European Journal of Social Work

ISSN: 1369-1457 (Print) 1468-2664 (Online) Journal homepage: https://www.tandfonline.com/loi/cesw20

e-Social work: building a new field of specialization in social work?

Antonio López Peláez, Raquel Pérez García & Mª Victoria Aguilar-Tablada Massó

To cite this article: Antonio López Peláez, Raquel Pérez García & Mª Victoria Aguilar-Tablada Massó (2018) e-Social work: building a new field of specialization in social work?, European Journal of Social Work, 21:6, 804-823, DOI: 10.1080/13691457.2017.1399256

To link to this article: https://doi.org/10.1080/13691457.2017.1399256

Published online: 24 Nov 2017.

EUROPEAN JOURNAL OF SOCIAL WORK
2018, VOL. 21, NO. 6, 804–823
https://doi.org/10.1080/13691457.2017.1399256

Routledge
Taylor & Francis Group

e-Social work: building a new field of specialization in social work?

E-social trabajo: Construyendo un nuevo campo de especialización en el trabajo social?

Antonio López Peláez[a], Raquel Pérez García[b] and Mª Victoria Aguilar-Tablada Massó[c]

[a]Department of Social Work, Faculty of Law, National Distance Education University (UNED), Madrid, Spain; [b]Department of Business Management, Public University of Navarra, Pamplona, Navarra, Spain; [c]Law and Social Sciences, International Doctoral School, National Distance Education University (UNED), Madrid, Spain

ABSTRACT

New technologies have transformed the nature and practice of social work. A wider range of available digital procedures has opened up a broader dimension regarding research, therapies, interventions and social networks in the field. Using meta-analysis methods, this article reviews the current situation of the application of information and communication technologies (ICTs) in social work. A search of the literature reveals 70 articles using different methodological approaches over the period 2006–2016. The descriptors for the search were ICTs, information systems, technological systems, social work and e-social work. The main findings are that most studies on ICTs and social work focus on the impact, potential and specific uses of technologies in different aspects of social work, the ethical issues involved and the special attention that should be given to social workers' educational programmes. This scenario is a changing reality that must be taken into account: it is an irrefutable fact that new technologies are affecting social work and will be reflected by researchers and practitioners who should address and deal with these new trends in social work. The results allow us to identify four key recommendations to assist social workers in successfully adopting and implementing ICTs in their daily practice.

KEYWORDS

E-social work; technology; information and communication technologies (ICTs)

RESUMEN

Las nuevas tecnologías han transformado la naturaleza y la práctica del trabajo social. Una gama de nuevos procedimientos digitales ha abierto una dimensión más amplia en materia de investigación, terapias, intervenciones y redes sociales sobre el terreno. Utilizando métodos de metanálisis, este artículo revisa la situación actual de la aplicación de las tecnologías de la información y la comunicación (TIC) en el trabajo social. Una búsqueda de la literatura revela 70 artículos en los que se utilizan diferentes enfoques metodológicos durante el período 2006–2016. Los descriptores para la búsqueda han sido: TICs, sistemas de información, sistemas tecnológicos, trabajo social y e-social trabajo. Las conclusiones principales son que la mayoría de los estudios sobre las TIC y el trabajo social se centran en el impacto y los usos potenciales y específicos de las tecnologías en los diferentes aspectos del trabajo social, las cuestiones éticas y la atención especial que debe prestarse a los programas educativos de los trabajadores sociales. Este escenario es una realidad cambiante que hay que tener en cuenta: es un hecho irrefutable que las

PALABRAS CLAVE

e-social trabajo; tecnología; tecnologías de la información y la comunicación (TICs)

CONTACT Antonio López Peláez alopez@der.uned.es

nuevas tecnologías están afectando al trabajo social y serán reflejadas por los investigadores y profesionales que deben abordar y tratar estas nuevas tendencias. Los resultados nos permiten identificar cuatro recomendaciones clave para ayudar a los trabajadores sociales a adoptar y aplicar con éxito las TIC en su práctica diaria.

Introduction

Technologies are changing our society, our economy, processes of social exclusion and inclusion, as well as social work (Andriole, 2005; Castells, 1995, 1997; Coleman, 2011; Degryse, 2016; Marcuello-Servós, 2010; Mohr, Burns, Schueller, Clarke, & Klinkman, 2013; Zysman & Newman, 2006). The Internet of things, big data and social networks are transforming social relations, education and access to information. Users' demands and the competences and skills of social workers have also changed, as well as the features of our institutions, which are immersed in a process of digital transformation (Perron, Taylor, Glass, & Margerum-Leys, 2010). Technologies are a product of our society and they are not neutral, neither in terms of their designs nor their effects (Torres-Albero, Robles, & De Marco, 2014).

The effects of technologies can be analysed in terms of their geographical distribution, the economy, inequality or our way of life (Warf, 2017). Although the incorporation of new technologies in the field of social work has been rather slow compared to business or marketing sectors (Zorn, Flanagin, & Shoham, 2011), the presence of information and communication technologies (ICTs) has increased in the daily activity of users and professionals. In the coming years, ICTs will transform social work practice (Berzin, Singer, & Chan, 2015). The widespread use of technologies in numerous spheres make it evident that this is an inexorable phenomenon. From the perspective of social work, the incorporation of technologies in everyday life is linked to the analysis of their advantages and disadvantages, the need to develop technology-based interventions that respect the ties between social workers and users and emerging ethical dilemmas (López, 2014; Reamer, 2015; Voshel & Wesala, 2015).

E-social work can be defined as social work that uses ICTs within this techno-social sphere (López Peláez & Díaz, 2015). As such, e-social work could be understood as a social work field where individuals, communities and groups have needs and it is possible to develop intervention programmes, conduct research projects and design public policies to address them. Today, several public administrations manage social services using ICTs and non-profit organizations provide assistance using the Internet. E-social work comprises online research, therapy (individual, group and community dynamics), the teaching and training of social workers and the monitoring of social service programmes. In this regard, e-social work has become the new social work frontier.

Based on this perspective, we analyse the current application of ICTs in the field of social work. We focus basically on the theoretical discussions, practical experiences and key areas of professional interventions that are being redefined through digitization. To this end, we analyse the key publications on the subject published from 2006 to 2016. In social work, as in other disciplines, meta-analysis is a well-founded research technique (Lundahl & Yaffe, 2007; Ramsey & Montgomery, 2014), which allows addressing the characteristics of technology-based interventions and the main debates that arise within our field of knowledge.

Methodology

Social work is not alien to the changes in today's technology, including big data, e-government and social networks (Belluomini, 2014). While new social problems emerge, old ones are redefined in this new digital environment. In response, we must redesign our research methodology and social intervention programmes to include and improve the new possibilities for analysis based on big data. In this regard, there are relevant theoretical and methodological reflections (Baker, Warburton, Hodgkin,

& Pascal, 2014) and applied research in different disciplines that can sustain the interaction with new technologies (Holden, Barker, Rosenberg, & Cohen, 2012), including investigations ranging from case studies (Humphries & Camilleri, 2002) to meta-analyses on the interaction between ICTs and social work in various fields of professional activity (Ramsey & Montgomery, 2014). In our view, meta-analysis is an effective research strategy (Franklin & Tripodi, 2009) to analyse the experiences, problems and principal debates related to the incorporation of ICTs in social work, what we call e-social work.

E-social work is a research area with a growing scientific community. This review examines articles related to ICTs used in social work. The articles were published in 33 social work journals from which we have selected 70 papers dating from 2006 to 2016. The databases from which the articles were retrieved are Academica-e, ASSIA, the Citation Index, Dialnet, ISOC, Scopus, the Social Sciences Citation Index, Social Services Abstracts and the Web of Science.

The inclusion criteria were (a) English or Spanish articles published from 2006 to 2016 in the 33 journals, (b) studies related to the use of ICTs in social work and (c) all e-social work. The initial search aimed to find all articles which specifically included the term 'technology' in their abstracts or keywords, or those which included ICT-related terms like 'technology', 'digital', 'Internet', 'online', 'web', 'virtual' or 'social media' in their titles. The exclusion criteria assumed that if none of these terms appeared in any of these fields of an article, it was likely that ICTs in social work did not occupy a core position in the article and could therefore be excluded. We have focused on articles in English and Spanish because journals published in both languages account for a very large percentage of the total journals published in the field of social work and social services.

The searches were conducted in May 2016 and updated in March 2017. A manual search of papers published from 2006 to the end of 2016 was performed in the selected journals. The studies were coded by reading the abstracts and full texts of the papers.

The coding procedure

The level of evidence of the articles was ranked according to the Oxford Centre for Evidence-based Medicine Levels of Evidence (OCEBM, 2011). OCEBM classifies the studies in increasing order of bias control. Level 1 corresponds to the highest level of evidence (high-quality systematic reviews), followed by level 2 (randomized clinical trials), level 3 (case–control trials without randomization), level 4 (case reports) and level 5 (studies merely based on expert opinions), which is the lowest level. This grading system is regularly used in assessing the methodological quality of studies related to the use of ICTs in human services (Moorhead et al., 2013).

The type of ICT evaluated in social work was categorized based on a heuristic framework that included the logical steps of this field: research, education, practice and theory.

ICT media were classified (West & Heath, 2011) into types as generic, device and applications (Tables 1 and 2) based on the notion that ICT is the term applied to a range of tools and media that provide the infrastructure for communication and includes devices with all of their applications. Tables 1 and 2 show the types of ICTs discussed in the articles and reveals low percentages for more recent technologies (i.e. gaming, big data, Voip, storytelling). According to the OCEBM classification, 18% of the articles in the sample are of high quality, while more than half are of low accuracy, with research articles being the least frequent.

The research methods used were also categorized as qualitative, quantitative and mixed research, while the research type options were specified as quantitative (descriptive, correlational, quasi-experimental and experimental) or qualitative (case study, grounded theory, phenomenology, ethnography, historical, meta-analysis, thematic analysis, narrative summary) (Alvira Martin, 1983).

Bibliometric study

In order to assess the research, bibliometric aspects were included to provide an idea of the quality of the study and identify the reliability of the sources and the countries where e-social work is an

Table 1. ICT Types

		Device				APP																	
							Social Media																
Articles		DTIV	Tablet	Telep-hone	Robot	Generic	Generic	Facebook	Twitter	Internet	EC	On line	Blog	E-mail	Web site	Skype	Online forum	Voip	Internet of Things	Big data	Pod-casting	Gaming	Story-telling	Other
Oxford level of evidence																								
LEVEL 1	**8.57%**																							
Best et al. (2016)							x																	
Franklin et al. (2009)							x																	
Franklin et al. (2016)							x																	
Ishizuki and Cotter (2009)										x				x										
Simpson (2016)							x			x														
Waldman and Rafferty (2006)												x												
LEVEL 2	**8.57%**																							
Adedoyin (2016)																		x						
Best et al. (2014)												x												
Blackburn et al. (2011)		x																						
Chan (2016a)							x																	
Chan (2016b)						x																		
Santhiveeran (2009)															x									
LEVEL 3	**14.29%**																							
Blanco (2016)			x																					
Brownlee et al. (2010)							x																	
Chan and Holosko (2017)							x																	
Cooner (2014)								x	x															
Fang et al. (2014)							x																	
Hick (2006)										x														
Knowles and Cooner (2016)								x																
Mishna et al. (2012)						x																		
Santás García (2016)			x																					
Sitter and Curnew (2016)							x																	

Table 2. ICT Types

		Device				APP																			
							Social Media																		
Articles		DTIV	Tablet	Tele-phone	Robot	Generic	Generic	Facebook	Twitter	Internet	EC	On line	Blog	E-mail	Web site	Skype	Online forum	Voip	Internet of Things	Big data	Pod-casting	Gaming	Story-telling	Other
Oxford level of evidence																									
LEVEL 4	**5.71%**																								
Brady et al. (2016)									x							x									
Johnston-Goodstar et al. (2014)								x	x				x								x				
Martinez-Brawley (2016)											x														
Steyaert and Gould (2009)										x															
LEVEL 5	**62.86%**																								
Arriazu (2007)																	x								
Arriazu and Fernández-Pacheco (2013)											x														
Baker et al. (2014)						x																			
Bellouomini (2014)							x																		
Bielskis et al. (2011)																									x
Brooks et al. (2013)							x																		
Chandran (2016)							x																		
Craig and Calleja Lorenzo (2014)						x																			
						x																			

Del Fresno and López Peláez (2013)																			
Dombo et al. (2014)			x																
Duncan-Daston et al. (2013)				x															
Fernández-Pacheco and Arriazu (2014)									x										
Freddolino and Blaschke (2008)																		x	
Giffords (2009)				x			x												
Gillingham (2016)			x																
Goldkind and Wolf (2015)	x														x	x		x	
Groshong and Phillips (2015)								x											
Hasan and Linger (2016)			x																
Hitchcock and Battista (2013)						x													
Ienca et al. (2016)		x																	
Jorgensen (2013)			x																
Karpman and Drisk (2016)				x															
Kimball and Ki (2013)				x															
LaMendola (2010)				x															
Lenette et al. (2015)																			x
Lomax and Nix (2015)				x															
López (2014)			x																

(*Continued*)

Table 2. Continued.

		Device				APP																		
							Social Media																	
Articles		DTIV	Tablet	Tele -phone	Robot	Generic	Generic	Facebook	Twitter	Internet	EC	On line	Blog	E-mail	Web site	Skype	Online forum	Voip	Internet of Things	Big data	Pod-casting	Gaming	Story-telling	Other
Miles (2006)		x																						
Naccarato (2010)						x																		
Parker-Oliver and Demiris (2006)						x																		
Parrott and Madoc-Jones (2008)						x																		
Parton (2008)						x																		
Pérez-Lagares et al. (2012)						x																		
Ramsey and Montgomery (2014)						x																		
Rasmussen (2015)						x																		
Reamer (2013)						x																		
Reamer (2015)							x																	x
Robbins and Singer (2014)							x																	
Shawna and Walsh (2015)																								x
Stanfield and Beddoe (2016)							x																	
Turner (2016)							x																	
Turner et al. (2016)							x																	
West and Heath (2011)						x																		
Youn (2007)						x																		
Total 100%	**100%**																							
ICT Types		2 (33% Device)	2 (33% Device)	1 (17% Device)	1 (17% Device)	21 (27,27% App)	23 (29,86% App)	3 (3,9% App)	4 (5,19% App)	5 (6,48% App)	3 (3,9% App)	3 (3,9% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	1 (1,3% App)	2 (2,6% App)	1 (1,3% App)	3 (3,9% App)

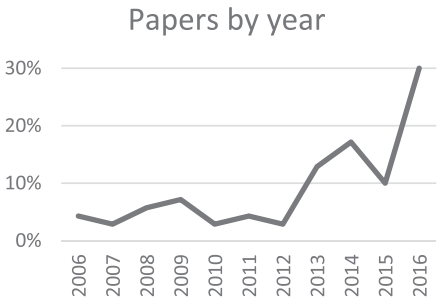

Figure 1. Evolution of publications on e-social work over the period 2006–2016 by percentage ($n = 70$).

important topic (Chan, 2016; Franklin & Tripodi, 2009; Martínez, Herrera, Contreras, Ruiz, & Herrera-Viedma, 2015).

Papers by year

This indicator of scientific productivity reveals that e-social work has emerged as an important field in the last third of the time considered. The evolution of publications on e-social work is shown in Figure 1.

Most of the papers retrieved were published from 2013 to 2016 (48 papers), with the largest number of papers published in 2016 (30% of the total corresponding to 21 documents). Thus, e-social work could be considered an innovative research topic.

Papers by country in the period 2006–2016 (n = 70)

The country with the largest number of scientific articles is the United States, followed by the UK. Together, these two countries account for 77.14% of all publications. It is striking that the number of publications corresponding to the EU member states is quite low (15.72%).

Table 3 also reveals a small number of countries have published highly cited articles in the e-social work discipline. The United States is in the lead, followed by the UK and Canada. The predominance of the United States and the UK is not surprising given that the majority of social work journals with a high-impact factor are published in these two countries, as also occurs in other scientific fields and in the WoS. The most highly cited papers in the field of social work have received more than 64 citations (Martínez et al., 2015). In our sample only six papers, from UK and the United States, correspond to this range.

Papers by journal, google scholar citation and JCR ranking 2015

As shown in Table 4, 45.71% (32) of the papers were published in six JCR journals. It should also be noted that 17.14% of the highly cited papers (12) were published in two of the most long-standing

Table 3. Papers by country in the period 2006–2016.

Country	Papers	%	Google Scholar citations
Australia	1	1.43	12
Canada	4	5.71	186
China	1	1.43	6
Germany	1	1.43	1
Lithuania	1	1.43	13
Netherlands	2	2.86	21
Spain	7	10	11
UK	12	17.14	366
USA	41	58.57	662
Total	70	100	1278

Table 4. Papers by journal, Google Scholar citation and JCR ranking 2015.

Journal	Papers	Google Scholar citations	Journal citation reports (JCR) 2015
International Journal of Social Robotics	1	1	1.407
Journal of Telemedicine and Telecare	1	25	1.377
Information Society	1	9	1.333
Social Work	5	191	1.145
Child & Family Social Work	1	4	1.064
British Journal of Social Work	7	404	1.027
Children and Youth Services Review	2	95	0.969
Journal of Social Work Practice	1	0	0.964
Social Work in Health Care	6	61	0.8
Families in society: The Journal of Contemporary Social Services	1	29	0.758
Ethics and Information Technology	1	21	0.739
Australian Social Work	1	12	0.667
Clinical Social Work Journal	4	147	0.595
Qualitative Social Work	1	1	0.589
Journal of Social Work Education	2	13	0.578
Journal Social Work Education	7	7	0.578
Journal of Social Work	3	94	0.484
Educational Gerontology	1	0	0.429
Elektronika Ir Elektrotechnika	1	13	0.389

journals, the British Journal of Social Work and Social Work. The first is the leading academic social work journal in the UK published by the British Association of Social Workers and the second one is the premier journal published by the National Association of Social Workers (NASW) of the United States, which is the largest membership organization of professional social workers in the world (Martínez et al., 2015).

The most cited paper in Google Scholar is titled 'Changes in the form of knowledge in social work: from the 'social to the informational'? (Parton, 2008). The paper analyses how ICTs might be transforming the form of knowledge in social work and its very nature. The remaining papers deal mostly with topics such as specific tools or sets of tools in e-social work (50%), uses of the Internet, e-mails, blogs, social media and the ethical challenges of social work, issues related to the lack of confidentiality and privacy, as well as new ethical risks and their online treatment.

No differences were found between the topics discussed by country, with the exception that the United States has more scientific literature on ethics and the professional consequences of using ICTs in social work practice. In the other countries, there is a predominance of research concerning social media in social work intervention.

Results

Most of the studies were not directed at specific audiences ($n = 22$), although many of them focused on practitioners ($n = 20$) and social work students ($n = 12$), children and youth ($n = 6$) and the elderly ($n = 4$). The remainder focused on other recipients of social services ($n= 6$) such as people suffering from social exclusion, the poor or those at risk.

Social media was observed to be the most popular type of ICT (38.95%, Tables 1 and 2), followed by generic ICTs (27.27%). A significantly lower percentage of interest and larger dispersion was found for other ICT applications, which could be an interesting field of investigation (i.e. VoIP, the Internet of Things, big data, podcasting, gaming, storytelling, etc.).

As regards the type of ICT intervention, the majority of articles (52%; 38 studies) deal with social work practice, followed by social work pedagogy (23%; 17 studies) and social work research (10%; 7 studies). A total of seven studies belong to a variety of areas (Table 5).

When classifying the academic rigour of the articles according to the OCEBM system, we found that most of the articles based on a mixed methodology (20% from total) use samples ($n = 12$, 85.71% of all articles using a mixed methodology), but that only a small percentage of qualitative

Table 5. Study type

Articles		Intervention	Pedagogical	Theory	Research
Oxford level of evidence					
LEVEL 1	**8.57%**				
Best et al. (2016)				x	
Franklin et al. (2009)		x	x		
Franklin et al. (2016)		x	x		
Ishizuki and Cotter (2009)			x		
Simpson (2016)		x			
Waldman and Rafferty (2006)				x	
LEVEL 2	**8.57%**				
Adedoyin (2016)		x			
Best et al. (2014)					
Blackburn et al. (2011)					x
Chan (2016a)		x			
Chan (2016b)		x			
Santhiveeran (2009)		x			
LEVEL 3	**14.29%**				
Blanco (2016)				x	
Brownlee et al. (2010)					x
Chan and Holosko (2017)			x		
Cooner (2014)			x		
Fang et al. (2014)		x			
Hick (2006)				x	
Knowles and Cooner (2016)		x			
Mishna et al. (2012)		x			
Santás García (2016)		x			
Sitter and Curnew (2016)		x			
LEVEL 4	**5.71%**				
Brady et al. (2016)			x		
Johnston-Goodstar et al. (2014)			x		
Martinez-Brawley (2016)		x			
Steyaert and Gould (2009)		x			
LEVEL 5	**62.86%**				
Arriazu (2007)					
Arriazu and Fernández-Pacheco (2013)			x		
Baker et al. (2014)			x		
Bellouomini (2014)				x	
Bielskis et al. (2011)					x
Brooks et al. (2013)		x			
Chandran (2016)		x			
Craig and Calleja Lorenzo (2014)		x			
Del Fresno and López Peláez (2013)		x			
Dombo et al. (2014)				x	
Duncan-Daston et al. (2013)		x	x	x	x
Fernández-Pacheco and Arriazu (2014)		x			
Freddolino and Blaschke (2008)				x	
Giffords (2009)					x
Gillingham (2016)		x	x		
Goldkind and Wolf (2015)		x			
Groshong and Phillips (2015)		x			
Hasan and Linger (2016)			x		
Hitchcock and Battista (2013)		x			
Ienca et al. (2016)		x			
Jorgensen (2013)			x		
Karpman and Drisk (2016)		x			
Kimball and Ki (2013)		x			
LaMendola (2010)		x			

(*Continued*)

Table 5. Continued.

Articles		Intervention	Pedagogical	Theory	Research
Lenette et al. (2015)			x		
Lomax and Nix (2015)					x
López (2014)		x			
Miles (2006)		x			
Naccarato (2010)		x			
Parker-Oliver and Demiris (2006)			x		
Parrott and Madoc-Jones (2008)				x	
Parton (2008)			x		
Pérez-Lagares et al. (2012)		x			
Ramsey and Montgomery (2014)		x			
Rasmussen (2015)		x			
Reamer (2013)		x			
Reamer (2015)		x			
Robbins and Singer (2014)				x	
Shawna and Walsh (2015)		x			
Stanfield and Beddoe (2016)		x			
Turner (2016)					
Turner et al. (2016)					x
West and Heath (2011)				x	
Youn (2007)			x		
Total	**100%**				
Study Types		38 (52%)	17 (23%)	11 (15%)	7 (10%)

research (77% of the total) uses randomized samples ($n = 9$, 16.66% of the total). The OCEBM level per article is shown in Tables 1, 2 and 5.

New technologies are present in our everyday lives and have transformed users' demands and social intervention strategies. The institutions in which social workers carry out their activity have also changed technologically and advanced towards e-government. This has led to an increased interest in the training of social workers and the transformation of the profession as social workers must strengthen their skills in the use of new technologies. New ethical debates emerge as technology evolves.

The incorporation of ICTs has changed social interactions and given rise to new fields of expertise, such as online interventions and diagnostics based on the study of user behaviour in online social networks. These new methodologies, activities, projects and research on the climate of opinion and leadership in social networks make up the area of what we call e-social work. In this regard, we can group the results of our research into four areas.

ICTs and social work

Most of the studies noted that using ICTs in social work practice can serve as an incentive to encourage users to engage in the service. ICTs is the term applied to a range of tools and media that provides the infrastructure for communication. As we pointed out for coding, ICTs include devices with all their applications (the Internet, apps, social networking, etc.). In a basic sense, ICTs allow users to communicate more quickly and efficiently, access a large amount of information in real time, gain access to services remotely and build relationships with people (Castells, 2010; West, 2003). The ability and opportunity to access, adapt and create new knowledge using ICTs is key in social work research and practice. Unlike Web 1.0 technology, which is centralized and content-driven, the current Web 2.0 technology is based on user-generated content, social networking and affiliation, thus enabling people to access and participate. Web 2.0 are technologies, such as blogs, social networking sites, folksonomy, Really Simple Syndication, wikis and tags (Giffords, 2007). Moreover, new technical concepts and developments, such as the Internet of Things, big data, mobile telephones and gaming, provide new scenarios for social interaction. These changing realities mean that social work must assess and diagnose problems and carry out professional interventions in a different

way. Indeed, the advent of the Internet and the social media has revolutionized the way people communicate and social work users should recognize the fact that the use of verbal and written communication has radically changed their jobs.

It is therefore pertinent to inquire into how social work might respond to the inherent challenges technology poses for both society and the profession itself. Social work practitioners will now have to deal with both the risks involved in (pornography, violence, bullying, sexual solicitation and commercial exploitation) and the opportunities (learning, communication, creativity, expression and entertainment) afforded by the Internet and social media in particular. However, part of the problem is that technology is changing at such a quick pace that it is difficult to provide guidelines about how to ethically respond to specific technology issues (Reardon, 2011).

ICTs include an innovative flexibility, accessibility and fluidity in the relationship between professionals and users. But on the other hand, some limitations are considered commonly shared among different types of social media. For example, ICTs as a dehumanizing factor that takes social workers away from their core practice tasks; there is also a risk of less access to services as well as less choice and possibly greater costs may result in social exclusion (the person does not have access to new technology or skills to use it, becoming a new platform for social exclusion) (Chang, Bakken, Brown, & Houston, 2004). There is a downside in using new technologies: depersonalization, technical problems or the necessity to know the legal regulations in the context of the user if social interventions are performed in different geographical contexts are limitations considered. There are hazards associated with the fraudulent use of the ICTs, such as pharming (scamming practices in which malicious code is installed on connected computers, misdirecting users to fraudulent web sites without their knowledge), phishing which involves sending spam or pop-up messages to lure sensitive personal information (e.g. credit card numbers, bank account information, social security numbers, passwords, …) and cyberbullying (the act of harassing someone online by sending or posting mean messages, usually anonymously).

Most studies recommend that caution be taken when introducing and using ICTs in social work practice, because current budget cuts could result in new technical barriers for the involvement of social services users. In addition, there is a need for professionals specially trained in the handling and use of ICTs (Arriazu & Fernández-Pacheco, 2013).

Although ICTs cannot and should not substitute the work of a professional, their correct use facilitates the management, storage and dissemination of data, thus permitting social workers to work more quickly and efficiently. In addition, other key social work tasks, such as investigating and informing about social problems, are also facilitated by the use of new technologies. However, it is clear that much work needs to be done to harness the power of technology in order to respond to the challenges of social work practice. In this regard, interdisciplinary collaboration is a necessity and requires partnerships with technologists, computer scientists, engineers and business management because social work cannot do it alone (Berzin et al., 2015).

To sum up, although the analysis of communicative practices and communication technologies has formed part of traditional social work practice, we are at a turning point where ICTs have come to play a key role in the field. Interaction through social networks and the intensive use of ICTs are now a reality in the everyday life of individuals of all ages, and cannot be neglected in social work. Policies that prohibit e-social work communication with users cannot and should not be adopted. A technological revolution is occurring in social work and it has become impossible to ignore the impact of new developments on the expectations of users, patients, practitioners and clients and the potential benefits of ICT tools.

The impact of ICTs on the social work curriculum

ICTs and social media can be used by educators both to facilitate students' learning of the traditional social work curriculum and to prepare them for using social media in professional practice.

The cited papers highlight that even when social work educators have incorporated technology, it has primarily served as a vehicle to relay content to students or to assist the instructor. Social media-driven education is on the rise, but there is still a need for social work educators to strength social media as a means of professional literacy that transforms the way students learn.

Students need to make the link among their use of social media in their personal life, during their studies and in their professional practice, while service users and social workers need to consider the ways social media use can develop and reinforce the relationship between both and the organizations they work with or for (Lomax & Nix, 2015).

As with all technologies, the best use of social media is to help students achieve learning objectives and develop the required competencies (Hitchcock & Battista, 2013). Social media can also be used in social work education to strengthen the ties between teachers and students. Social media allows students to keep up-to-date on policy changes in real time and avoid them finding that information on policies and legislative agendas contained in textbooks is out of date.

Social work practice can benefit from recent platforms such as Storify.com (it gives content teams the tools to create their own live blog stories uniting traditional storytelling with engaged audiences). Social media can expand the audience thanks to students' posts in public blogs, the creation of podcasts in public Tweet chats and the use of mobile technologies (i.e. cameras in cellphones, location-marking apps) to document real situations and provide contemporaneous content for the class. Skype or Google Hangouts are also tools that can be used to engage experts around the world and facilitate discussion groups.

The findings of this study indicate that the social work profession has not proactively connected much of the technology that has been integrated into other fields of practice. ICTs still appear to play a very limited role in the social work discipline despite the fact that it is an aspect of a modern, globalized world that can offer extensive benefits to social work users.

There are several reasons why social media and ICTs should hold a central place in social work curricula, but perhaps none is more convincing than the fact that social networks already occupy students' attention and influence how they learn (Hitchcock & Battista, 2013). Moreover, graduates will be required to work in systems that operate in these ways and will have little opportunity to step outside of this framework (West & Heath, 2011). Authors also emphasize that, through participation, students gain a greater understanding about professionalism in online environments and the ethical challenges related to the use of social media, as well as discover some of the strengths and weaknesses of working with the social media tools but always in the safety of the academic setting.

Social work education is grounded in values of service, social justice, dignity and the worth of each individual, the importance of human relationships, integrity and competence. While social workers have put these values into practice through their face-to-face interactions, it is important to extend their reflections and practice to the online world. Social work educators must take on the critical task of teaching students to incorporate the values the profession upholds in a new technology environment that is provided by social media platforms (Chandran, 2016).

Ethical implications of the use of ICTs in social work

The emergence and growing availability of ICTs and social media has given rise to new and complicated, potential ethical challenges for social workers (Reamer, 2013).

One of the most widely cited limitations is professional boundaries and the imperative of personal discretion when interacting with clients or representing agencies on social media networks (Mishna, Bogo, Root, Sawyer, & Khoury-Kassabri, 2012; Reamer, 2015). Conflicts of interest arise when social workers receive requests from current and former clients asking to be social networking 'friends', which can blur the boundaries and compromise clients' privacy and confidentiality (Santhiveeran, 2009). Privacy and confidentiality was another commonly mentioned concern, such as protecting client data in a computer, especially information shared over the Internet, preventing computer'

hackers from spying on therapists' computer information, forgetting hidden files (text residue) left behind when they are seemingly deleted (Menon & Miller-Cribbs, 2002) or managing records of online conversations. It is essential to back up files, encrypt e-mails and refrain from identifying individual clients, among other precautions (Reardon, 2011).

Social media also undermine the efforts of practitioners to give clear messages about their availability, office hours, roles and responsibilities. To address this issue, the Canadian Association of Social Workers has developed supplemental social media practice guidelines that are linked to the Code of Ethics (CASW, 2005).

In addition, social workers must be prepared for handling situations where clients bring up information they have found. They also have the ethical obligation to seek material from reputable sources, such as empirical peer-reviewed studies, which are readily available through the Internet (Giffords, 2009).

Clearly, the task facing the social work profession is to assess, in a thoughtful and constructively critical way, the acceptability of digital, online and electronic tools. Further, social workers must embark on the rigorous, well-designed evaluation of outcomes associated with these novel interventions (Reamer, 2013). Social workers should continue their open-minded pursuit of new ways of helping, recognizing that these efforts shall fall within the profession's venerable moral tradition and always within the ethical and moral principles inherent in this profession. The development of an organizational and professional culture that embraces digital technology and data analytics, respects the need for privacy and integrates the best digital tools and approaches into practice and policy is essential. The real challenge is to integrate these changing products and platforms to meet the aims of the social work field.

Relationship of social workers with specific technological tools

Some of the studies mention that the real opportunity for social work in the future may depend on the capacity to meet patients where they are online utilizing the tools that they use (Aase & Timimi, 2013).

A research project by Mishna et al. (2012) found that technology tends to 'creep in' to the professional–client relationship and that ICTs can reshape the professional relationship in three ways: through new methods of communication, rethinking social work roles and collaborative problem-solving. Communication between social workers and clients has changed with the inclusion of ICTs. To support this new relationship, new boundary definitions may be required in the social worker–client relationship. One possible solution that has been proposed is to adopt a more contextualized and dynamic construct of the professional–client relationship (Berzin et al., 2015). Future technologies may allow social workers to negotiate and indicate different relationships and establish new boundaries for clients and professionals.

Social workers learn quickly that Twitter, for example, could connect them with information that can be shared with each other, social work faculty members, practicum instructors and clients. Twitter encourages collaboration, the evaluation of information and professional decision-making. A YouTube channel can also serve to showcase a group's profile within the wider community, while online focus groups (Chan, 2016a) are used by social workers for conducting group interviews and other therapeutic uses. A range of social media platforms such as Twitter, Facebook and Weibo has been used in HIV/AIDS prevention and education with hard to reach populations in diverse settings (Chandran, 2016).

Several ICTs, such as electronic chat rooms, academic blackboards and easy to access shared video viewing for teaching the highly theoretical material, can become a dynamic and interactive endeavour. Indeed, social work practice has a slew of educational devices to bring clinical practice experience to life within the classroom (Laracuente, 2012).

Video technology has been used as an educational tool in classrooms (Miles, 2006) for treatment programmes (Groshong & Phillips, 2015) and therapeutic interventions and with community groups

(Sitter & Curnew, 2016). It allows researchers to create films, documentaries or presentations that contain audio-visual media.

Through ICTs, the role of social work also changes as the activity is not confined to the office or to the therapeutic environment. Social workers can play the role of aggregator, facilitator and legitimizer of information sources (Parton, 2008).

Technology also allows participation and collaborative therapeutic problem-solving. Podcasting and online storytelling allow people to feel part of a community. Another strand of research reflects on the wider potential of digital narratives as a useful tool for social work practitioners (Lenette, Cox, & Brough, 2015). Clinical interventions, such as psychotherapy using telephones, interactive video and the Internet, are also gaining in popularity and have become a new approach to collaborative problem-solving.

Conclusions

In our opinion, and as the results of our research have shown, a new sphere of online specialization is emerging in the field and extending out to include all facets of social work. The online dimension cannot be described as being remote and removed from offline life; both belong to the same social and personal life of individuals as technological beings. In this sense, online research and social intervention form part of the whole of social life, of an enlarged sociability that characterizes contemporary society (Del Fresno & López Peláez, 2013).

E-social work, or online social work, is becoming a new specialty in a twofold sense: as a specific sphere for professional intervention (on topics and issues related with the online reality) and as a cross-cutting sphere that affects the lives of people, groups and institutions, as well as the professional activity of social workers (through e-government, interventions using new technologies to address traditional social problems that are being redefined in the technological setting, etc.). In its individual, group or community dimension, social work is undergoing a continuous process of change due to the constant evolution of society and institutional responses to civil society's reaction to the demands and needs of its citizens. These changes require that social work as a scientific discipline constantly adapt all its areas of intervention.

Unlike other sectors, however, social work has been slow to adapt to a rapidly changing technology. Limited resources, ethical and legal considerations, the lack of training and social work's historical reliance on face-to-face communication have fuelled this lag. But despite the delay, ICTs are beginning to permeate social work structures. Social workers now use technology for online research, therapies (individual, group and community dynamics), the teaching and training of social workers and the monitoring of social service programmes. ICTs in social work not only improve practice but also support the social good. In this sense, 'in social work practice, embracing new and innovative communication technologies can create opportunities for enhancing human service delivery' (Bullock & Kolbin, 2015, p. 9).

ICTs are impacting, influencing and intersecting with social work practice. Future social work practitioners will be required to develop different skills from those of previous generations. These technologies can potentially contribute to various social work processes, including service user engagement and delivery, assessment and intervention, as well as community and programme evaluation. These new dimensions of e-social work entail the need to take a more active role in designing curricula and educational tools, as well as in research on social work practice and technology. It is critical to tap into this potential and incorporate technology in social work practice, as well as consider the ethical issues involved. The articles reviewed here address the topic of media used in the field of e-social work, including new ICT applications, such as mobile applications, gamification, big data or the Internet of Things (Goldkind & Wolf, 2015), which should be developed and implemented in practice. E-social work as a new field of specialization for social work practitioners is here to stay and its future is linked to the evolution of ICTs. Harnessing the power of technology will mean shifting practice to include technology when appropriate and to use its potential for social good (Berzin et al., 2015).

Social work must be at the forefront of technology. In this regard, the first issue we must address is recognizing that technological innovation is a challenge for our discipline. To this end, this article outlines four key recommendations to assist social workers in successfully adopting and implementing ICTs in their practice.

Firstly, social workers must be trained in the use of new technologies. Moreover, specific programmes need to be designed that enable them to perform their work in a digital society, analyse online opinion climates, develop online programmes and strategies and use the available technological applications.

Second, social workers must take part in the design, development and implementation of new technologies in their field of work, since their participation can improve the accessibility and performance of technological applications.

Thirdly, social workers must be involved in the design and development of undergraduate and master's degree curricula in order to ensure that future social workers are provided specific training in new technologies and e-social work and are prepared for the digital society in which we are immersed.

Fourthly, it is necessary to address the ethical debates surrounding new technologies and e-social work. Specifically, we must redefine and revise our commitment to confidentiality taking into account the characteristics of new technologies (e.g. the trail left by online interactions or free access to messages sent through twitter, which bring apparently private conversations into the public domain). It is also necessary to regulate the standards of professional practice by establishing protocols of action that respect professionals' accessibility, as well as their free time and working hours. If this does not occur, we may find ourselves in a situation where the free time and private lives of professionals will eventually disappear due to the constant demands of social network users.

Future research

This review has some limitations. First, some grey literature, such as reports from non-governmental organizations and frontline practitioners' reflections, were not included. Second, only research studies in English and Spanish were reviewed. In spite of these limitations, this study has covered the leading journals in the social work field and represents a very significant sample set of the e-social work literature.

The specific applications that have been analysed here include mainly social media, the Internet and online tools. More recent applications (i.e. gaming, big data, the Internet of things, Skype storytelling, VCoP, podcasting, storytelling, specific apps), however, have received little attention in the literature. These applications are important for both social work practice and research as they could serve as tools to support the emerging field of e-social work. Indeed, new arenas should be explored, such as virtual online gaming and its 'social' dimensions or the development of digital services for social service users. In addition, more studies need to be conducted that critically evaluate the roles of ICTs in social work practice and their specific utility for interventions. The dominant research concern in social media is more about professional ethics than their application in interventions. A rigorous conceptualization of the nature of social work in the digital age is an important step to enable the profession to fully evaluate and harness ICTs. To this end, further discussion, practise and research are necessary and educational programmes must become much more active in learning about the place of technology in social work practice.

Geolocation information

40°26′08.3″N 3°44′00.4″W

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This article has received financial support from the Vice-Rector for Research and Internationalization of the UNED for the dissemination of research results.

Notes on contributors

Antonio López Peláez is a Professor of Social Work and Social Services at the Department of Social Work, Faculty of Law, of UNED, the largest Spanish Public University. He has been visiting scholar at the School of Social Welfare (University of California, Berkeley, USA), Universidad Americana (Managua, Nicaragua), and at the School of Social Work (Western Michigan University, USA). He is the principal investigator of the Research Group Koinonía, an interdisciplinary and international research team on Social Work and Social Services, Technology, History and Law (www.koinonia.org.es). Outside the academic world he is a supportive member of the Abracadabra Foundation: Solidarity Magicians.

Raquel Pérez García is a Professor of Human Resources and Management at the Department of Business Management of the Public University of Navarra. This activity combines with her work as a consultant and trainer, providing training in all areas of people management, as well as advising various companies in these areas: human resources, management, recruitment, training, career, talent development, etc.

Mª Victoria Aguilar-Tablada is a doctoral student at the International Doctoral School, Universidad Nacional de Education a Distancia (UNED). She worked on computers at NCR Corporation, joining the staff of Didaskalion SL in 1984. She is nowadays CEO of Didaskalion SL and an expert in woman leadership.

References

Aase, L., & Timimi, F. (2013). Health care social media: Engagement and health care in the digital era. *Clinical Obstetrics and Gynecology*, *56*(3), 471–476.

Adedoyin, A. C. (2016). Deploying virtual communities of practice as a digital tool in social work: A rapid review and critique of the literature. *Social Work Education*, *35*(3), 357–370.

Alvira Martin, F. (1983). Perspectiva cualitativa-perspectiva cuantitativa en la metodología sociológica. *Reis*, *22*(22), 53–75.

Andriole, S. J. (2005). *The 2nd digital revolution*. IGI Global. Vilanova University, Philadelphia, Pensilvania, USA.

Arriazu, R., & Fernández-Pacheco, J. L. (2013). Internet en el ámbito del trabajo social: Formas emergentes de participación e intervención socio-comunitario. *Cuadernos de Trabajo Social*, *26*(1), 149–158.

Arriazu, R. (2007). ¿Nuevos medios o nuevas formas de indagación?: Una propuesta metodológica para la investigación social on-line a través del foro de discusión. *Forum Qualitative Sozialforschung*, *8*(3), Art. 37.

Baker, S., Warburton, J., Hodgkin, S., & Pascal, J. (2014). Reimagining the relationship between social work and information communication technology in the network society. *Australian Social Work*, *67*(4), 467–478.

Belluomini, E. (2014). Turn up the tech in social work: Using digital self-advocacy to empower social work populations. *The New Social Worker*, *21*, 30–31.

Berzin, S. C., Singer, J., & Chan, C. (2015). *Practice innovation through technology in the digital age: A grand challenge for social work*. Paper No. 12. Columbia, SC: American Academy of Social Work and Social Welfare.

Best, P., Manktelow, R., & Taylor, B. J. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, *41*, 27–36.

Best, P., Manktelow, R., & Taylor, B. J. (2016). Social work and social media: Online help-seeking and the mental well-being of adolescent males. *British Journal of Social*, *46*(1), 257–276.

Bielskis, A. A., Andziulis, A., Ramasauskas, O., Guseinoviene, E., Dzemydiene, D., & Gricius, G. (2011). Multi-agent based e-social care support system for inhabitancies of a smart eco-social apartment. *Elektronika Ir Elektrotechnika*, *1*(107), 11.

Blackburn, S., Brownsell, S., & Hawley, M. S. (2011). A systematic review of digital interactive television systems and their applications in the health and social care fields. *Journal of Telemedicine and Telecare*, *17*(4), 176.

Blanco, A. P. (2016). Buenas prácticas del proyecto piloto enred@te: Red social digital para personas mayores y voluntariado de la cruz roja española. *Cuadernos de Trabajo Social*, *29*(2), 201.

Brady, S. R., Sawyer, J. M., & Crawford Herrera, S. (2016). Preparing social work students to practice in diverse communities through difficult digital dialogues. *Journal of Technology in Human Services*, *34*(4), 376–393.

Brooks, D., Maarsen, S., & Holten, J. (2013). Globalization, social media and social justice: Implications for social work educators, researchers and practitioners. In L. G. Chova, A. L. Martinez and I. C. Torres (Eds.), *Edulearn13: 5th international conference on education and new learning technologies* (p. 4815). Valenica: IATED – International Academy of Technology, Education and Development.

Brownlee, K., Graham, J. R., Doucette, E., Hotson, N., & Halverson, G. (2010). Have communication technologies influenced rural social work practice? *The British Journal of Social Work*, *40*(2), 622–637.

Bullock, A. N., & Kolbin, A. D. (2015). Communication technology integration into social work practice. *Advances in Social Work*, *16*(1), (Spring 2015) 1–14.

Canadian Association of Social Workers, (CASW). (2005). *Code of ethics*. Canada: Elsevier Inc. doi:10.1016/S0840-4704(10)60064-6

Castells, M. (1995). La ciudad informacional: Tecnologías de la información, reestructuración económica y el proceso urbano-regional Alianza Editorial.

Castells, M. (1997). La era de la información: economía, sociedad y cultura Alianza Editorial.

Castells, M. (2010). *The rise of the network society* (2nd ed., with a new pref. ed.). Chichester: Wiley-Blackwell.

Chan, C. (2016a). A scoping review of social media use in social work practice. *Journal of Evidence-Informed Social Work*, *13*(3), 263–276.

Chan, C. (2016b). ICT-supported social work interventions with youth: A critical review. *Journal of Social Work*, doi:10.1177/1468017316651997.

Chan, C., & Holosko, M. J. (2017). The utilization of social media for youth outreach engagement: A case study. *Qualitative Social Work*, *16*(5), 680–697.

Chandran, D. (2016). Social media and HIV/AIDS: Implications for social work education. *Journal Social Work Education*, *35*(3), 343.

Chang, B. L., Bakken, S., Brown, S. S., & Houston, T. K. (2004). Bridging the digital divide: Reaching vulnerable populations. *Journal of the American Medical Informatics Association*, *11*(6), 448–457.

Coleman, N. (2011). *E-social work: A preliminary examination of social services contact centres*.

Cooner, T. S. (2014). Using facebook to explore boundary issues for social workers in a networked society: Students' perceptions of learning. *British Journal of Social Work*, *44*(4), 1063–1080.

Craig, S. L., & Calleja Lorenzo, M. V. (2014). Can information and communication technologies support patient engagement? A review of opportunities and challenges in health social work. *Social Work in Health Care*, *53*(9), 845–864.

Degryse, C. (2016). *Digitalisation of the economy and its impact on labour markets. ETUI*, Brussels.

Del Fresno, M., & López Peláez, A. (2013). Trabajo social, nuevas tecnologías y redes sociales: Nuevas herramientas para la práctica profesional en el siglo XXI. *Servicios Sociales Y Política Social (Ejemplar Dedicado a: XII Congreso Estatal Del Trabajo Social), N. Extra*, *104*, 31–39.

Dombo, E. A., Kays, L., & Weller, K. (2014). Clinical social work practice and technology: Personal, practical, regulatory, and ethical considerations for the twenty-first century. *Social Work in Health Care*, *53*(9), 900–919.

Duncan-Daston, R., Hunter-Sloan, M., & Fullmer, E. (2013). Considering the ethical implications of social media in social work education. *Ethics and Information Technology*, *15*(1), 35–43.

Fang, L., Mishna, F., Zhang, V. F., Van Wert, M., & Bogo, M. (2014). Social media and social work education: Understanding and dealing with the new digital world. *Social Work in Health Care*, *53*(9), 800–814.

Fernández-Pacheco, J. L., & Arriazu, R. (2014). Diagnóstico e intervención 2.0: Posibilidades de la metodología online en trabajo social. *Teknokultura*, *11*(1), 39–70.

Franklin, C., & Tripodi, S. (2009). A meta-analysis of published school social work practice studies. *Research on Social Work Practice*, *19*(6), 667–677. doi:10.1177/1049731508330224

Franklin, P., Hossain, R., & Coren, E. (2016). Social media and young people's involvement in social work education. *Journal Social Work Education*, *35*(3), 344–356.

Freddolino, P. P., & Blaschke, C. M. (2008). Therapeutic applications of online gaming. *Journal of Technology in Human Services*, *26*(2–4), 423–446.

Giffords, B. (2007). Networked trade: Web 2.0 technology, as much as new regulation, has spurred the fragmentation of markets. *Financial World-London Then Canterbury-Chartered Institute of Bankers Then Institute of Financial Management*, *50*(G), 43.

Giffords, E. D. (2009). The internet and social work: The next generation. *Families in Society: The Journal of Contemporary Social Services*, *90*(4), 413–418.

Gillingham, P. (2016). Technology configuring the user: Implications for the redesign of electronic information systems in social work. *British Journal of Social Work*, *46*(2), 323–338.

Goldkind, L., & Wolf, L. (2015). A digital environment approach: Four technologies that will disrupt social work practice. *Social Work*, *60*(1), 85–87.

Groshong, L., & Phillips, D. (2015). The impact of electronic communication on confidentiality in clinical social work practice. *Clinical Social Work Journal*, *43*(2), 142–150. doi:10.1007/s10615-015-0527-4

Hasan, H., & Linger, H. (2016). Enhancing the wellbeing of the elderly: Social use of digital technologies in aged care. *Educational Gerontology*, *42*(11), 749–757.

Hick, S. (2006). Technology, social inclusion and poverty: An exploratory investigation of a community technology center. *Journal of Technology in Human Services*, *24*(1), 53–67.

Hitchcock, L. I., & Battista, A. (2013). Social media for professional practice: Integrating twitter with social work pedagogy. *The Journal of Baccalaureate Social Work*, *18*, 33–45.

Holden, G., Barker, K., Rosenberg, G., & Cohen, J. (2012). Information for clinical social work practice: A potential solution. *Clinical Social Work Journal*, *40*(2), 166–174.

Humphries, P., & Camilleri, P. (2002). Social work and technology: Challenges for social workers in practice: A case study. *Australian Social Work*, *55*(4), 251–259.

Ienca, M., Jotterand, F., Vică, C., & Elger, B. (2016). Social and assistive robotics in dementia care: Ethical recommendations for research and practice. *International Journal of Social Robotics*, *8*(4), 565–573.
Ishizuki, T., & Cotter, J. (2009). Social workers' use of the internet and E-mail to help clients in virginia. *Journal of Technology in Human Services*, *27*(2), 127–140.
Johnston-Goodstar, K., Richards-Schuster, K., & Sethi, J. K. (2014). Exploring critical youth media practice: Connections and contributions for social work. *Social Work*, *59*(4), 339–346.
Jorgensen, J. (2013). Digital welfare for the third age: Health and social care informatics for older people. *Information Society*, *29*(4), 248–249.
Karpman, H. E., & Drisk, J. (2016). Social media policy in social work education: A review and recommendations. *Journal of Social Work Education*, *52*(4), 398–408.
Kimball, E., & Ki, J. (2013). Virtual boundaries: Ethical considerations for use of social media in social work. *Social Work*, *58*(2), 185–188.
Knowles, A. J., & Cooner, T. S. (2016). International collaborative learning using social media to learn about social work ethics and social media. *Journal Social Work Education*, *35*(3), 260–270.
LaMendola, W. (2010). Social work and social presence in an online world. *Journal of Technology in Human Services*, *28*(1–2), 108–119.
Laracuente, M. S. (2012). Integrating clinical video vignettes and the electronic discussion board into a social work practice course: Bringing the practice experience to life for students in and out of the classroom. *Edulearn12: 4th International Conference on Education and New Learning Technologies*.
Lenette, C., Cox, L., & Brough, M. (2015). Digital storytelling as a social work tool: Learning from ethnographic research with women from refugee backgrounds. *British Journal of Social Work*, *45*(3), 988–1005.
Lomax, R., & Nix, I. (2015). *Social media and social work students: The boundaries just got more complicated. Joint social work education conference (JSWEC 2015).* Milton Keynes: The Open University.
López, A. (2014). Social work, technology, and ethical practices: A review and evaluation of the national association of social workers' technology standards. *Social Work in Health Care*, *53*(9), 815–833.
López Peláez, A., & Díaz, H. L. (2015). Social work challenges in the XXI century: Citizenship, technology and E-social work. In A. López Peláez (Ed.), *Social work challenges in the XXI century: Perspectives from the USA* (pp. 29–55). Pamplona: Thomson-Reuters Aranzadi.
Lundahl, B., & Yaffe, J. (2007). Use of meta-analysis in social work and allied disciplines. *Journal of Social Service Research*, *33*(3), 1–11.
Marcuello-Servós, C. (2010, July 11–17). *Digital generations, soft societies?* Presented at Session 11: Understanding cyberspace and the internet. Sociocybernetics on the move, research committee on Sociocybernetics, RC51 XVII World Congress of Sociology, Sociology on the move, Gothenburg, Sweden.
Martinez-Brawley, E. (2016). Questioning. the Merits and Demerits of Electronic Communication in Social Work. *Cuadernos De Trabajo Social*, *29*(2), 173–183.
Martínez, M. A., Herrera, M., Contreras, E., Ruiz, A., & Herrera-Viedma, E. (2015). Characterizing highly cited papers in social work through H-classics. *Scientometrics*, *102*(2), 1713–1729.
Menon, G. M., & Miller-Cribbs, J. (2002). Online social work practice: Issues and guidelines for the profession. *Advances in Social Work*, *3*(2), 104–116.
Miles, B. W. (2006). Moving out of the dark ages: An argument for the use of digital video in social work research. *Journal of Technology in Human Services*, *24*(2–3), 181–196.
Mishna, F., Bogo, M., Root, J., Sawyer, J. L., & Khoury-Kassabri, M. (2012). 'It just crept in': The digital age and implications for social work practice. *Clinical Social Work Journal*, *40*(3), 277–286.
Mohr, D. C., Burns, M. N., Schueller, S. M., Clarke, G., & Klinkman, M. (2013). Behavioral intervention technologies: Evidence review and recommendations for future research in mental health. *General Hospital Psychiatry*, *35*(4), 332–338.
Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A new dimension of health care: Systematic review of the uses, benefits, and limitations of social media for health communication. *Journal of Medical Internet Research*, *15*(4), e85.
Naccarato, T. (2010). Child welfare informatics: A proposed subspecialty for social work. *Children and Youth Services Review*, *32*(12), 1729–1734.
OCEBM Levels of Evidence Working Group*. (2011). *The Oxford levels of evidence 2*. Oxford Centre for Evidence-based Medicine. Retrieved from http://www.cebm.net/index.aspx?o=5653
Parker-Oliver, D., & Demiris, G. (2006). Social work informatics: A new specialty. *Social Work*, *51*(2), 127–134.
Parrott, L., & Madoc-Jones, I. (2008). Reclaiming information and communication technologies for empowering social work practice. *Journal of Social Work*, *8*(2), 181–197.
Parton, N. (2008). Changes in the form of knowledge in social work: From the 'social' to the 'informational'? *British Journal of Social Work*, *38*, 253–269.
Pérez-Lagares, M., Sarasola Sánchez-Serrano, J. L., & Balboa-Carmona, M. (2012). Trabajo social y nuevas tecnologías [Social work and new technologies]. *Portularia*, *12*(Addenda), 57–60.
Perron, B. E., Taylor, H. O., Glass, J., & Margerum-Leys, J. (2010). Information and communication technologies in social work. *Advances in Social Work*, *11*(1), 67–81.

Ramsey, A. T., & Montgomery, K. (2014). Technology-based interventions in social work practice: A systematic review of mental health interventions. *Social Work in Health Care*, *53*(9), 883–899.
Rasmussen, B. (2015). Sue watling and Jim rogers: Social work in a digital society. *Clinical Social Work Journal*, *43*(2), 254–255.
Reamer, F. G. (2013). Social work in a digital age: Ethical and risk management challenges. *Social Work*, *58*(2), 163–172.
Reamer, F. G. (2015). Clinical social work in a digital environment: Ethical and risk-management challenges. *Clinical Social Work Journal*, *43*(2), 120–132.
Reardon, C. (2011). Building a practice in a digital world. *Social Work Today*, *11*(3), 10.
Robbins, S. P., & Singer, J. B. (2014). The medium is the message: Integrating social media and social work education. *Journal of Social Work Education*, *50*(3), 387–390.
Santás García, I, J. (2016). Proyecto de apropiación de las TIC en servicios sociales de atención social primera del ayuntamiento de Madrid. *Cuadernos De Trabajo Social*, *29*(2), 213–223.
Santhiveeran, J. (2009). Compliance of social work e-therapy websites to the NASW code of ethics. *Social Work in Health Care*, *48*(1), 1–13.
Shawna, J. L., & Walsh, T. B. (2015). Using technology in social work practice: The mDad (mobile device assisted dad) case study. *Advances in Social Work*, *16*(1), 107–124.
Simpson, J. E. (2016). A divergence of opinion: How those involved in child and family social work are responding to the challenges of the internet and social media. *Child & Family Social Work*, *21*(1), 94–102.
Sitter, K. C., & Curnew, A. H. (2016). The application of social media in social work community practice. *Journal Social Work Education*, *35*(3), 271–283.
Stanfield, D., & Beddoe, L. (2016). Social work and social media in aotearoa New Zealand: Educating social workers across shifting boundaries of social work identity. *Journal Social Work Education*, *35*(3), 284–296.
Steyaert, J., & Gould, N. (2009). Social work and the changing face of the digital divide. *British Journal of Social Work*, *39*(4), 740–753.
Torres-Albero C., Robles J. M., & De Marco S. (2014). Inequalities in the information and knowledge society: From the digital divide to digital inequality. In: A. López Peláez (Eds.), *The robotics divide*. London: Springer.
Turner, D. (2016). Only connect': Unifying the social in social work and social media. *Journal of Social Work Practice*, *30*(3), 313–327.
Turner, D., Bennison, G., Megele, C., & Fenge, L. A. (2016). Social work and social media: Best friends or natural enemies? *Journal Social Work Education*, *35*(3), 241–244.
Voshel, E. H., & Wesala, A. (2015). Social media & social work ethics: Determining best practices in an ambiguous reality. *Journal of Social Work Values and Ethics*, *12*(1), 67–76.
Waldman, J., & Rafferty, J. (2006). Evidence from virtual social work practice. *Journal of Evidence-based Social Work*, *3*(3–4), 127–148.
Warf, B. (2017). *Handbook on geographies of technology*. Northampton, MA: Edward Elgar.
West, D. (2003). Is computer access enough? A multilevel analysis of the barriers to engagement. *Southern Review: Communication, Politics and Culture, Special Issue: Wired Communities: Information Policy at the Local and Regional Level*, *36*(1), 22–33.
West, D., & Heath, D. (2011). Theoretical pathways to the future: Globalization, ICT and social work theory and practice. *Journal of Social Work*, *11*(2), 209–221.
Youn, E. (2007). The relationship between technology content in a masters of social work curriculum and technology use in social work practice: A qualitative research study. *Journal of Technology in Human Services*, *25*(1–2), 45–58.
Zorn, T. E., Flanagin, A. J., & Shoham, M. D. (2011). Institutional and noninstitutional influences on information and communication technology adoption and use among nonprofit organizations. *Human Communication Research*, *37*(1), 1–33.
Zysman, J., & Newman, A. (2006). *How revolutionary was the digital revolution?* Stanford, CA: Stanford University Press.