A REVIEW AND CONTENT ANALYSIS OF THE TURKISH ONLINE JOURNAL OF DISTANCE EDUCATION PUBLICATIONS BETWEEN 2000 AND 2015

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Abstract

This paper presents a review of distance education literature published in the Turkish Online Journal of Distance Education (TOJDE) to describe the status thereof and to identify gaps and priority areas in distance education research based on a validated classification of research areas. The articles (N = 784) published between 2000 and 2015 were reviewed for this study. Findings indicated that issues related to educational technology are a popular research area in articles published in TOJDE. Nearly all the articles are theoretical/descriptive, quantitative, or qualitative in nature. According to publication and authorship patterns, TOJDE is an international journal with a special ability to reflect developments in its near region in the field of distance education.

Introduction

In any discipline, to understand the past and the present, as well as to achieve success in the future it is necessary to benefit from what has already been experienced. Within this perspective, it is of the utmost importance to define research areas of distance education and fill in these areas with scholarly experience and research-based evidence. In this regard, this paper addresses questions in the following areas with a special emphasis on Turkish distance education research:

- Distribution of research areas;
- Analysis of research methods;
- Geographical distribution;
- Gender and research methods.

Literature Review

Two other articles have analysed the research trends in TOJDE, in a way that is similar to the aim of this article. The overall objective of those studies was to identify the research trends in TOJDE over a specific time period. Latchem (2009) conducted a content analysis of the Notes for Editors and articles published in the journals issued between 2000 and 2008. The analysis involved determining the articles' countries of origin, sectors represented, and focus and frequency of the topics covered. It was reported that the majority of articles were from Asian countries, with Turkey providing the greatest number of contributions. There were also many papers from the Middle East, Africa, South America, USA, Eastern and Western Europe, and Australia. According to Latchem, some of the papers, presenting non-Western perspectives, are particularly illuminating. The earlier articles tended to be descriptive or theoretical, but the latter papers were quantitative-experimental and qualitative-descriptive studies into distance education and e-learning needs, policies, procedures, practices and outcomes. Özarslan, Balaban-Sali, and Demiray (2012) analysed the articles in TOJDE published between 2000 and 2010 by focusing on research topics, methods, instruments, statistical methods, author numbers and their institutional affiliation. They reported that single-author articles constitute the largest proportion of TOJDE. It was also indicated that Turkey, USA, India, Nigeria, Malaysia, Pakistan, Australia, Canada, UK, Bangladesh, Greece, and Iran, respectively, are the chief contributors to TOJDE. In addition, the researchers identified 17 research topics in TOJDE. Accordingly, (a) Learner and instructor experiences in online learning environment; (b) information about the system and program; (c) economic, social and cultural dimension of distance education, and (d) pedagogical, political, philosophical, legal, ethical reflections in distance education are top four research topics in TOJDE. In terms of method, it was found that the quantitative studies far outweighed the qualitative and mixed studies. Bozkurt, Zawacki-Richter, and Aydin (2019) conducted social network analysis to identify keyword patterns and found that TOJDE largely focused on technology-related issues.

In addition to attempts to identify research trends in TOJDE, the following studies included TOJDE into their research within different perspectives. For instance, Zawacki-Richter, Anderson, and Tuncay (2010) investigated impact of 12 distance education journals (6 open and 6 published in closed format by commercial publishers). The impact and perceived value of the journals was identified through citation analysis of the published issues from 2003 to 2008, and with a survey with the editors of the journals. They found that articles in open access journals, such as TOJDE, are cited more quickly than in closed format journals. They also reported that both open and closed journals are not significantly different in terms of prestige. Zawacki-Richter and Anderson (2011) analysed

the relationships and influences in peer reviewed distance education journals using social network analysis and multidimensional scaling. With this aim, they sampled 1416 scholarly articles published from 2003 to 2008. They used journals as nodes and citations patterns as relationships. In their research, they found that TOJDE is one of the journals in the core of the citation network. This finding was confirmed in a study by Perkins and Lowenthal (2015) who examined open access journals in educational technology through a survey among more than 300 educational technology academics. The reported that TOJDE is one of the most influential open access journals.

Methodology

This study is a literature review that intends to reach a synthesis by examining articles published in TOJDE. For this purpose, review study benefits from traditional content analysis (Wilson, 2011). This research adopts a quantitative approach, which mostly relies on counting, to identify research themes in articles published in TOJDE. For this study, all the articles published in TOJDE between 2000 and 2015 were reviewed (N = 784). Book reviews and editorial notes were excluded from the sample.

Results and Discussion

Distribution of research areas

The classification of research areas for this review is based on the framework developed by Zawacki-Richter (2009). When examined, it can be seen that educational technology (23.72%) is the most studied research area. Learner characteristics (16.84%), theories and models (9.44%), professional development and faculty support (7.02%), instructional design (6.51%), and research methods in distance education and knowledge transfer (6.51%) are, respectively, the most studied research areas in TOJDE (Table 1).

Table 3:   Distribution of Research areas

	AREAS	2000-2003	2004-2007	2008-2011	2012-2015	TREND	2000-2015 COUNT	2000-2015 PERCENTAGE
Macro	1-Access, equity and ethics	1	4	11	14		30	3,83
	2-Globalisation of education and cross-cultural asp	3	5	4	5		17	2,17
	3-Distance teaching systems and institutions	8	23	10	9		50	6,38
	4-Theories and models	7	24	11	32		74	9,44
	5-Research methods in distance education and kno	4	7	19	21		51	6,51
Meso	6-Management and organisation	4	9	7	8		28	3,57
	7-Costs and benefits	0	5	4	1		10	1,28
	8-Educational technology	18	31	75	62		186	23,72
	9-Innovation and change	2	2	4	9		17	2,17
	10-Professional development and faculty support	1	10	20	24		55	7,02
	11-Learner support services	1	6	7	5		19	2,42
	12-Quality assurance	2	6	5	8		21	2,68
Micro	13-Instructional design	5	15	9	22		51	6,51
	14-Interaction and communication in learning comm	2	8	16	17		43	5,48
	15-Learner characteristics	10	23	31	68		132	16,84
	PERCENTAGE	8,67%	22,70%	29,72%	38,90%	100%	784	100,00
	TOTAL (BY PERIODS)	68	178	233	305	784		

Zawacki-Richter, Bäcker, and Vogt (2009) reported that articles published in prominent DE journals between 2000-2008 demonstrated that interaction and communication in learning communities (17.6%), instructional design (17.4%), learner characteristics (16.3%), distance teaching systems and institutions (8.9%) and educational technology (6.9%) were mostly employed in research areas. In a follow-up study, Bozkurt et al. (2015) found that articles in DE journals published between 2009-2013 indicated that educational technology (15%), interaction and communication in learning communities (13%), learner characteristics (12%), instructional design (11%), and distance teaching systems and institutions (8%). The increasing trend of "educational technology" as reported by Zawacki-Richter et al. (2009) and Bozkurt et al. (2015) is confirmed by the findings of the current research (see Table 1). Bozkurt et al. (2015) highlights that DE is strongly related to technological developments and reacts swiftly to these developments.

Analysis of research methods

This research adopted the schema of research methods proposed by Bozkurt, Akgün-Özbek, and Zawacki-Richter (2017). Research methods and models/designs are coded according to quantitative, qualitative, mixed/triangulation, conceptual/descriptive/other, practice based, and data mining and analytics paradigms. Accordingly, researchers mainly preferred theoretical/ descriptive (40.43%), quantitative (39.92%), qualitative (15.43%), mixed/ triangulation (3.7%) and practice-based (0.51%) methodologies. There was no research from the emerging research paradigm of data mining and analytics. Of all the research models and designs, literature reviews and reports in theoretical/descriptive; surveys, correlational and experimental research in quantitative; descriptive studies and case studies in qualitative; explanatory design in mixed methodology, and finally action research in practice-based research methodologies are mostly used (Table 2).

Table 2:   Trends in research method and model/design

Method	Model/Design	F	Within Method %	Total %
Conceptual/Descriptive/Other 40,43% (n=317)	Literature Reviews	246	77,6	31,38
	Reports	67	21,14	8,55
	Technical Paper	4	1,26	0,51
	Comparative	0	0	0
	Field Notes	0	0	0
	Opinion Paper	0	0	0
	Position Paper	0	0	0
	Reflection Paper	0	0	0
	Systematic Review	0	0	0
Quantitative 39,92% (n=313)	Survey	191	61,02	24,36
	Correlational	74	23,64	9,44
	Experimental	37	11,82	4,72
	Casual comparative	3	0,96	0,38
	Meta-Analysis	1	0,32	0,13
Qualitative 15,43% (n=121)	Descriptive	66	54,55	8,42
	Case Study	29	23,97	3,7
	Content Analysis	18	14,88	2,3
	Phenemology	4	3,31	0,51
	Delphi	2	1,65	0,26
	Ethnography	2	1,65	0,26
	Grounded Theory	2	1,65	0,26
	Narrative	2	1,65	0,26
	Discourse Analysis	1	0,83	0,13
	Naturalistic Inquiry	1	0,83	0,13
	Historical	0	0	0
	Heuristic	0	0	0
	Meta-Synthesis	0	0	0
Mixed 3,70% (n=29)	Explanatory	15	51,72	1,91
	Exploratory	9	31,03	1,15
	Convergent	6	20,69	0,77
	Embedded	0	0	0
	Transformative	0	0	0
	Multiphase	0	0	0
Practice-Based 0,51% (n=4)	Action Research	3	75	0,38
	Design-Based Research	1	25	0,13
Data mining and analytics 0% (n=0)	Learning Analytics	0	0	0
	Social Network Analysis	0	0	0
	Text Mining	0	0	0
	Log Analysis	0	0	0
	Internet and Traffic Ranks	0	0	0
	Sentiment Analysis	0	0	0

Similarly, Berge and Mrozowski (2001), who examined research trends in distance education between 1990 and 1999, reported that of all the articles examined, 74.83% was descriptive studies. Zawacki-Richter et al. (2017), who examined articles published in IRRODL between 2000 and 2015, also reported that 44.5% of all articles were theoretical/descriptive studies. The majority of theoretical/descriptive studies something expected in distance education journals. The rationale behind this scene might be the nature of the field. Accordingly, distance education is an interdisciplinary and pragmatist field, which frequently benefits from innovative technologies and other developments in educational sphere. Therefore, theoretical/descriptive papers can be considered as the first phase to understand innovative technologies and developments in education field. As indicated in many reports, distance education and educational technology are exposed to constant changes and these types of papers can be considered a natural, expected phase for the adaptation of the field.

Geographic distribution

For the analysis of geographical, countrywise distribution of the articles, countries of the first author were included in the analysis. Of all the 784 articles came from 67 different countries (Table 3), almost one third of the articles came from Turkey. India, the USA, Malaysia and Pakistan comprised the countries from where the majority of the articles originated (Table 3).

Table 3: Distribution of articles by country

R	Country	F	%	R	Country	F	%	R	Country	F	%
1	Turkey	250	31,89	18	Romania	4	0,51	21	BH	1	0,13
2	India	72	9,18	18	Russia	4	0,51	21	Botswana	1	0,13
3	USA	61	7,78	19	Argentina	3	0,38	21	CI	1	0,13
4	Malaysia	50	6,38	19	Bahrain	3	0,38	21	China	1	0,13
5	Pakistan	38	4,85	19	Ethiopia	3	0,38	21	Eritrea	1	0,13
6	Nigeria	36	4,59	19	Finland	3	0,38	21	Guyan	1	0,13
7	Iran	25	3,19	19	Israel	3	0,38	21	Lesotho	1	0,13
8	Greece	24	3,06	19	Jordan	3	0,38	21	Mauritius	1	0,13
9	Bangladesh	23	2,93	19	Norway	3	0,38	21	Mexico	1	0,13
10	Australia	20	2,55	20	Austria	2	0,26	21	Moldova	1	0,13
11	UK	19	2,42	20	Barbados	2	0,26	21	Morocco	1	0,13
12	Canada	15	1,91	20	Brunei	2	0,26	21	Netherlands	1	0,13
13	Thailand	11	1,40	20	Colombia	2	0,26	21	Serbia	1	0,13
14	Indonesia	10	1,28	20	France	2	0,26	21	Slovenia	1	0,13
14	Zimbabwe	10	1,28	20	Italy	2	0,26	21	Spain	1	0,13
15	Saudi Arabia	9	1,15	20	Lithuania	2	0,26	21	Swaziland	1	0,13
16	Brazil	8	1,02	20	Oman	2	0,26	21	Switzerland	1	0,13
17	Egypt	5	0,64	20	South Korea	2	0,26	21	Syria	1	0,13
17	Ghana	5	0,64	20	Sri Lanka	2	0,26	21	Taiwan	1	0,13
17	South Africa	5	0,64	20	Tanzania	2	0,26	21	Uganda	1	0,13
18	Cyprus	4	0,51	20	UAE	2	0,26	21	Ukraine	1	0,13
18	Germany	4	0,51	21	Algeria	1	0,13				
18	Philippines	4	0,51	21	Belgium	1	0,13				

USA: United States of America; UK: United Kingdom; UAE: United Arab Emirates; BH: Bosnia and Herzegovina; CI:Cayman Islands.

*only the country of the first author was taken into consideration

First, these findings indicate that TOJDE is an international distance education journal. Secondly, TOJDE is a regional voice of the Asian continent. As was seen in Table 3, a great majority of the articles were published from countries such as India, Malaysia, Pakistan and Iran where distance education programs are part of mainstream education. Finally, to identify the geographical distribution patterns is important as it can be considered an indicator of the research productivity of individual countries or regions. Such analysis could be very helpful for identifying gaps and priorities in research based on the current status of distance education in specific regions.

Gender and research methods

According to gender analysis and the methods used, it could be seen that 481 (61.4%) of the first authors were male, 302 (38.5%) were female and 1 (0.1%) was institutional. In

terms of the frequency of the publications, it can be seen that the male researchers showed much more interest than the female researchers (Table 4). The same patterns were also observed by Zawacki-Richter and von Prümmer (2010) who examined articles published in five distance education journals between 2000 and 2008 (Male: 55.4%, Female: 44.6%), and Zawacki-Richter et al. (2017) who examined articles published in IRRODL between 2000 and 2015 (Male: 55.9%, Female: 44.1%).

In the related literature, it was reported that there was a relationship between gender and the preferred research paradigm (Carlson, 1972; Grant, Ward, & Rong, 1987), however some others claimed that there is no such relationship (Goldenberg & Grigel, 1991). Mishra (1997), Zawacki-Richter et al. (2009), and Zawacki-Richter and von Prümmer (2010) further highlighted the relationship between gender and research paradigms in distance education. In order to explore if there is an association between gender type and research paradigm in the sampled articles published in TOJDE, we conducted a chi-square analysis. In order to do this, one paper, which was written by an institute, was omitted from the sample. Data mining and analytics was not counted in by the statistical software because it had a 0 value. Accordingly, in a 5 x 2 table, there was no significant association between gender and the preferred research paradigm $\chi^2 (4) = 4.9$, $p > .05$.

Table 4: Cross tabulation of gender (first author) and research paradigms

Method			Male	Female	Inst.	Total
Quantitative		Count	180	132	1	313
		% within method	57,5	42,2	0,3	100,0
Qualitative		Count	75	46	0	121
		% within method	62,0	38,0	0	100
Mixed/Triangulation		Count	16	13	0	29
		% within method	55,2	44,8	0	100
Conceptual/Descriptive/Other		Count	208	109	0	317
		% within method	65,6	44,8	0	0
Practice based		Count	2	2	0	4
		% within method	50	50	0	100
Data mining and analytics		Count	0	0	0	0
		% within method	0	0	0	0
Total		Count	481	302	1	
		% of total	61,4%	38,5%	0,1%	

Conclusions

The current findings indicated that of all the 15 research areas, educational technology (23.72%) is the most studied research area. Learner characteristics (16.84%), and theories and models (9.44%) are the other most studied research areas. It is also salient that these research areas comprise 50% of all the research areas. In terms of the research methods and models/designs, theoretical/descriptive (40.43%), quantitative (39.92%), and qualitative (15.43%) research paradigms, all of which constitute 95.78% of the research

methods mostly used in articles published in TOJDE. Mixed/triangulation, practice-based, and data mining and analytics were the least preferred research paradigms. Among the many research models/designs, literature reviews (31.38%), and survey studies (24.36%) constituted 56.16% of all research models/designs. Furthermore, it was also seen that the 784 articles originated from 67 countries, which means that TOJDE published articles from nearly one third of the world's nations. It was also seen that TOJDE, as an international open access journal, is the representative of its own region, mostly developing countries, and is also representative of many other countries, which makes it an important publication venue. The analysis on the relationship between gender and research methods was found not to be statistically significant, yet it was also seen that male researchers published more articles than female researchers did.

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