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Developing a Digital and Traditional Political Participation (DTPP) Scale for Youth: A Validity and Reliability Study

Abstract

The purpose of this study is to develop and validate a political participation scale for youth, considering both traditional and digital political participation (DTPP). The research was conducted using 458 participants from Turkey, Italy, and Romania, aged between 15 and 29 years. Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were performed to test the structural validity of the scale. EFA results illustrated that scale consisted of three factors and the total variance was 61.23%. These factors were labeled as “digital political support”, “traditional political support” and “digital political following”. During confirmatory factor analysis, the three-factor structure was tested, and the resulting model produced an acceptable goodness of fit. The scale consists of 39 items and the reliability coefficients for each subscale vary from .92 and .95. The results show that the scale is valid and reliable to measure traditional and digital political participation of young people.

Keywords: participation, traditional political participation, digital political participation, scale development

Introduction

Young people’s participation in social, economic, and political life is a major aspect of contemporary democracies. Still, young people have lower levels of political engagement, especially when we talk about traditional forms of political participation (such as voting and being members of political organizations). Starting from the new millennium, youth disengagement with and disconnectedness from traditional political activities, especially voting, is largely ac-

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knowledge (European Commission, 2001), causing concerns about the future of democracy and the declining space for civil society (Molder et al., 2021; Putnam, 2000).

Political participation is defined as an ensemble of citizens' actions aiming to communicate information to the government about preferences and values, and pressuring government officials to react accordingly (Verba & Nie, 1972). Political participation can be seen in diverse traditional and non-traditional forms, from voting in elections to serving on a local council, engaging through political organizations, or, more recently, taking part in online political activism, online boycotts, or participating in online protests (Valenzuela, 2013). Indeed, with the pervasiveness of the new communication technologies, the opportunities for political actions in the digital media environment have expanded and the Internet plays a crucial role in examining new forms of political participation. The forms of participation involving digital media are particularly interesting to be studied among young adults. First, because they are a generation brought up with these new communication technologies, and they are often described as technological savvy; second, because they seem to be the group less interested in the traditional forms of political participation, compared with other generations (e.g., baby boomers).

At the policy level, policymakers are preoccupied to promote not only traditional but “new forms” of political participation, as a way to involve more young people. After all, political engagement is not only “making democracy work”, but also connects citizens and (re)distributes power among different groups of people and the whole state (Bimber, 2017). Having access to power and contesting power is a way of reducing the socio-economic vulnerabilities of different social groups. Young people remain a vulnerable group in nowadays societies affected by the economic crisis, and the scarcity of social-economic benefits (e.g., affordable houses, secure jobs, health care insurance). It becomes important not only to stimulate young people to engage politically at different levels, but also to understand forms of youth political participation – described as lawful activities undertaken by citizens in the range 15-29 years old who will influence or aim at influencing, changing, or who will affect government, public policies, or how institutions are run (Kitanova, 2020; Van Deth, 2001). It is important to consider non-traditional forms of political participation and also digital forms of political participation, as young people might think of some of their actions as non-political, even though they are political (Weiss, 2020).

Our study intends to develop and validate a political participation scale focused on both traditional and digital political participation. The aim is to define a new instrument emerging from the scientific literature to measure youth political participation. In the followings, we will present the support from the literature in having such an instrument to measure political participation and also the process of structural validation of the new scale (*Digital and Traditional Political Participation – DTPP*).

Literature review

There is increased recognition in the academic literature on political participation of the fact that young people are less interested in politics, as compared with other older age groups (Hen et al., 2002). Socio-demographic characteristics such as age, gender, and socioeconomic status have been always considered the main determinants of political participation (Manarini et al., 2008, Verba et al., 1995). To some extent, the differences between the young and

the old in political participation are treated as a natural effect of the life cycle (Highton & Wolfinger, 2001): as people get mature, their interest in politics and their willingness to take an active role in the society normally increases.

Empirical evidence shows that younger generations are indeed less engaged in established political activities than older generations (Zhang, 2022). Young people are less willing to take part in various traditional political activities, such as attending political meetings or working for the political parties. Also, youth voter turnout tends to decrease at a higher rate than that of other (older) age groups (Dalton 2008; Kitanova, 2020). The rise of a disenchanting young generation questions the legitimacy of the political system itself and the future of democracy. Nevertheless, the Internet has provided people with the tools to participate in public life in various ways. It politically mobilizes and engages social groups that were not that involved in the traditional forms of political participation, for example, youth, minorities, people who are usually under-represented in the political agenda (Boulianne, 2020).

Political participation is a multidimensional concept (Ohme, 2019; Verba et al., 1995; Verba & Nie, 1972). Traditional political participation distinguishes between institutional (e.g., voting during the elections, being a member of a political party or a political organization, petition signing) and non-institutional forms of participation (e.g., boycotting or sharing the ideas of a political party or candidate) (Lu et al. 2021). In the new, digitally connected environment, new approaches are needed to conceptualize political participation (Ekman & Amnå, 2012; Ohme, 2019). Previous research distinguished between online and offline; also between active and passive forms of political participation (Bakker & de Vreese, 2011; Bode, 2017). Still, current research studies focused on the way in which people's online activities, treated as non-institutional forms of political participation (e.g., reading political news online or getting involved in conversations about politics in online forums), would influence their traditional forms of offline participation (Moeller et al. 2018; Lu et al., 2021).

Few studies that we know of have approached digital political participation as an independent form of participation and not as an antecedent of traditional (offline) participation. In such studies (Robles et al., 2013; Anduiza et al., 2010), digital political participation was considered a type of political participation, that comprises the political activities that could be carried out only by the use of Internet tools (example.g., writing an online petition or following a politician online – see Livingstone et al., 2005). Some authors (Robles et al., 2013) suggested a reverse flow, considering digital political participation as a dependent variable and offline-traditional participation as an independent variable with a positive impact on digital political participation. From this perspective, digital political participation has been treated as a form of online participation of those who have been already active in the traditional (offline) forms of political engagement. The same authors stated that offline political participation fosters digital political participation, as digital tools could be disposable tools for those who are already politically active.

In the current study, we approach digital and traditional political participation as facets of the same concept and propose a bi-dimensional scale that would measure the political participation by including online and offline activities, and institutional and non-institutional forms of participation. Instead of treating the relationship between digital and traditional participation in terms of antecedents and consequences, we suggest a composite measurement of political participation, in which the online indicators are mirroring the traditional indicators which have been used to measure political participation. We agree with Radina and Belyashova's (2021, p. 66) point of view that digital and traditional forms of participation could be treat-

ed together and not as fundamental different components. They are universal forms of political participation (such as petitioning and boycotting) and some are typical only for the on-line format (as online commenting and sharing content linked to a political party or a candidate). As a result, we propose a scale of political participation that would include both traditional and digital forms of participation aiming to validate it for the young population.

Methodology

Method and participants

First, the items were developed within the research team, starting from the behaviors listed in the literature which are commonly researched in studies about traditional political participation and respectively digital political participation. We select the behaviors most studied in studies about political participation and develop items describing such behaviors.

The research using the final list of items was conducted using an online survey among people 15 to 29 years of age from Italy (IT), Romania (RO), and Turkey (TR), who were recruited using Social Networks Sites in all three countries. The total sample was $N=458$ (M age =23.58, SD =4.26; M age IT =23.44; SD =5.11; M age Ro =23.38; SD =3.07; M age TR =22.75, SD =4.396). Although we got a relatively small sample size, the literature indicates a sample size 5 to 10 times larger than the number of items (see Bryman & Cramer, 2005), or at least 300 cases/participants to be able to conduct an exploratory factor analysis (Tabachnick & Fidell, 2013). The distribution of participants by the main socio-demographics is illustrated in Table 1.

Table 1. The sample structure (N = 458)

Socio-demographics		N	%
Countries	<i>Turkey</i>	157	34.3
	<i>Italy</i>	146	31.9
	<i>Romania</i>	155	33.8
Gender	<i>Male</i>	166	36.2
	<i>Female</i>	292	63.8
Age in years	<i>15-18</i>	43	9.4
	<i>19-22</i>	210	45.9
	<i>23-26</i>	100	21.8
	<i>26-29</i>	105	22.9
Live with your parents	<i>Yes</i>	294	64.2
	<i>No</i>	164	35.8
Household's total monthly income	<i>0-750 €</i>	195	42.6
	<i>751-1500 €</i>	86	18.8
	<i>1501-2500 €</i>	75	16.4
	<i>2501-3500 €</i>	59	12.9
	<i>3501-5.000 €</i>	24	5.2
	<i>5.000 € +</i>	19	4.1
Education Level(Last graduated school)	<i>Primary school</i>	38	8.3
	<i>Lower secondary school</i>	137	29.9
	<i>Upper secondary school</i>	211	46.1
	<i>Bachelor's degree</i>	69	15.1
	<i>Master's degree</i>	4	0.9
Time spent on the Internet	<i>1-3 hours</i>	97	21.2
	<i>4-6 hours</i>	162	35.4
	<i>7-9 hours</i>	87	19.0
	<i>10-12 hours</i>	93	20.3
	<i>More than 12 hours</i>	19	4.1

Scale development

In the development process of the Digital and Traditional Political Participation (DTPP) Scale, first, the current scales related to political participation and the relevant literature (Bakker & Vreese, 2011; Wang, 2007; Delli Carpini & Keeter, 1993) were reviewed. We found out that previous scales mostly targeted traditional political participation and had two dimensions: Traditional (conventional) and Non-Traditional (unconventional) Political Participation. More recent scales included also items regarding political participation in digital media. Based on the literature review, items related to both traditional and digital political participation were presented by the researchers, using a common language (English), and a pool consisting of 47 items was created. Participants could answer each item using a 5-point Likert scale, expressing their level of agreement: “5” – “Certainly I would do it”, “4” – “Probably I would do it”, “3” – “I would do it, only in certain conditions”, “2” – “Most probably I would not do it”, “1” – “Certainly I would not do it”. Experts in political science, sociology, and education were invited to review the 47-items pool to ensure the external validity. The necessary revisions were made based on the feedback on language and expressions. For the second step of scale development, this draft scale was translated into the native languages of all three countries by the researchers and a language expert. We used a back-translation technique to create the final version of the instrument to be further tested on samples of people aged 15 to 29 in Italy, Romania, and Turkey. Data gathered through online surveys were tested, using SPSS 22 and AMOS package program for validity and reliability, resulting in the final version of the *Digital and Traditional Political Participation (DTPP) Scale* (see Annex).

Data analysis

Before testing the construct validity, KMO and Bartlett tests were run to evaluate whether data are suitable for using factor analysis and we continued the analysis to show sample adequacy for the complete instrument. The factorial analysis was used to check whether the way items load on factors that exclude each other, and to test whether the scale is unidimensional (Tabachnick & Fidell, 2013). Factor loadings of the items obtained using Varimax orthogonal rotation were examined. Items with factor loadings lower than .30 were eliminated and the analyses were run again. Factor loadings higher than .30 and explained variance higher than 40% are accepted as adequate in behavioral sciences (Kline, 1994; Scherer et al., 1988). The analyses and findings of the scale development process are presented below.

Results

Construct validity

Exploratory factor analysis (EFA) was performed to test construct validity. Before performing EFA, Kaiser-Meyer-Olkin (KMO) and Bartlett’s Sphericity tests estimated the suitability of the data for the factor analysis. Kaiser-Meyer-Olkin value was estimated to be $KMO=.955$. A value of KMO higher than 0.60 indicates that factor analysis is adequate for the data (Field, 2005). Bartlett’s Sphericity test yielded significant results ($\div 2=14697$ df. (741), $p < .01$).

A principal components analysis was conducted to determine the dimensions of the Digital and Traditional Political Participation Scale. We used Varimax orthogonal rotation to de-

termine whether the scale was divided into independent factors and the factor loadings were examined. Based on the findings obtained from principal components analysis and the Varimax orthogonal rotation technique, items with factor loadings lower than .30 were excluded. Table 2 shows the values of mean standard deviations and corrected item-total correlations of items.

Table 2. The Means, Standard Deviation, and Item Total Correlations of DTPP Items

Item	Mean	SD	r	Item	Mean	SD	r
i.31	2.1638	1.2150	.768	i.4	2.1659	1.19021	.612
i.22	2.2314	1.22293	.753	i.26	3.3362	1.32986	.610
i.20	2.0437	1.16582	.742	i.3	1.9105	1.02414	.585
i.32	2.1725	1.26160	.736	i.45	3.8122	1.27752	.577
i.38	1.8188	1.05635	.729	i.7	1.9694	1.10655	.569
i.40	2.5873	1.37260	.722	i.6	1.8166	.95934	.569
i.23	2.9170	1.39775	.719	i.24	2.3821	1.29139	.558
i.44	2.7424	1.39207	.713	i.16	1.6790	.93301	.547
i.8	2.2795	1.20196	.712	i.37	3.1790	1.41678	.546
i.41	1.7707	1.06149	.702	i.47	3.3581	1.42137	.542
i.28	2.9803	1.41948	.698	i.5	1.8035	.97711	.537
i.18	2.2205	1.21868	.697	i.36	3.7227	1.24625	.512
i.19	2.0655	1.24119	.695	i.15	2.0568	1.10946	.509
i.30	1.8362	1.09776	.685	i.14	2.4258	1.27420	.451
i.29	1.8755	1.09495	.685	i.13	1.7424	1.02869	.409
i.34	1.9585	1.13644	.685	i.21	2.1092	1.21492	.297
i.27	1.7314	1.00976	.683	i.9	1.6507	.99022	.295
i.39	2.7991	1.32929	.675	i.12	3.0131	1.36213	.275
i.35	2.5000	1.26949	.673	i.43	1.3057	.82521	.253
i.10	2.1812	1.08698	.659	i.11	3.1790	1.29239	.251
i.17	1.8362	1.01274	.654	i.1	4.4563	.93512	.231
i.25	1.7838	1.13392	.648	i.2	4.4869	.94767	.207
i.33	3.5939	1.30011	.645	i.42	1.3212	.79675	.002
i.46	3.5459	1.37780	.620				

The thresholds for item-total correlations can be listed as $r = .40$ means excellent. $.30 = r = .39$ means good. $2-0.29$ means marginal. $=0.19$ means poor. Negative item-total correlations or correlations lower than $.30$ are undesirable because it is accepted that these situa-

tions indicate that the items are not able to distinguish between participants responding positively and those responding negatively. Thus, we selected only items having positive item-total correlations higher than .30. Based on the findings, items i.21, i.9, i.12, i.43, i.11, i.1, i.2, i.42 were excluded from the initial scale in the subsequent analyses. The remaining 39 items were used to perform Exploratory Factor Analysis (EFA) after excluding the items lower than .30, total correlation coefficients (8 items in total).

Table 3. Rotated Components Matrix on the Factor Structure of the Scale items

no		Component		
		Factor 1	Factor 2	Factor 3
i.30	Replying to comments made by others to political news distributed/posted online	.803		
i.29	Making comments to political news distributed or posted online	.781		
i.31	Sharing support messages for top political topics on the Internet	.770		.306
i.22	Sharing political content online (link, video, text, etc.)	.769		.309
i.32	Posting or sharing an opposing message on a top political topic (on the Internet)	.758		
i.18	Sharing my political views on the Internet	.751		
i.20	To participate (with reactions, comments, etc.) in a political campaign on the Internet	.750		
i.34	Making comments on friends'/acquaintances' political views on the Internet	.742		
i.19	Taking part in launching a political campaign on the Internet	.716		
i.38	Write a message on the Internet to support a politician or a political party	.659	.417	
i.27	Sharing online posters/banners or images to promote the ideas and the program of a political party/ political candidate	.655	.359	
i.41	Being part of one/more online political group(s)	.630	.388	
i.40	React with a like or something similar to what a politician shares online	.630		.433
i.25	Sending e-mail, and online messages (including through social media) to a politician	.583		
i.44	Participating in an online survey about politics	.519		.512
i.35	Discussing online political issues (ex. WhatsApp, Messenger, Zoom, etc.)	.492		.464
i.6	Actively getting mission in a local office of a political party at the local level		.830	

i.5	Actively getting a mission in the head office of a political party at the national level		.829	
i.13	Being a candidate in local elections		.822	
i.14	Being a candidate in general elections at the national level		.763	
i.3	Being a member of a political party	.304	.732	
i.7	Promoting the doctrine and ideas of a party		.732	
i.16	Carrying a badge, emblem, or other symbols of a party	.312	.708	
i.4	Supporting a political party or candidate in the elections	.303	.687	
i.15	Participating in a demonstration for a political party or political candidate		.650	
i.17	Putting up a written poster/banner for a political purpose	.435	.610	
i.8	Participating in a demonstration (not online)	.472	.499	
i.10	Being a member of a non-governmental organization related to politics/political issues	.390	.447	.356
i.46	Checking whether a politician you support/ you sympathized with shares credible things online			.816
i.45	Checking whether the political news you read online is trustworthy/credible			.807
i.33	Trying to be updated with political issues (at the national or international level) by the use of Internet			.784
i.47	Checking whether a politician you do not sympathize with shares credible things online			.760
i.26	Following government actions on the Internet			.726
i.28	Following Internet journalists who write articles about political issues	.441		.683
i.36	Getting information (facts, data) from official sources (ex. public institutions) using the Internet			.655
i.23	Following one or more politicians on the Internet	.424		.618
i.39	Visiting websites about politics/political issues	.431		.615
i.24	Following the Internet politicians from party/parties, I do not sympathize with			.562
i.37	Sign an online petition to support a person or a social problem (to be addressed to the government)	.404		.438
Eigenvalues		17.225	4.177	2.478
Variance		25.132	18.096	18.004
Total Variance		61.232		

Table 3 reveals that the items are distributed under three factors, with factor loadings ranging from .304 to .830. Also, each factor had a high coherence resulting in consistency and a meaningful whole. Three factors explained 61.23% of the total variance (F1 = 25.13%, F2 = 18.09%, F3 = 18.00%). In multifactorial designs, an explained variance between 40% and 60% and the contribution by each factor to the total variance is considered adequate (Tabachnick & Fidell, 2013). The content validity of the items, under each factor, was examined and the three factors were labeled. The factor called here *digital political support* (F1) consisted of 16 items; the factor called *traditional political support* (F2) included 12 items, and the factor called *digital political following* (F3) consisted of 11 items. Due to lower factor loadings, we decide to drop off the following items from the final scale (with loading less than 0.6 on a factor): i.2, i.8, i.10, i.24; i.25; i.35, i.37, i.44.

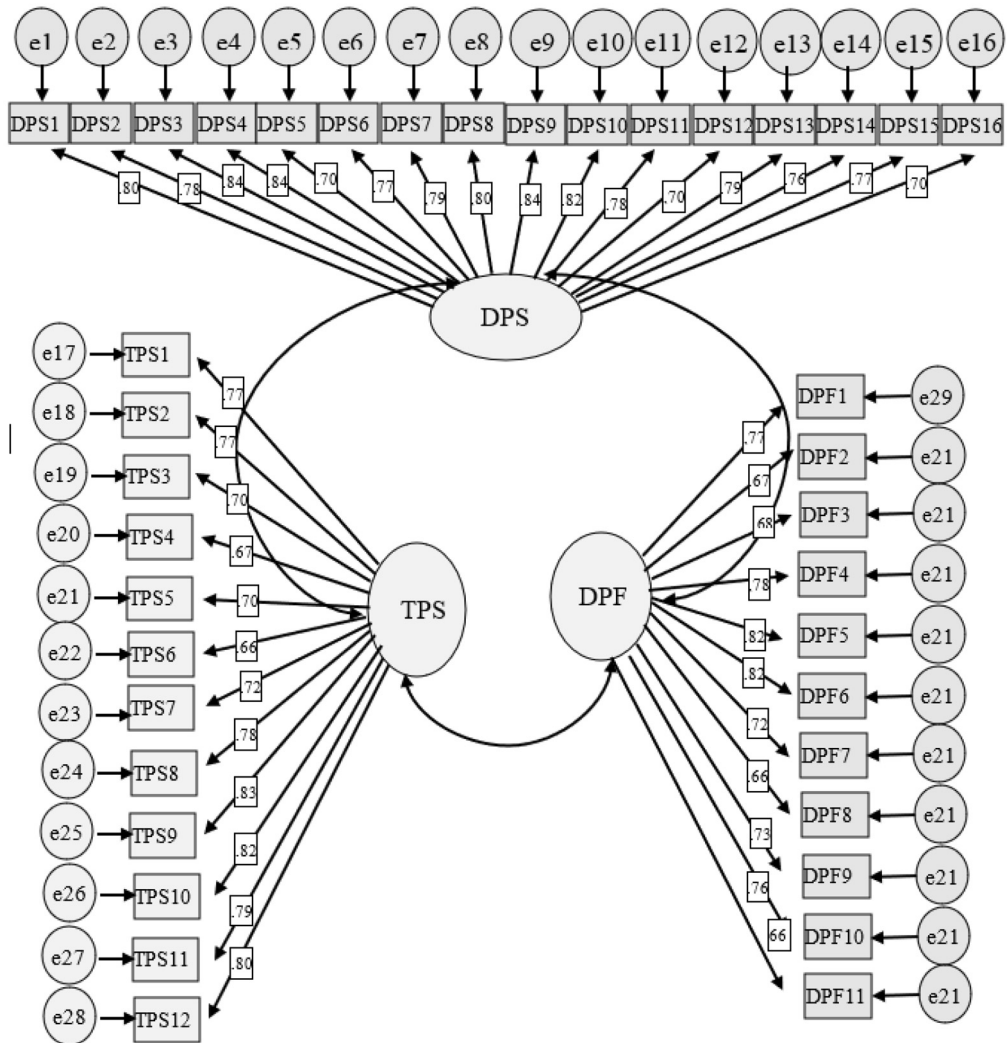
Table 4: Descriptive Statistics of the DTPP Scale and Subscale

	Turkey				Italy				Romania			
	F1	F2	F3	Total	F1	F2	F3	Total	F1	F2	F3	Total
Mean	1.533	1.855	2.797	1.988	2.297	1.687	3.250	2.378	2.469	2.217	3.675	2.732
Median	1.250	1.833	3.000	1.897	2.250	1.500	3.363	2.346	2.500	2.083	3.909	2.717
Mode	1.00	1.00	3.00	1.87	1.00	1.00	3.73	3.23	2.50	1.00	4.45	2.72
Skewness	1.215	.868	-.193	.617	.372	1.205	-.416	.219	.270	.577	-.998	-.105
Kurtosis	.413	.866	-.708	-.003	-.628	1.215	-.461	-.696	-.787	-.545	.520	-.667

Table 4 shows descriptive data for each country. The Kurtosis and Skewness values for each country are between -1.5 and +1.5, which are acceptable values (Tabachnick & Fidell, 2013).

The construct validity of the 3-factorial model obtained during the EFA was further tested, using CFA. The standardized scores and the model could be seen in Figure 1.

Figure 1: Confirmatory Factor Analysis model of the Development of Digital and Traditional Political Participation



Adjusted Goodness of Fit Index values was examined for model fit. The results of the CFA for the construct composed of 39 items and the three factors without any modification are presented in Table 5.

Table 5. Model Fit Indices and Thresholds for Digital and Traditional Political Participation Scale

		Criterion Values	Fit Index
DTPP	2		2321.798
	Df		688
	p		.000
	χ^2/df	= 2	3.37
	RMSEA	=.08	.071
	CFI	=.90	.978
	GFI	=.90	.900
	NFI	=.90	.960

We examined the goodness of fit indices and we found that the ratio of chi-square to the degree of freedom, χ^2 (df.) was 3.37(5), indicating that the model is acceptable (Kline, 2010). In the current model, RMSEA value is estimated to be 0.071, which is an accepted value in the literature. RMSEA value below .05 indicates a good fit, whereas any value between .05 – .08 indicates a close fit (Kline, 2010). Accordingly, the fit indices of the current study were CFI= .97, GFI= .90, and NFI= .96. In conclusion the model has an acceptable goodness of fit with the data based on the aforementioned thresholds. According to Tabachnick and Fidell (2013), a CFI value of .90 or higher; a GFI value of .90 or higher; and an NFI value of .90 or higher are acceptable.

Table 6. Reliability Analysis Alpha Coefficients of Digital and Traditional Political Participation Scale

Factors	Number of Items	Cronbach Alpha
Digital political support	16	.95
Traditional political support	12	.93
Digital political following	11	.92
Total	39	.96

We calculated the reliability coefficients for each of the three dimensions of the scale: Cronbach alpha reliability coefficient of the “Digital political support” factor consisting of 16 items was .95; the reliability coefficient of the “Traditional political support” factor consisting of 12 items was .93, and the reliability score of “The digital political following” factor, of 11 items, was .92 (see Table 6). All reliability coefficients were higher than .90 (Leech

et al., 2005), the new three-dimensional scale of political participation (DTPP) showed high reliability.

Discussion

The current study aimed to develop a scale to measure the political participation of youth (15 to 29 years of age) by including both the traditional forms of participation (i.e., being a member of a political party, supporting a party in the election) and the digital forms of political participation (e.g., taking part in a political campaign on the Internet, sharing one's political views online). We started from the idea of constructing a bi-dimensional instrument while treating traditional (offline) and digital forms of participation as two facets of the same concept; we obtained a three-dimensional scale which comprises 39 items: *digital political support* – 16 items; the *traditional political support* – 12 items; *digital political following* -11 items. The final instrument is a composite measurement of political participation in which we included digital behaviors that would indicate political engagement by mirroring the traditional forms of political participation. We then added the new forms of online behaviors that have been rated as “political” by a group of experts. We further tested the construct validity of the scale, using Exploratory Factor Analysis and Confirmatory Factor Analysis. The final model revealed a three-dimensional construct, with digital political participation being formed by items indicating political support (for candidates, parties) – items that would reproduce, in the online environment, the type of support which is normally found in the traditional forms of political participation. The model also included a series of items that would describe a different digital political participation dimension, here called “digital political following” (e.g., “following one or more politicians on Internet”), which comprises activities that people could do only in the online environment. Such behaviors would hardly be labeled as political participation in the traditional way. Many people follow what a politician says or does using traditional media. One might wonder to which extent the “online political following” count as political participation. Nonetheless, digital technologies allow for more complex forms of political participation and more sophisticated ways to engage with politics. The agency of people who engage in such activities online could be better described as “participation” then engaging in activities such as watching the news on television (using TV set). When following online different political content (e.g., the content posted by a party or a particular politician) people could engage in various ways from reacting (comments or other types of standardized reactions) to sharing or even reporting the content, when it does not comply with the rules of the online community. Such reactions would count as following political participation in the form we have defined (or used) the concept in the Digital and Traditional Political Participation Scale. The instrument shows a bi-dimensional operationalization of political participation (traditional and digital), with the digital dimension having complexity in the way items are grouped around in two factors: support and following. Finally, the instrument (DTPP) indicates that digital political participation might be a more complex term to measure, not necessarily unidimensional, and consisted of forms of engagement that are not “traditionally” named “political engagement”.

It is worth mentioning that DTPP is a scale constructed and validated for young people (15 to 29 years of age) and a similar validation should be performed when such scale will be used for other age groups. It might be that digital political participation is a multi-dimension-

al construct only in the case of youth, as we argued in the current paper, given the salience of such forms of political engagement to those who were brought up in societies where the digital environment was part of daily routine. Still, digital technologies penetrated all our personal and professional lives and are not only associated with young people. Subsequent attempts to validate this instrument on other age groups would clarify the role of digital political participation when measuring political participation.

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