) is to ensure that future teachers develop an extensive set of skills and an in-depth knowledge of interaction and communication processes in the classroom. They must also learn to manage these processes and develop the skills to handle discipline problems and constructively resolve conflicts (Rodríguez-Muñiz et al., 2022).

Carreras and Perrenoud (2008) emphasized that university education should not be merely a question of transmitting theoretical information to students and should also seek to develop their skills. Future teachers are expected to be able to bring together their theoretical, practical, personal, and existential knowledge and abilities in such a way as to be able to put them into practice in their teaching work (UNESCO, 1998). In line with all the above, the Council Recommendation on Key Competences for Lifelong Learning (The Council of the European Union, 2018) emphasizes the importance of conflict prevention and resolution skills such as critical thinking, problem-solving, teamwork, communication and negotiation skills, analytical abilities, creativity, and intercultural abilities.

According to Lamb et al. (2017), critical thinking is one of the key skills for the 21st century. It is a skill that requires people to know how to judge and assess arguments and evidence and make inferences using their powers of reason to solve a problem or decide (Lai & Viering, 2012). Some additional qualities play an important role in the critical thinking process, such as having an open mind, curiosity, and empathy (Facione, 2007).

For its part, Global Citizenship Education (GCED) takes an inclusive approach based on social justice, fairness, and participation. In this sense, as well as learning how to encourage the participation and collaboration of their future students using active methodologies, it is essential that the teachers doing pre-service training develop their critical thinking so that they can apply this skill in concrete actions that conform to the principles of social justice and fairness. However, some studies have observed that teachers develop analytical and comprehension skills quite easily but find it difficult to make a critical analysis of the situation in which they find themselves (Sáiz-Serrano & Parra, 2017) and come up with specific proposals to adapt their educational praxis accordingly (Ballbé et al., 2021). These difficulties may be related to a lack of perspective, at least in the case of those students who do not have broader points of reference due to their lack of teaching experience, which could lead them to make a formulaic, self-satisfying reflection (Día et al., 2022).

In line with the theoretical principles summarized above, PSTE should be based on a student-centred approach, developing problem-solving skills (Gadsby, 2022) and stimulating discussion and debate based on case studies, and in particular those that seem to be "most realistic" for the future teachers (Día et al., 2022; Korthagen, 2017). Yelland et al. (2008) propose developing the teachers' higher-order thinking skills through four key processes: experimenting, conceptualizing, analysing, and applying. In this sense, and regarding conflict prevention and resolution training, the case study-based methodology enables trainee teachers to experience the education system vicariously via immersion in a television series. It also enables them to stand back from the conflict they have been studying and conceptualize it theoretically, analysing the people's different needs, interests, perspectives, and experiences (Farré, 2004). Lastly, by drawing up other alternative ways of resolving the conflicts, they can apply the theory they have studied more creatively, stimulating critical thinking about the possible consequences of each proposed solution.

1.1. Audio-visual media in teacher training

Teacher training programmes must be updated in line with social, economic, and political changes (Esteve, 2002). Given the emergence of new youth identities associated with digitalization and the hyperconnectivity of Generation Z, future teachers should be fully immersed in digital culture (Espejo et al., 2022). Some teachers take advantage of their students' transmedia skills to innovate, thus strengthening their motivation and commitment (Scolari et al., 2019). Espejo et al. (2022) argue that the process of digitalization of education should not be confined to using technological resources for passing on formal knowledge and that it is important to develop the capacity of future teachers to decode the messages they receive and reflect on them in a critical way. Within this line of research, Triviño and Requena (2019) requested students with a master's degree in Secondary School Teacher Training to undertake a critical analysis, decoding the gender stereotypes that appeared in a video clip in order later to make their own video clips aimed at deconstructing these stereotypes.

Other innovative proposals include using television series as a didactic tool. Television series provide a reference for the younger generation by presenting them with models and settings with which they can identify. When used in education, they effectively motivate students (Faria-Ferreira, 2021; Traeta & Lops, 2022).

Although they were not created for educational purposes, they can become part of social pedagogy to the extent that the students can relate the situations depicted on screen with real-life experiences (Cappello, 2016), thus stimulating reflection and critical thinking of teachers in initial training (Tan & Koh, 2018).

In further education, various recent research studies have been conducted into using television series as a resource in disciplines such as bioethics (Cambra & Masstandrea, 2020) or digital culture (Mateus, 2017).

Within PSTE, Leduc & Acosta (2017) proposed using television series to reach out to young students, given that this age group consumes a large amount of these cultural contents. To this end, the students were required to act on the one hand, as observers, and on the other, as thoughtful activists, deconstructing and reconstructing the educational narratives and teaching practices presented in the TV series they had watched. With this objective in mind, student teachers in secondary schools in Argentina were asked to watch the Spanish television series "Merlí" within the framework of their teaching practice. The results highlighted the tensions between traditional pedagogical practices and the innovative practices being taught in PSTE. In a subsequent study (Leduc et al. 2019), these researchers interviewed the students for their opinions regarding using television series as a didactic resource. The students generally considered that this method enhanced their motivation, creativity, and critical thinking. Similar conclusions were reached by Traeta & Lops (2022), who received a positive response from teachers regarding using television series as a tool for skills development. For their part, Saíz-Serrano and Parra (2017) also received positive feedback from future teachers. However, they discovered that their ability to decode and critically analyse the content of series was poorly developed, a finding later confirmed by Espejo et al. (2022) in their study of digital innovation in PSTE. Lastly, we should highlight the recent paper by Lasekan and Mendez-Alarcon (2022), who conducted a quantitative analysis of the Danish television series "Rita", concluding that this series could be used in PSTE as an illustrative example of servant-leadership theory, which offered a model for good teaching practices and stimulated learning through reflection.

In conclusion, the available research suggests that the didactic use of television series in PSTE allows them to actively build their knowledge of future teachers by reflecting on the situations they have watched in the programme. Considering that not all teacher training can be carried out via direct experience in the classroom, the television series can be viewed as vicarious experiences, as simulations that facilitate analysis, reflection and critical thinking.

1.2. Methodology

This study used the series "Merlí" as a teaching aid. This series has been used previously in other university courses with similar purposes (Leduc & Acosta, 2017; Cambra & Mastandrea, 2020). It is set in a secondary school and explores topical, up-to-date issues, with the action taking place in a context that is relevant and familiar to students. This makes it easy for them to observe the interaction between teachers, students, and families. The series also offers philosophical and ethical reflections about present-day social problems, so enabling us to analyse conflicts that are highly relevant for teachers in pre-service training.

At present, there is a broad consensus regarding the positive effect of the use of participative methodologies in teacher training, as a means of stimulating the future teachers' commitment to their learning process (Mateus, 2017), and of encouraging debate (Korthagen, 2017) and cooperation between peers (Arregi et al., 2004).

In short, the series became a transmedia micro-narrative which helped stimulate the active participation of future teachers, enabling them to develop conflict-resolution skills. These included the identification of the different structural elements of the conflict (Torrecilla et al, 2014), the skills required for the regulation and managing of emotions during the conflict situation (Redorta, 2007), and important social and communication skills (Lederach, 2000).

1.3. Context of application

This methodology was investigated as part of the master's degree in Secondary School Teaching run by a Spanish University. Although our research was limited to a single university, we believed that the information collected and analysed would be useful in that it would offer the researchers an insight into the perceptions of university students regarding the use of innovative methodologies based on the use of television series, as had been done in several previous studies (Cambra & Mastandrea, 2020; Sáiz-Serrano & Parra, 2017; Vargas et al., 2021).

As part of the "Conflict prevention and resolution" course, students were asked to watch the television series "Merlí" and study the different conflict situations it depicted.

Table 1. What the students were asked to do.

1. Select two conflicts and describe them.
2. Identify the positions, interests, and needs of the parties involved.
3. Identify the emotions experienced by the parties.
4. Express their opinions about the way the conflict was resolved by the parties and suggest alternatives.
5. Identify and assess the strong and weak points of each party in terms of their socioemotional and communication skills.
6. Identify the Governing and Teacher Coordination bodies at the school in the series.
7. Identify the situations presented in this series in which harmonious coexistence is disrupted.
8. Identify situations of bullying (if there are any).
9. Identify possible situations in the series that could help promote equality between men and women.

The series was selected by the course teachers as an excellent medium for discussing the contents of the course and because it was easily accessible through popular platforms such as RTVE play and/or Netflix.

The theoretical and practical contents were taught in alternate classes. First, the students were taught the theory, which they were then asked to apply during the practical class when they analysed the series, with supervision and prompting from the teacher.

Over the first two weeks, the students formed workgroups of four or five people and watched episodes 1 to 5 of the series at home. They were then allowed to choose a specific episode from episodes 5 to 13, from which they had to analyse two conflicts in depth.

The students were given instructions on how to go about this task and were asked to answer the following questions (Table 1) in writing.

The students approached the analysis and resolution of the various situations via a process of group reflection, interaction, and decision-making, which was then set down in writing. They conducted their analysis with the support of the different theoretical models of conflict analysis that they had studied, and the rules and intervention protocols explained during the course. In this way, they were able to link educational theory and teaching practice, a fundamental requirement in PSTE (Christiansen et al., 2018).

2. Materials and method

2.1. Objectives

This study's main objective was to investigate trainee teachers' opinions regarding a methodology based on the analysis of a television series. We also tried to find out whether there were any significant differences regarding their perceptions of this methodology according to the following variables: sex, employment situation and age. Lastly, we tried to determine if predictive relations could be established between the critical thinking variable and students' opinions about the methodology.

2.2. Hypotheses

H1. The students have positive opinions about the methodology based on the analysis of television series.
H2. The students' opinions regarding the TV series-based methodology differ according to sex.
H3. The students' opinions regarding the TV series-based methodology vary according to age.
H4. The students' opinions regarding the TV series-based methodology are related to their employment situation.
H5. The students' opinions regarding the TV series-based methodology can be predicted on the basis of the critical thinking variable. The predictive capacity of this variable is different in men and women.

2.3. Characteristics of the sample group

The sample group comprised 91 students (57♀ and 34♂) who were enrolled on the "Conflict prevention and resolution" course. They were selected based on convenience sampling. As regards the time they dedicated to

this master's degree course, 52 were full-time students, while the remaining 39% were combining their studies with some form of work. The age of the participants ranged between 22 and 54 years old and the average age was 30.2. The standard deviation was 8.2 years, which indicated a high degree of diversity in the sample group as regards the age variable.

2.4. Information-gathering procedure

Three main instruments were used to gather the information. The first was a brief socio-demographic questionnaire in which the students were asked about their age, sex and employment situation (annex 1). The variable age was selected for its relationship with different patterns of audio-visual consumption (Navarro & Vázquez, 2020) and willingness to teamwork (Pegalajar & Colmenero, 2013). The variables gender and employment status were selected for their relevance in previous studies on PSTE (Muñoz et al., 2019; Palomero, 2022).

The second instrument was a questionnaire to assess the perception about the methodology based on the analysis of television series. The questionnaire items were developed based on the results of previous research using qualitative methodology (Coma & Palomero, 2020). This questionnaire (annex 2) consisted of 33 questions and had a high level of reliability (α=.919). It assessed six constructs described in Table 2.

The third instrument (annex 3) was the "Critical thinking questionnaire: individual generic competences" (Núñez-López et al., 2017). This questionnaire had a reasonable level of reliability (α=.702) and was made up of 14 questions which evaluated three constructs (Table 3).

The data were collected at the end of the last class on this course using Google Forms. Before doing this, the students were informed about the research objectives and the participation conditions. Participation was voluntary. All participants gave their informed consent to participate in this research by the ethical criteria governing educational research, and the questionnaire was anonymised.

Table 2. Features of de questionnaire to assess the perception about the methodology based on the analysis of television series.

Construct	**Aspects assessed**
Learning achieved (items 1-18)	Personal learning on conflict prevention and resolution that students perceive they have achieved through the work.
Shortcomings of the methodology (items 19-20)	Perceived shortcomings in the work proposal.
Difficulties (items 21-22)	Characteristics of the methodology that have made it difficult to carry out the work, hindering its development.
Challenge (23-24)	Methodological aspects that have been a positive stimulus for students, favouring change.
Value of the TV series-based methodology (items 25-30)	The value attributed by students to the methodology about the development of conflict analysis and resolution skills
Value of teamwork (items 31-33)	The value attributed by students to teamwork in developing analytical and conflict resolution skills.

Table 3. Features of de critical thinking questionnaire.

Construct	**Aspects assessed**
Analysis and interpretation of data (items 1,2, 9, 11, 12)	Ability to organise, synthesise and compare information from data analysis, responding to complex and/or unfamiliar situations
Opinion regarding a specific situation with objective and subjective data (items 3, 4, 5, 8)	Organisation, evaluation, and communication of information based on subjective perceptions and objective data
Inference of the consequences of the decision based on self-regulated judgement (items 6, 7, 10, 13, 14)	Evaluation of the variables involved in a problem and the possible consequences of the personal position adopted, using self-regulated judgement as a behavioural referent

2.5. Data analysis

A specific data analysis procedure was applied for each objective. The IBM SPSS 26 software was used. As regards the first objective, average scores and standard deviations were obtained for each of the six constructs evaluated by the questionnaire.

Later, compliance with the assumption of homogeneity of variance was checked by calculating the Levene statistic and by carrying out Student's T-tests to compare independent samples, using Cohen's D coefficient to establish the size of the differences.

To determine whether there was a significant relationship between the age variable and students' opinions about the methodology, we calculated the Pearson correlation coefficient between the six constructs and age. We then carried out several simple linear regressions to establish whether age could predict the score obtained in these constructs.

In the final stage, we analysed the influence of critical thinking to assess whether it could be considered a predictive variable of the scores obtained in the six constructs. With this in mind, various structural equation models were tested, and the one that gave the best fit was selected. The correlations between the variables were calculated.

3. Results

3.1. Opinions regarding the value of the TV series-based methodology

Calculating the descriptive statistics enabled us to identify high average scores in three of the six constructs in the questionnaire. The most noteworthy scores were for learning achieved (X=3.4; DT=.4), value of the TV series-based methodology (X=3.31; DT= .049) and value of teamwork (X=3.04; DT= .68). These results indicated that the future teachers thought that the TV series-based methodology had enabled them to learn a significant amount about conflict prevention and resolution and that it had been a positive, beneficial experience. The fact that the work was conducted in teams was also highly valued. These results align with those obtained in previous qualitative studies on this issue (Vargas et al., 2021).

Positive scores (albeit slightly lower) were also obtained for the other constructs, i.e. shortcomings of the methodology (X=2.66; DT=.76), difficulties (X=2.85; DT=.56) and challenge (X=2.89; DT=.64). These scores indicate that the shortcomings observed in the methodology were not particularly important, that the students did not encounter excessive difficulties when doing the work and that the work turned out to be a reasonable, moderately stimulating challenge.

3.2. Differences in students' opinions regarding the TV series-based methodology according to sex, age and employment situation

We later investigated whether there were any significant differences regarding students' attitudes towards the methodology according to various socio-demographic variables.

We began with the variable sex. The Student's T-test for independent variables identified a significant relationship between this variable and three of the six constructs investigated: learning, shortcomings, and value of the methodology (Table 4). The effects were of average size.

Table 4. T-tests for independent samples. T and D values.

Variable	**T**	**DF**	***P***	***D***
Learning achieved	-3.103	89	0.003	-0.672
Shortcomings	2.198	89	0.031	0.476
Difficulties	-0.365	89	0.716	-0.079
Challenge	-1.278	89	0.205	-0.277
Value of the TV series-based methodology	-3.058	89	0.003	-0.663
Value of teamwork	-1.112	89	0.269	-0.241

T= T value; DF: Degree of freedom; *P*= Probability value; *D*= Effect size.

As regards the differences between men and women, in Table 5 we can see that women scored higher than men in the variables learning achieved and value of the methodology. This indicates that women were more satisfied with the methodology. Men gave higher scores to the shortcomings construct than women, confirming that they found the methodology less complete than women.

Lastly, no significant relationships were found between any of the six constructs in the questionnaire and the employment situation variable.

In order to find out if there was any relationship between the age variable and the variables measured in the questionnaire, a correlations matrix was calculated. This enabled us to identify statistically significant relationships between age and three of the constructs (Table 6): learning achieved, shortcomings of the methodology and difficulties (r=.243; p=.02).

We then carried out three simple linear regressions to test our hypothesis that the scores in the three aforementioned constructs could have been predicted by age. In the case of the learning achieved construct, an R^2 value of .064 (F=5.665; p=.019) was obtained. This indicates that age explains 6% of the variability in the scores obtained for this construct, with a small size effect (f=.063). Once the model had been obtained, we verified its compliance with the assumptions, achieving a satisfactory result. The determination coefficient highlighted that the importance given to the learning achieved in this course increases in line with the age of the participants. This could be related to their greater critical capacity as a result of their greater experience of life.

Table 5. T-tests for independent samples. Difference in averages according to the variable sex.

Variable	Sex	N	Average	Standard Deviation	Standard Error of the Mean
Learning achieved	Men	34	3.22	.44	.07
	Women	57	3.49	.39	.05
Shortcomings	Men	34	2.88	.65	.11
	Women	57	2.53	.79	.11
Difficulties	Men	34	2.82	.60	.10
	Women	57	2.87	.55	.07
Challenge	Men	34	2.78	.68	.12
	Women	57	2.96	.61	.08
Value of the TV series-based methodology	Men	34	3.12	.57	.09
	Women	57	3.43	.40	.05
Value of teamwork	Men	34	2.94	.71	.12
	Women	57	3.11	.66	.09

N=Number of participants.

Table 6. Correlations matrix between *age* and the six constructs.

	Age	Learning	Shortcomings	Difficulties	Challenge	Value methodology	Value teamwork
Age	1						
Learning	.272**	1					
Shortcomings	-.254*	-.006	1				
Difficulties	.243*	.100	-.009	1			
Challenge	.090	.470**	-.106	.047	1		
Value methodology	.161	.756**	-.063	-.094	.527**	1	
Value teamwork	-.017	.540**	-.014	.046	.597**	.479**	1

*The correlation is significant at level .05

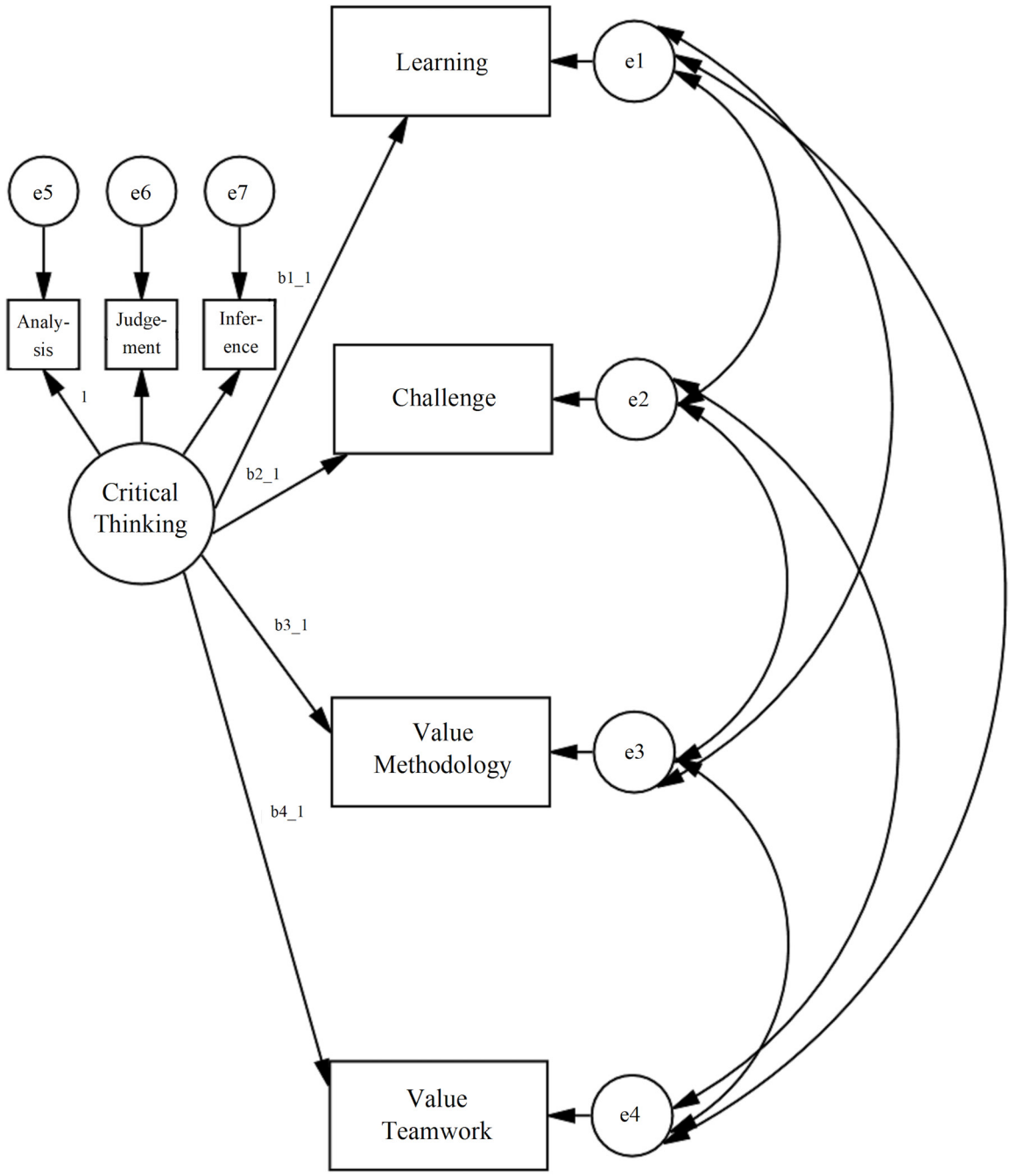
**The correlation is significant at level .01

As regards the simple linear regressions between the age variable and the shortcomings of the methodology (F=3.895; p=.55) and difficulties (F=3.786; p=.55) constructs, no significant results were obtained, so enabling us to rule out the hypothesis that age could predict these variables.

3.3. Influence of critical thinking on students' opinions of the methodology. Differences in opinion according to the variable "sex"

To analyse the possible influence of critical thinking as a predictor of the learning achieved as a result of this activity, we decided to test a structural equations model, as presented in Figure 1.

Figure 1. Hypothetical model of the influence of critical thinking on the learning scale.



Given that the earlier analyses revealed certain differences on the basis of the sex variable, we decided to conduct a multigroup analysis based on said variable. For this comparison we again tested 13 models, adding different restrictions to the influence of the effects. Table 7 shows that the model with the best fit was Model C12 (Equal β2; CMIN/DF = 1.453; p<.0001; GFI = .975; CFI = .944; RMSEA = .071; AIC = 102.698), i.e. the model in which men and women had different results for all the effects, except for the influence of critical thinking on the challenge variable (ß2).

We then calculated the correlations between the six constructs that formed the model, bearing in mind the sex variable (Table 8). In general, all the correlations between the variables were positive and significant (except for the correlation between "critical thinking" and the "value of teamwork", which, in the case of women, had a negative coefficient). The general conclusion is that the correlation values were higher in the subgroup of men (r > .03; p < .001) than in that of women, especially in the correlation between "value of the methodology" and "learning" (r = .703), and between "value of the methodology" and "critical thinking" (r = .679).

The last stage was to test the structural model (C12). The results are set out in Table 9, bearing in mind that the effects were significantly different between men and women, except regarding the influence of critical thinking on the challenge (ß2). As we can see, critical thinking had a particularly significant, strong influence on learning and the value of the methodology. However, it had no significant influence on the value of teamwork. These coefficients were higher in men, with a coefficient of ß1 = .507*** for the effect of critical thinking on learning and of ß3 = .652*** for the effect of critical thinking on the value of the methodology, as compared to ß1 = .463*** and ß3 = .384 respectively in the case of women.

The model for the men subgroup explained 42.5% of the variance in value of the methodology and 25.7% in learning, but just 3.2% in value of teamwork and 3.0% in challenge. In the case of women, the explained percentage was somewhat lower at 14.8% for value of the methodology and 21.5% for learning. As with men, low scores were obtained for value of teamwork (2.1%) and challenge (4.9%).

Table 7. Adjustment indices for the structural equations model (multigroup analysis by sex).

Model	Description	CMIN	DF	*P*	CMIN/DF	GFI	RMSEA	AIC
A	Measurement weights	32.975	22	.062	1.499	.967	.075	100.975
B	Structural covariances	35.633	23	.045	1.549	.964	.079	101.633
C1	Model 1 (Equal β1; β2; β3)	31.693	19	.034	1.668	.968	.087	105.693
C2	Model 2 (Equal β1; β2; β4)	28.172	19	.080	1.483	.972	.074	102.172
C3	Model 3 (Equal β1; β3; β4)	28.627	19	.072	1.507	.971	.075	102.627
C4	Model 4 (Equal β2; β3; β4)	31.681	19	.034	1.667	.968	.087	105.681
C5	Model 5 (Equal β1; β2)	26.609	18	.087	1.478	.973	.073	102.609
C6	Model 6 (Equal β3; β4)	28.753	18	.051	1.597	.971	.082	104.753
C7	Model 7 (Equal β1; β3)	28.562	18	.054	1.587	.971	.081	104.562
C8	Model 8 (Equal β2; β4)	27.285	18	.074	1.516	.973	.076	103.285
C9	Model 9 (Equal β1; β4)	28.168	18	.060	1.565	.972	.080	104.168
C10	Model 10 (Equal β2; β3)	31.680	18	.024	1.760	.968	.092	107.680
C11	Model 11 (Equal β1)	26.465	17	.066	1.557	.973	.079	104.465
C12	**Model 12 (Equal β2)**	**24.698**	**17**	**.102**	**1.453**	**.975**	**.071**	**102.698**
C13	Model 13 (Equal β3)	28.620	17	.038	1.684	.971	.088	106.620
C14	Model 14 (Equal β4)	27.283	17	.054	1.605	.973	.082	105.283

CMIN= Chi-square statistics; DG= Degree of freedom; *P*= Probability value; CMIN/DF= Chi-square statistics / Degree of freedom; GFI= Goodness of fit index; RMSEA= root mean square error of approximation; AIC= Akaike information criterion.

Table 8. Correlations between the variables of the model.

Model for men	**Learning**	**Challenge**	**Value of the methodology**	**Value of teamwork**	**Critical thinking**
Learning	1				
Challenge	.600***	1			
Value of the methodology	.703***	.659***	1		
Value of teamwork	.642***	.550***	.546***	1	
Critical thinking	.513***	.265***	.679***	.231***	1
Model for women	**Learning**	**Challenge**	**Value of the methodology**	**Value of teamwork**	**Critical thinking**
Learning	1				
Challenge	.294***	1			
Value of the methodology	.298***	.298***	1		
Value of teamwork	.331***	.543***	.388***	1	
Critical thinking	.449***	.167***	.373***	-.170***	1

***The correlation is significant at level p<.001

Table 9. Structural model for the influence of critical thinking on the learning scale. Standardized coefficients and level of significance.

Relationship between variables		**Men**	**Women**
Learning	<--- Critical Thinking (β1)	.507***	.463***
Challenge	<--- Critical Thinking (β2)	.174*	.221*
Value methodology	<--- Critical Thinking (β3)	.652***	.384***
Value teamwork	<--- Critical Thinking (β4)	.179	-.146

*p<.05; ***p<.001; GFI = .975; CFI = .944; RMSEA = .071; CMIN/DL = 1.453

3.4. Summary of results

Table 10 offers a summary of the main results of this research.

Table 10. Summary of results.

hypotheses	**Results**
H1	Students had a positive opinion of this methodology in all its dimensions and especially *learning achieved, value of the TV series-based methodology* and *value of teamwork.*
H2	Significant differences in these opinions were observed in line with the variable "sex". Women had higher scores in *learning achieved* and in *value of the TV series-based methodology,* while men had higher scores in *becoming aware of shortcomings.*
H3	There was a significant correlation between *age* and *learning achieved, value of the TV series-based methodology* and *difficulties.* Positive opinions about the *learning achieved* increased in line with age.
H4	There was no significant correlation between employment situation and opinions about the methodology.
H5	The greater their development of critical thinking, the greater the students' satisfaction with the methodology and with the learning achieved through the analysis of the conflicts presented in the television series. The link between the two was stronger in men than in women.

4. Discussion

This research has revealed that the students of the Conflict Prevention and Resolution course on the master's degree in Secondary Teacher Training had a positive view of the learning methodology involving the analysis of a TV series. They also expressed very positive opinions regarding the importance of the learning achieved in this course.

These findings align with those obtained by Cambra and Mastandrea (2020) within the context of teaching bioethical principles to university students by analysing the TV series Merlí. These authors demonstrated that this method was useful for teaching students how to resolve ethical dilemmas and stimulate Critical Thinking. They also coincide with the results obtained by Leduc et al. (2019) and Traeta & Lops (2022), who observed that the methodology based on the analysis of television series favoured motivation, creativity, and critical thinking within the context of secondary school teacher training. Finally, the findings are similar to those obtained by Coma and Palomero (2020). They found that methodologies of this kind enabled secondary teacher education students to integrate the theoretical and practical conflict resolution skills acquired during the course into their teaching practice and those acquired during their own life experiences.

Regarding their assessment of teamwork, the results indicate a generally positive opinion, in line with previous research on teamwork in PSTE (Álvarez & García, 2012; Gil, 2015). These positive assessments could be related to the exchange of ideas and opinions during the analysis of the TV series. In this sense, teamwork stimulates the development of key conflict-resolution skills such as empathy, active listening, assertiveness, and frustration tolerance.

In addition, some significant differences were encountered in the participants' views of the methodology based on the sex and age variables. We found that women gave the methodology a higher assessment than men. Although the men also showed a high degree of satisfaction, they were more critical regarding the possible limitations of the methodology. These findings are consistent with those obtained by Palomero (2022), who found a greater interest in women towards active methodologies. These results indicate that it would be a good idea for students to form mixed teams, as this would strike a balance between those who are more enthusiastic about the method (women) and those who are more sceptical (men).

As regards the age variable, we found that the older the students, the more content they acquire. These findings are in line with those obtained by Pegalajar and Colmenero (2013). Although the size effect was small, this was an interesting finding that suggests that it might be a good idea to personalize the tasks given to the students based on their age. In this way, more detailed explanations could be given to the younger students, who could also be supervised more closely, especially when they lack the set of vital experiences that would enable them to analyse conflict situations with a certain degree of perspective. The older students could be given more freedom as they seem better able to draw on their own experiences. It would also be interesting to try to encourage the formation of teams of varying ages to enhance the youngest members' learning process with the experience accumulated over the years by their older colleagues.

The last item considered in this research was the predictive capacity of the Critical Thinking variable as regards the students' views about the methodology applied on this course. We found that the higher their level of Critical Thinking, the greater their satisfaction with the methodology and the learning achieved through the analysis of the conflicts featured in the television series. We also found that, amongst men, the Critical Thinking variable had a higher capacity to predict student satisfaction with the methodology than amongst women.

As a whole, the findings confirmed that it would be a good idea to develop critical thinking in much greater depth during PSTE (Espejo et al., 2022; Gadsby, 2022; Korthagen, 2017; Torrecilla et al., 2014). We also found that the methodology was effective in that it was motivating and stimulating for most students. However, the results suggested that its purpose and usefulness within the framework of PSTE should be explained in more detail. There may also be a need to debate and renegotiate the value of the methodology with those students who have certain reservations about it, perhaps because this approach is still relatively new within the field of further education (Martín & Cervi, 2006). It also revealed the importance of detailed supervision of the debate and discussion processes within each team to avoid debate becoming a meaningless, content-free ritual (Día et al., 2022).

5. Conclusions

The results obtained provide valuable additional evidence to that obtained in previous studies, so enabling us to confirm the value and usefulness in further education of the methodology based on the analysis of TV series.

Bearing in mind the differences encountered based on the sex and age variables, the results suggest that it would be a good idea to use the methodology flexibly, bearing in mind the specific characteristics of each work group and encouraging the formation of mixed, heterogeneous teams. Using it in combination with other methodologies that stimulate critical thinking would also be a good option.

The research results also confirm the convenience of developing more deeply critical thinking during PSTE. We suggest various ways of improving the practical application of the method. For example, discuss and renegotiate the value of the method with the students, provide additional information about their objectives, or closely monitor each team's learning process.

The main limitations in this research include the exclusive use of self-report studies based on personal opinions, the size of the sample, and the need for a control group, making it difficult to generalise results. In the future, we could consider conducting the research on an inter-university basis to increase the size of the sample group. This would also allow us to set up a control group for comparison purposes. This would require greater efforts in terms of coordination, but it would also provide greater impact and relevance. It would also be a good idea to complete the data collection process via observation techniques that allow the course teachers to gather additional information during the interaction in class to evaluate the main variables in this research. Despite the limitations noted above, it is hoped that this research will improve initial training and suggest future lines of research.

References

Álvarez, F. J., & García, J. R. (2012). El aprendizaje cooperativo en el Máster de Secundaria para enseñar y aprender a ser tutor. *Revista Educativa Hekademos, 12*, 83-93.

Arregi, X., Bilbatua, M., & Sagasta, M. P. (2004). Innovación curricular en la Facultad de Humanidades y Ciencias de la Educación de Mondragón Unibersitatea: Diseño e implementación del perfil profesional del maestro de educación infantil. *Revista Interuniversitaria de Formación del Profesorado, 18*(1), 109 - 129.

Ballbé, M., González, G., & Ortega, D. (2021). Invisibles y ciudadanía global en la formación del profesorado de Educación Secundaria. *Bellaterra journal of teaching and learning language and literature, 14*(2), 1-19. https://doi.org/10.5565/rev/jtl3.910

Cambra, I., & Mastandrea, P. B. (2020). Ética en la universidad: una experiencia formativa a partir de la serie Merlí. *Revista Colombiana de Bioética 15*(2), 1-24. https://doi.org/10.18270/rcb.v15i2.2947

Cappello, G. (2016). *Una ficción desbordada: narrativa y teleseries*. Universidad de Lima.

Carreras, J., & Perrenoud, P. (2008). *El debate sobre las competencias en la enseñanza universitaria. Competencias y planes de estudio. Transmisión de conocimientos y competencias.* Ediciones Octaedro.

Christiansen, I., Bertram, C., & Mukeredzi, T. (2018). Contexts and concepts: analysing learning tasks in a foundation phase teacher education programme in South Africa. *Asia-Pacific Journal of Teacher Education, 46*(5), 511-526. https://doi.org/10.1080/1359866X.2018.1461804

Coma, T., & Palomero, P. (2020). Training teachers in the prevention and resolution of conflicts by studying Tv series. In C. Salavera, P. Teruel, & J. L. Antoñanzas (Eds.), *Observatory for Research and Innovation in Social Sciences. European Proceedings of Social and Behavioural Sciences, 84* (pp. 301-309). European Publisher. https://doi.org/10.15405/epsbs.2020.05.33

Día, S, Webster, C., & Killen, A. (2022). Exploring initial teacher education student teachers' beliefs about reflective practice using a modified reflective practice questionnaire. *Reflective Practice, 23*(4), 437-451. https://doi.org/10.1080/14623943.2022.2048260

Espejo, L. B., Lázaro, L., & Álvarez, G. (2022). UNESCO Strategy and Digital Policies for Teacher Training: The Deconstruction of Innovation in Spain. *Journal of New Approaches in Educational Research*, *11*(1), 15-30. https://doi.org/10.7821/naer.2022.1.812

Esteve, J. M. (2002). El profesorado de secundaria: hacia un nuevo perfil profesional para enfrentar los problemas de la educación contemporánea. *Revista Fuentes, 3*, 7-32.

Facione, P. (2007). Critical Thinking: What It Is and Why It Counts. *Insight Assessment, 22*, 23-56.

Faria-Ferreira, A. P., Faria Ferreira, P. A., & Marques, C. G. (2021). Motivating for Reading through Transmedia Storytelling: A Case Study with Students from a Middle School in the Médio Tejo Region. *Education in the Knowledge Society, 22*. https://doi.org/10.14201/eks.23680

Farré, S. (2004). *Gestión de Conflictos: Taller de mediación. Un enfoque socioafectivo*. Ariel.

Gadsby, H. (2022). Fostering reflective practice in Post Graduate Certificate in Education students through the use of reflective journals. Developing a typology for reflection. *Reflective Practice, 23*(3), 357-368. https://doi.org/10.1080/14623943.2022.2028612

Gil, P. (2015). Percepciones hacia el aprendizaje cooperativo del alumnado del Máster de Formación del Profesorado de Secundaria. *REDU. Revista de Docencia Universitaria, 13*(3), 125-146. https://doi.org/10.4995/redu.2015.5423

Korthagen, F. A. J. (2017). Inconvenient truths about teacher learning: towards professional development 3.0. *Teachers and Teaching, 23*(4), 387-405. https://doi.org/10.1080/13540602.2016.1211523

Lai, E. R., & Viering, M. (2012). *Assessing 21st Century Skills: Integrating Research Findings.* Council on Measurement in Education.

Lamb, S., Maire, Q., & Doecke, E. (2017). *Key Skills for the 21st Century: an evidence-based review*. Project Report. Education: Future Frontiers.

Lasekan, O., & Mendez-Alarcon, C. (2022). The Depiction of Servant Teacher Leadership Attributes in Mass Media: A Characterization Analysis of the Protagonist in Rita TV Series. *Journal of Curriculum and Teaching, 11*(8), 122-133. https://doi.org/10.5430/jct.v11n8p122

Lederach, J. P. (2000). *El abecé de la paz y los conflictos. Educar para la paz*. Los libros de la Catarata.

Leduc, S. M., & Acosta, M. I. (2017). Las series para pensar los sentidos de la educación, más allá de la pantalla. *Cardinalis*, *9*, 200-2012.

Leduc, S. M., Nin, M. C., & Acosta, M. I. (2019). Las series para pensar/crear/vivir escenarios educativos en contextos culturales juveniles [Conference paper]. *Ensenada: Universidad Nacional de La Plata. Facultad de Humanidades y Ciencias de la Educación*. XXI Jornadas de Geografía de la UNLP. Construyendo una Geografía Crítica y Transformadora: En defensa de la Ciencia y la Universidad Pública.

Martín, E., & Cervi, J. (2006). Modelos de formación docente para el cambio de concepciones en los profesores. In J.L. Pozo, N. Scheuer, M.P. Pérez, M. Mateos, E. Martín, & M. De la Cruz (Eds.), *Nuevas formas de pensar la enseñanza y el aprendizaje. Las concepciones de profesores y alumnos* (pp. 419-434). Graó.

Mateus, J. C. (2017). Black Mirror como recurso educativo: una distopía para pensar la cultura digital. In Facultad de Comunicació i relacions internacionals Blanquerna, Universitat Ramon Llull (Eds.), *Reality and screen, a postmodern mirror* (pp. 225-233). Universitat Ramón Llull.

Muñoz, G.A., Rodríguez, P., & Luque, M. (2019). La formación inicial del profesorado de educación secundaria en España: perfil y motivaciones del futuro docente. *Educación XX1, 22*(1), 71-92. https://doi.org/10.5944/educxx1.20007

Navarro, M., & Vázquez, T. (2020). El consumo audiovisual de la Generación Z. El predominio del vídeo online sobre la televisión tradicional. *Revista Internacional de Comunicación, 50*, 10-30. https://doi.org/10.12795/Ambitos.2020.i50.02

Núñez-López, S., Ávila-Palet, J. E., & Olivares-Olivares, S. L. (2017). O desenvolvimento do pensamento crítico em estudantes universitários por meio da aprendizagem baseada em problemas. *Revista Iberoamericana de Educación Superior*, *8*(23), 84-103. https://doi.org/10.22201/iisue.20072872e.2017.23.3012

Palomero, P. (2022). *El profesorado de educación secundaria en fase de formación inicial: perfiles motivacionales, creencias psicopedagógicas y disposición a utilizar técnicas de dinámica de grupos* [Tesis de Doctorado no publicada]. Universidad de Zaragoza.

Pegalajar, M. C, & Colmenero, M. J. (2013). Percepciones hacia el aprendizaje cooperativo en estudiantes del Grado de Maestro. *REDU. Revista de Docencia Universitaria, 11*(3), 343-362. https://doi.org/10.4995/redu.2013.5532

Redorta, J. (2007). *Cómo analizar los conflictos. La tipología de conflictos como herramienta de mediación.* Paidós Contextos.

Rodríguez-Muñiz, N., Pérez-Herrero, M. del H., & Burguera-Condon, J. L. (2022). Analysis of School Coexistence in Compulsory Secondary Education: A Case Study in Asturias. *Education in the Knowledge Society, 23*. https://doi.org/10.14201/eks.27100

Sáiz-Serrano, J., & Parra, D. (2017). Formación del profesorado de historia y ficción televisiva: el aprovechamiento didáctico de las series históricas en educación secundaria. *Revista Electrónica Interuniversitaria de Formación del Profesorado, 20*(2), 95-109. https://doi.org/10.6018/reifop/20.2.284931

Scolari, C., Lugo, N., & Masanet, M. J. (2019). Educación Transmedia. De los contenidos generados por los usuarios a los contenidos generados por los estudiantes. *Revista Latina de Comunicación Social*, *74*, 116-132. https://doi.org/10.4185/RLCS-2019-1324

Tan, C., & Koh, K. (2018). Signature pedagogies for educators using films: An example from Singapore. *The Teacher Educator, 53*(1), 86-100. https://doi.org/10.1080/08878730.2017.1390713

The Council of the European Union. (2018). *Council Recommendation of 22 May 2018 on key competences for lifelong learning*. Official Journal of the European Union (2018/C 189/01).

Torrecilla, E. M., Martínez, F., Olmos, S., & Rodríguez, M. J. (2014). Formación en competencias básicas para el futuro profesorado de educación secundaria: competencias informacionales de resolución de conflictos. *Revista de Currículum y Formación de Profesorado, 18*(2), 189-208.

Traetta, L., & Lops, L. (2022). The World on a Screen. Streaming platforms and teaching. In P. Limone & Di Fuccio, R. (Eds.), *Proceedings of Third Workshop of Technology Enhanced Learning Environments for Blended Education – The Italian e-Learning Conference 2022 (Vol. 3256)*, (Paper 3463). CEUR Workshop Proceedings.

Triviño, L., & Requena, C. (2019). Investigación e innovación educativa desde el Máster de Formación del Profesorado de Ciencias Sociales a las prácticas curriculares en Educación Secundaria. *Contextos educativos. Revista de Educación*, *23*, 83-99. https://doi.org/10.18172/con.3513

UNESCO (1998). *Conferencia Mundial sobre la Educación Superior: La Educación Superior en el Siglo XXI, Vision y Acción.* UNESCO.

Vargas, M., Vallejo, B., Bellido, M., Trujillo, X., Oneto, M., Paramio, L., & Bustillo, E. (2021). Uso pedagógico de la Serie HIT para la formación del profesorado de secundaria. Debate sobre una experiencia en tiempos de pandemia. *Aularia. El País de las Aulas, 10*(2), 119-146.

Yelland, N., Cope, B., & Kalantzis, M. (2008). Learning by Design: creating pedagogical frameworks for knowledge building in the twenty-first century. *Asia-Pacific Journal of Teacher Education, 36*(3), 197-213. https://doi.org/10.1080/13598660802232597