

THE INFLUENCE OF SELECTED FACTORS ON THE LOWER SECONDARY SCHOOL TEACHERS' PERCEPTION OF MEDIA EDUCATION

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Abstract

Media education is an educational subject whose parent fields are not firmly defined. It is located at the intersection of subjects like pedagogy, media studies, film science, aesthetics, sociology, psychology and other humanities and social disciplines. The aim of the research was to determine the influence of various factors on the perception of media education among teachers. 600 teachers participated in the research, and the research tool was a self-designed questionnaire. It was divided into several parts, with the media part containing 12 items focused on the perception of education. The multiple regression model was used as the statistical method for the identification of significant factors. Also, Pearson's correlation coefficient and a student t-test were used for the identification of a significant relationship and whether the use of different methods and forms had a significant effect on media education perception. The length of teaching experience, the benefits of media education in the areas of knowledge, abilities and skills, as well as the last variable – receptive circles, were shown to be significant factors. Higher implementation of media education into the school subjects would be beneficial for every participant of the teaching process.

Keywords: teachers' perception, media education, multiple regression model, quantitative approach

Introduction

The world we live in today is overflowing with stimuli spread through the mass media. They take the form of visual images, sounds and information spoken in natural language. It is increasingly difficult to navigate through the flood of mass media production in a globalizing society, both for students and for teachers themselves. As a result of cultural and social changes, students and teachers are confronted with an excess of information, which they are often unable to analyze sufficiently. It is, therefore, necessary, even at lower secondary schools, to deal intensively with the issue of media education (hereafter also "ME"), which should react to technical, social, and economic changes and trends in the international context of mass media. Media education at lower secondary schools has been established in the Czech educational system as one of the cross-curricular themes of the Framework Educational Program for Primary Education (2005). With this inclusion, media education became a mandatory part of the curriculum. Cross-curricular topics represent areas of current issues in the contemporary world and form a mandatory part of compulsory education. According to the Framework Educational Program for Basic Education, media education is intended to provide elementary knowledge

and skills regarding media communication and work with the media. In order for students to be useful to society, it is becoming increasingly important to be able to process, evaluate and make use of stimuli that are produced through the media. Media Education is taught in nearly 95 % in the subject of Czech Language and Literature and the rest is divided among subjects like Civic Education, Informatics and Foreign languages.

Media Education

Media education is a cross-sectional subject, which is taught in different school subjects, mainly in the lessons of Czech Language and literature. It is understood as education for orientation in mass media, how to use it and at the same time how to critically evaluate it. It is a process of teaching and learning about the media, the main aim of which is to impart knowledge to students and help them develop skills that will help increase their media literacy and critical reflection on media images, texts and messages produced by the mass media. Together with other cross-curricular topics, it contributes to the development of the attitudes and values of each student, introduces them to the essence and basic properties of modern media and develops the media competence of individuals (Hobbs et al., 2018; Kaur et al., 2015; Lauricella et al., 2020; Lu et al., 2023; Mino & Rogers, 2020; Rivera-Rogel et al., 2017; Tiede et al., 2015). Media education mainly pursues two basic aims. One of these is the formation and cultivation of critical reflection on the media and its contents among recipients. The critical-hermeneutic branch of media education deals with this area. The second basic aim of media education is the practical preparation of individuals for using media. This concept is called learning by doing, i.e., the skill branch of media education. Also, ME teaching is a relatively new subject, it could be in certain conditions a challenge for teachers, not only of the Czech language and literature. The teachers, by the teaching of new subjects, which is typical for more than one subject, are constrained to learn new kinds of information regarding actual topics. Media education also supports critical thinking, not only for learners but also for teachers, who are exposed to solving new problematic situations (e.g., Tommasi et al., 2023).

The way in which media education is perceived and evaluated by teachers is not a frequent research topic. It is usually on the fringes of researchers' interest. The importance of media education for teachers and subsequently for students is noted in the work of authors Christ and Potter (1998). Other research studies focus on whether and how mass media can significantly shape the knowledge, thinking, experience and actions of its addressees. Research into the socializing function of the media most often focuses on determining the influence of the media on children, the influence of violence in the media and the influence of the media on the formation of values. One of the most extensive pieces of research concerning the use of new digital media (internet, mobile phone, video games, etc.) by young people aged 12 to 18 was the Mediapro project (2005-2006), which took place in nine European countries. Accordingly, a questionnaire in which approximately 9,000 respondents participated, 240 respondents were selected and interviewed individually. The results showed that the number of new users of media is growing, which can actually lead to isolation of the part of the population that does not have access to the monitored media. Similar results are reported by a number of studies, according to which the proportion of students who have unlimited access to and use of the Internet is increasing. As research results indicate, unlimited use of the Internet can lead to mental disorders in students (e.g., Chaudhari et al., 2015; Chin et al., 2017; Tarimo & Kavishe, 2017). Internet use has also been found to have an effect on increased rates of cheating in exams (Anney & Mosha, 2015; Diedenhofen & Musch, 2017; Kaur, 2018; Mellar et al., 2018; Tayan, 2017; Wang et al., 2015). Teachers must respond appropriately to the use of the Internet in order to prevent this inappropriate activity for students as much as possible (Waheed & Jam, 2010). However, this requires not only adequate teacher training but also familiarity

with media education as well as orientation in mass media, not only the use of the Internet as a communication medium (Chaka & Govender, 2020; Hasan & Akbar, 2020). Examining teachers' perceptions of media education also includes the detection of aggressive behavior that can occur with excessive media use. A number of longitudinal studies have mainly been based on the assumption that children who watch a lot of violence have an increased risk of aggressive behavior (cf. Anderson & Bushman, 2001). The influence of the media on children was also discussed by Buckingham (2000), and the influence of the media on social behavior was discussed, for example, by Meyrowitz (1985). It is also possible to find other studies with similar results (e.g., Bushman, 2016; Coyne et al., 2018; Padilla-Walker et al., 2016).

Research Aim and Question

As already mentioned above, the research studies focused on the influence of different factors on the perception of media education by teachers are rare, or almost not at all. The main aim of the research was to determine the influence of selected variables (listed in the methodology section) on the perception of media education among teachers.

On the basis of the aim, the following research question was formulated: What is the influence of selected variables (listed in the methodology section) on the perception of media education among teachers?

Research Methodology

General Background

The study has a quantitative approach to obtaining and analyzing data. To obtain the answer to a research question, a questionnaire administered to a sample of Czech in-service lower secondary school teachers was a choice. The questionnaire included demographic variables and scales regarding teachers' perception of media education and the implemented form of media education (this one contained 7 thematic areas). Data were collected from 600 teachers in the Czech Republic using convenience sampling. The questionnaires were distributed in electronic form during the second term in the academic year 2021/2022 and the data collection took three months. Completion of the questionnaire was voluntary, and anonymity was guaranteed. No benefits were offered to those who provided responses.

Sample

The sample was made up of lower secondary school teachers (Czech language and literature) at lower secondary schools. The reason for the Czech language and literature teachers was that the teaching process of media education is nearly always connected with the subject of Czech Language and Literature in primary and upper-secondary schools (CSI, 2018). All the schools were approached through their head teachers. The principals of schools administered a questionnaire among teachers, and they could decide if to fill questionnaire or not. Personal information was not required from respondents. 600 Czech language and literature teachers from all the schools filled out the questionnaire. In determining the sample size, it was considered the information from Mundfrom et al. (2013), who presented rules about having 10 participants per item in the questionnaire. With the 55 items used in the questionnaire, the presented sample is adequate, and it ensures a high level of representativeness and enhanced reliability. Fan et al. (2017) stated a formula for sample size and provided a calculator. With respect to the number of Czech language teachers (from the official statistics of the Czech Ministry of Education), the minimum amount for the sample was 435 respondents (Confidence level = 95 %; Margin

of Error = 3.82 %). The average age of the respondents was $M = 43.68$; $SD = 10.44$ ($Min = 23$; $Max = 72$). The basic independent variables are shown in Table 1.

Table 1
Basic Independent Variables

Variables	Groups of Variables	Absolute Frequency
Gender	Male	67
	Female	533
Length of teaching experience	0–5 years	92
	6–20 years	211
	More than 20 years	297
Implementation of media education as a separate subject	Compulsory subject	122
	Optional subject	109
	It is not taught	369
The possibility to influence the content of the subject of media education	Yes	324
	No	276
Implementation of media education (number of years)	1 year	42
	2 years	81
	3 years	119
	4 years	122
	5 years	122
	6 years	32
	7 years and more	82
Completion of a media education course	Yes – course accredited by the Ministry of Education	106
	Yes – course not accredited by the Ministry of Education	34
	No	460
Frequency of implementation of media education	At least once a week	204
	At least once a month	324
	At least once every 6 months	72

One notice in Table 1, there is presented variable “Length of teaching practice”. The first group was beginning teachers, where the length of experience is maximally 5 years (Spooner-Lane, 2017). The teachers with longer teaching experience also served as mentors and in some studies, it is possible to find, that mentors are teachers above 20 years of teaching experience (e.g., Bressman et al., 2018).

Research Tool

The research tool was a questionnaire. The first version of the questionnaire was consulted with experts in methodology and pedagogy as well as experts in media education and media studies. Based on the evaluation of these recommendations, some items of the questionnaire were adjusted, and its final version was created and subsequently verified by preliminary research (Strejckova, 2011).

The final version of the questionnaire consisted of:

- The first part of the questionnaire contained 3 items that ascertained basic data about the respondent (gender, age, length of teaching experience).
- The second part of the questionnaire contained a group of twelve scaled items related to the teacher's perception of the media education curriculum. Each item contained 5 points on the Likert scale (strongly disagree ... definitely agree). Ten items were formulated positively, and two items were stylized negatively, to avoid negative statements (Croasmun & Ostrom, 2011; Roberts et al., 1999).
- The third part of the questionnaire focused on the implemented form of the media education curriculum. Each statement contained 5 points on the Likert scale. The thematic areas were the following: 1. Critical reading and perception of media messages (5 statements); 2. Interpretation of the relationship between media messages and reality (5 statements); 3. Construction of media messages (3 statements); 4. Perception of the author of the media messages (3 statements); 5. Function and influence of the media in society (5 statements); 6. Creating a media message (3 statements); 7. Working in an implementation team (3 statements). The last two were productive circles and the others were receptive circles. In this context, the receptive circle (or receptive learning) relates to the activities in the classes and the productive circle (or productive learning) relates to the learning outside of the class, where the student uses their own skills and previous knowledge. Another group of items focused on the benefits of media education in two areas. The first included benefits in the areas of knowledge, skills and abilities, with 11 scaled items, and the second included benefits in the areas of attitudes and values, with 5 scaled items. The last two items focused on the use of didactic methods and organizational forms in the teaching of media education. Each one was assessed dichotomously (1 – yes; 0 – no). This last item of the research tool, as it is obvious, had two possibilities, but there was also space for the answer if the options were not satisfactory.

The research tool is too long and some parts of it relate to other research. The complete questionnaire is located in we link: https://docs.google.com/forms/d/e/1FAIpQLSfnfWMr1U3BL8kna_QT7PrIvP1SOHg0AFX0ZL_wqM8gBfPv7Q/viewform?formkey=dDVHbTJEdmtvTjBQTWo0X3c4UkRwSUE6MQ

After recording the data, the reliability of the individual groups formed by the scaled items was determined. The reliability of the instrument regarding the perception of media education was ($\alpha = .70$). The group of items related to the inclusion of media education in teaching also reached a value that indicates high reliability ($\alpha = .93$). The reliability values for individual thematic areas ranged from .64 to .83. The group of items relating to benefits achieved a reliability value of $\alpha = .90$. The part focused on knowledge, skills and abilities reached $\alpha = .88$ and the part focused on attitudes and values reached $\alpha = .85$.

Data Analysis

Correlations between several independent indicators (see Results) and the dependent variable (perception of media education) were calculated using multiple regression analysis.

Multiple regression analysis (forward stepwise method) was used to select the most economical model. Multiple regression analysis describes the relationship between one dependent (criterion) variable and multiple independent variables. In testing, the focus is on finding how groups of independent variables predict the dependent variable. The data were first tested for normal distribution using the Kolmogor-Smirnov test, which confirmed the normal distribution of the data ($d = .05$; $p > .10$). The t -test for independent samples was used for differences in the perception of media education regarding the use of didactic methods and organizational forms.

Research Results

Multiple regression (forward stepwise method) of the perception of media education as a dependent variable with independent predictors, shown in Table 2, led to a significant model that explained 44% of the variance of the results ($R^2 = .44$, $F(12, 585) = 11.64$, $p < .001$).

Table 2
Multiple Regression (Forward Stepwise Method) of the Perception of Media Education

Variables	B	B ± SE	B	B ± SE	t	p
Interception			-18.76	8.66	2.17	< .05
Gender	.06	.04	.09	.05	1.69	.09
Age	-.01	.08	.00	.00	.09	.93
Length of teaching experience	.20	.08	.12	.05	2.58	< .05
Media education as a subject	.01	.04	.01	.03	.34	.73
Influence of media education	.03	.04	.02	.03	.69	.49
Length of implementing ME	-.05	.04	-.01	.01	1.05	.29
Media Education course	-.06	.04	-.04	.03	1.45	.15
Frequency of implementing ME	.03	.04	.01	.02	.77	.44
Benefits of ME – knowledge, skills, abilities	.31	.07	.23	.05	4.70	< .001
Benefits of ME – attitudes, values	-.08	.06	-.05	.04	1.37	.17
Receptive circles of ME	.15	.06	.10	.04	2.62	< .01
Productive circles	.00	.05	.00	.03	.00	1.00

Respondents with the longest teaching experience perceived media education the most positively ($M = 3.72$; $SE = .02$). Respondents with the shortest teaching experience had the least positive perception of media education ($M = 3.48$; $SE = .04$). The last group of respondents achieved an average score of $M = 3.56$; $SE = .03$. A significant positive relationship was found between the item related to the benefits of ME – knowledge, skills and abilities and the perception of ME, as well as between the receptive circles and the perception of ME. The other variables did not have a significant effect on the perception of media education.

Multiple regression (forward stepwise method) of the perception of media education as a dependent variable with independent predictors consisting of individual thematic areas that teachers can incorporate into teaching (see Table 3) resulted in a significant model that explained 36 % of the variance of the results ($R^2 = .36$, $F(7, 591) = 12.59$, $p < .001$).

Table 3
Multiple Regression (Forward Stepwise Method) of the Perception of Media Education with Independent Predictors Formed by Individual Thematic Areas

Variables	B	B ± SE	B	B ± SE	t	p
Interception			2.63	.12	22.28	< .001
Critical reading	.19	.06	.12	.04	3.40	< .001
Interpretation of media message relationship	.02	.06	.01	.04	.35	.72
Structure of media message	.04	.06	.02	.03	.71	.48
Perception of the author of the media message	-.03	.05	-.01	.03	-.47	.64
Function and influence of media in society	.14	.05	.08	.03	2.77	< .01
Creation of media messages	.00	.06	.00	.03	.03	.98
Teamwork	.07	.05	.03	.02	1.42	.16

Partial correlations were carried out to verify other relationships between the thematic areas of ME that teachers can include in teaching. The results are presented in Table 4. Although the most of correlations are moderate (all are significant), they showed consistent patterns.

Table 4
Partial Correlation Between the Thematic Areas of ME

	BME – A,V	CR	IMMR	SMM	PAMM	FIMS	CMM	TM
BME – K,S,A	.73	.52	.57	.54	.56	.59	.55	.58
BME – A,V		.41	.52	.42	.49	.50	.42	.39
CR			.66	.58	.55	.53	.50	.45
IMMR				.62	.64	.53	.53	.45
SMM					.57	.59	.56	.44
PAMM						.51	.49	.35
FIMS							.50	.37
CMM								.64

all relationships among variables are significant, $p < .001$

Legends: BME – K,S,A – Benefits of Media Education – knowledge, skills, abilities; BME – A,V – Benefits of Media Education – attitudes, values; CR – Critical reading; IRMM - Interpretation of media message relationship; SMM – Structure of media message; PAMM – Perception of the author of media message; FIMS – Function and influence of the media in society; CMM – Creation of media messages; TM – Teamwork

Other results focused on identifying differences in the perception of media education with respect to the use or not use of different teaching methods and organizational forms. If any teaching methods were used, the perception of media literacy would be significantly more positive (except for brainstorming). From organizational forms, only individual teaching and project-based teaching had a significant effect; the using or not-using of others did not have an influence on the perception of media education. The t-test and mean score values are presented in Table 5.

Table 5

Differences in the Perception of Media Education with Respect to the Use of Teaching Methods and Organizational Forms.

	<i>M</i> yes	<i>M</i> no	<i>t</i>	<i>p</i>
Methods				
Dialogic methods	3.66	3.56	2.85	< .01
Work with a text	3.66	3.54	2.82	< .01
Opinion teaching	3.69	3.58	2.99	< .01
Practical teaching	3.76	3.60	3.18	< .01
Problem methods	3.73	3.58	4.11	< .001
Project methods	3.69	3.60	2.13	< .05
Situational methods	3.79	3.59	4.73	< .001
On-stage methods	3.71	3.58	3.65	< .001
Didactic games	3.71	3.58	3.52	< .001
Brainstorming	3.63	3.63	0.02	.98
Organisational Forms				
Frontal teaching	3.62	3.63	0.21	.84
Group work	3.66	3.59	1.87	.06
Individual work	3.72	3.61	2.55	< .05
Block teaching	3.69	3.62	1.11	.27
Project work	3.70	3.60	2.44	< .05
Excursions	3.71	3.62	1.80	.07

Discussion

The aim of the research was to determine the influence of various factors on the perception of media education among teachers. The mentioned research is rare in the research field of social sciences. There is only a small amount of research in the field of media education. In the countries of Central Europe, this is one of the first comprehensive studies devoted to this problem.

The length of teaching experience proved to be an important factor in the perception of media education. Respondents with the longest experience achieved the highest score, which indicates that their perception of media education is consistent, and they include it extensively in the teaching process, either as a separate subject or as part of another subject. However, the respondents with the shortest experience achieved the lowest score, which may indicate less interest in implementing the issue of media education in the teaching process. This result is surprising, especially considering the results of some other research, which showed that the younger teachers were more willing to include elements that brought new methods or forms, thereby contributing to a more attractive lesson (e.g., Bond et al., 2018; O'Bannon & Thomas, 2014; Simmons et al., 2017; Wang et al., 2018). The results could be caused by the factor of longer experience in teaching and thus also greater implementation of media education methods in teaching. Teachers with a short period of teaching experience were probably forced

to connect information from several subjects at the start of their teaching, which was very stressful for them at the beginning of their career. As they may have less information from other subjects that may not be related to their specialisation, they probably perceive not only media education as a separate subject as somewhat more problematic but also media education as a cross-curricular topic that can be part of several subjects. Skaalvik and Skaalvik (2015) also drew attention to the abovementioned problem, pointing out that novice teachers have a higher level of stress related to coping with the teaching profession.

Another significant relationship was identified between the benefits of media education in the areas of knowledge, skills and abilities and the perception of media education. It is possible to interpret the stated findings in such a way that teachers who perceive media education positively are also aware that media education has a positive effect on the development of knowledge, skills and abilities in the given subject. This phenomenon in relation to media education has not yet been published, but it is possible to find it in relation to other subjects, where the authors reached similar results as in our case (e.g., Brooks & Freeman, 2018; Hansson et al., 2017; Karatas et al., 2017). An explanation for the positive relationship between the mentioned variables, which was also confirmed by other research, is the fact that teachers who had a tendency to trust media education as a cross-curricular topic also had more trust in increasing their students' knowledge, skills or abilities to understand the connection between the individual subjects that media education brings and to increase their cognitive potential, all of which media education can provide.

The last variable that appeared significant in the regression model was the item related to the receptive circles of media education, which were positively correlated with the perception of media education among teachers. Receptive circuits do not require the creation of products but are focused on activities that are related to a critical view of the thematic circuits discussed, identification of opinions or argumentative activities. The stated relationship that was examined in the research was too specific, which is why it was difficult to find it in other research, so it was not possible to compare our results with the findings of other authors. Within the given result, why did receptive circles have a positive effect on the perception of media education among teachers, while productive circles did not show the mentioned relationship? A possible answer is offered in the sense that productive activities that require more time in media education classes are less interesting for teachers and especially demanding to prepare. Teachers might also assume that students are not very interested in this type of activity. On the other hand, receptive activities could be easier for teachers in the above parameters and less difficult to prepare. Students could be more enthusiastic during these activities, which were reflected in the positive relationship between the mentioned (receptive) circles. The mentioned activity may also be related to the fact that the current era makes it possible to hide behind a computer monitor and write one's own opinions without the possibility of directly identifying the author of the post on the social network. This activity is advantageous for many people, and so it can also be seen in relation to media education as a subject. Even teachers could perceive the mentioned situation as beneficial. Krobholz et al. (2015) and Sahoo and Gupta (2020) also reported on the mentioned phenomenon.

Another interesting result was identified with regard to the perception of media education and the use of teaching methods and organizational forms. When evaluating the teaching methods, it was found that almost all of them (except brainstorming) showed a significant difference. This significant difference was always identified in favor of the methods that were used within media education, which proves that when not using the teaching method, the perception of media education was more negative, regardless of whether the teaching method is one of the classically used teaching methods. such as, for example, dialogic methods, or a more modern method such as project work. On the other hand, it was interesting that the teaching/organizational forms were insignificant when it came to evaluating the perception of

media education among teachers. The only significant difference was seen within individual and project teaching when it was proven in both that teachers who used the given forms had a more positive perception of media education. Individual teaching provides the opportunity to cooperate with students and to reveal their possible cognitive and affective inconsistencies in the given subject, which is why teachers feel that individual teaching contributes to a positive perception of media education. It is similar within project teaching, where there is direct interaction between the teacher and students and the mentioned phenomenon can have a positive effect on the perception of media education.

Conclusions and Implications

Media education is one of the cross-curricular topics within the local education system. Media education, based on the findings of research, is not a marginal area, but is part of the teaching process and has a firm place in it. Media education is taught either as a separate subject or as a part of a group of subjects. Unfortunately, not all teachers implement the mentioned cross-curricular subject in their teaching, and often there is a lack of support from head teachers. The results showed that teachers with a short period of practical experience have a quite negative perception of media education as a cross-curricular topic implemented in teaching. It would therefore be appropriate to think about whether the education of future teachers at university should be modified in favor of media education. The mentioned subject/course is often mentioned only as marginal, and future teachers have only a few opportunities to prepare for the real teaching process which the inclusion of media education requires. It was found out that some variables had a significant influence on the media education perception by teachers. The teachers with longer practice perceived media education more positively in comparison with younger ones. It could be caused by insufficient focus on intersection subjects and teachers at the starting point of their career are not able to connect different kinds of information from diverse topics. A higher focus on intersection subjects during the preparation of teacher profession could be useful. If teachers saw the benefits of media education, their perception toward this intersection subject would be more positive, as it is a little bit connected with the curriculum and other school documents. If principals of schools were open to the implementation of media education, this intersectional subject would be more understood. This statement is also valid for the incorporation of different teaching methods and organizational forms into the teaching process of media education.

As mentioned above, the perception of media education as a subject or course is often neglected even by researchers and the issue is marginalized. But as it is clear from research, media education is gaining importance. However, as it is also seen from the results, even media literacy is important for every participant of the learning process, in many cases, the subject of media education is laid back at the expense of the main subjects like the Czech language, Civic education and others. The effort of school policymakers could be to pay more attention to the topics regarding Media education. Nowadays, it is very important that every layer of society can work with the information provided by different platforms and also that they are able to select the messages that are true and not spread conspiracies and hoaxes. Therefore, there is an obvious need to conduct research not only among teachers but also among students which would relate to finding out what their skills are in processing information, whether they can think critically or distinguish true from false information, and what their media literacy is like. Other possibilities for further research are the experience with teaching media education among teachers, the level of teachers' media literacy and others, which can influence the media education perception by teachers.

Declaration of Interest

The authors declare no competing interest.

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