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Full Length Research Paper

An analysis of articles about Turkish primary and secondary school curriculum changes between 2005-2013

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This study examined the articles about primary and secondary curriculum changes in Turkey, published between 2005-2013 Turkish education journals indexed in SSCI and National Academic Network Information Center (ULAKBIM) databases. Its purpose was to determine the tendencies regarding the following characteristics of the studies: distribution across different journals, year of publication, language of publication, the discipline the study engages, the level of education investigated, the research methods used, the nature of sampling utilized and the contents of studies. It used targeted sampling to select 362 studies and did a content-analysis on them using a classification form. The findings, which are presented in frequency and percentage tables, were as follows: The highest number of articles about education programs was published in 2011. The use of qualitative methods was more frequent and the number of articles investigating more than one dimension of the studied programs was higher than the others. The single data collection was utilized more often and teachers were sampled more frequently. Finally, random sampling was the most common sampling method.

Key words: curriculum, articles, curriculum research, analysis, educational journals.

INTRODUCTION

Turkish Ministry of National Education (MNE) has been implementing fundamental changes in primary and secondary education since 2004, with a view to modernize and reorient primary and secondary education in the light of emerging concepts of information and information age, as well as the development of a perspective of life-long education. These changes were comprehensive; they transformed not only the components of the core curriculum such as Mathematics, Science and Technology, and Turkish, but also other

courses such as Information Technologies, English and Music. MNE (2005) explains at least some of the projected differences between the old programs and the new ones as follows: (a) The paradigm of education has moved away from a behaviorist approach towards a learning approach based on cognitive and structural elements. (b) Engaging subjects with reference to higher orders objectives as the grades progress affecting a spiral structure has been made a priority. (c) Alternative evaluation methods based on constructivism learning

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theory were also introduced. (d) The emphasis has been shifted away memorization, and the goals of instruction have been reconceived with an eye on making classes enjoyable, practical, informative and skill-developmentoriented. (e) A large part of instruction time has been reserved for student activities where teachers are expected to play primarily a supervisory role, instead of direct instruction. (f) "Behavior" was replaced by "expectations," which is understood as an umbrella term signifying acquired knowledge, skill, comprehension and attitude. (g) With the addition of various activities, curricula have been reoriented towards a studentcentered approach. (h) Furthermore, an evaluation approach, which takes into account not only the outcome but also the process that led to the outcome, has been adopted. The pilot study for these new changes was conducted in 2004-2005 academic year in 120 pilot schools in 9 provinces across Turkey. However, nationwide implementation followed the very next year and before the results of the pilot study (Umay et al., 2006) became available. Later curricula were revisited several times and some changes made, yet curricula core philosophy remained the same.

The process of program development does not end with the drafting of a curriculum and textbooks; it in fact continues even in the classroom (Remillard, 1999). Critical evaluation of the efficacy of curricula is vital for developing them further (Demirel, 1997; Gözütok, 2003). One might say that evaluating learning outcomes will be incomplete without first determining curriculum's implementation level, and concluding examination of the process change and teachers' approaches to the curriculum practices. Before a new program can be implemented, it needs to be subjected to a number of tests and a detailed analysis (Jacob and Frid, 1997). However, problems with curriculum assessment are not uncommon in Turkey (Karakuş and Mengi, 2014). Since changes made in the curricula entail significant differences for schools and especially for teachers, it is essential that the changes are embraced by teachers and all stakeholders. Failure of ensuring such an embrace would lead only to waste of time, money, and efforts (Bümen et al., 2014). Fullan and Pomfret (1997) suggest that the following aspects are highly crucial for affecting implementation: whether changes are clear for those who implement the program; whether teachers are eager and qualified to implement the changes; and whether schools available and equipped in terms of resources and organizational structure to implement the changes. In this regard, effective evaluation of curricula that is or will be implemented calls for effective scientific research. Numerous studies were conducted since 2005 to investigate the in-class activities provisioned by curricula and the differing perspectives held by teachers, students, administrators and inspectors. It is imperative to carry out regular analyses of these studies in order to determine which curricula they investigate, what and which periods

they focus on, who or what they sample, how they are done and what their findings are. Such analyses would constitute important contributions to the literature especially in determining the effects of the supposed reforms of 2004, and the new curricula they created. Moreover, such analyses would facilitate further research in the field by helping program development experts and active researchers see their way through the large volume of published studies. After all, researchers typically either have limited access to the literature in their area or have to make a significant time investment to access all the studies that might be relevant to their research (Göktaş et al., 2012a). In this regard, contentand meta-analyses make the lives of researchers significantly easier. It is not surprising that such analyses should gather much attention (Lubiensky and Bowen, 2000; Sözbilir and Canpolat, 2006; Çalık et al., 2008; Sözbilir and Kutu, 2008; Ulutaş and Ubuz, 2008; Uzunbovlu and Özcınar. 2009: Karadağ. 2009: Lee et al... 2009; Sert, 2010; Çiltaş, 2012; Sözbilir et al., 2012; Kablan et al., 2013; Sözbilir et al., 2013; Wang and Burton, 2013; Çalık and Sözbilir, 2014; Ma et al., 2014; Shintani and Wallace; 2014; Selçuk et al., 2014).

A review of the literature reveals a number of content analyses on education and instruction programs (Cansız-Aktaş, 2013; Hazır-Bıkmaz et al., 2013; Kazu and Aslan, 2013; Çakıcı and Ilgaz, 2011; Kablan, 2011). One can summarize the objectives and significant conclusions of these analyses regarding the assessment of programs as follows: Cakici and Ilgaz (2011) analyzed the dissertations regarding the Science and Technology program put in place from 2004-2005 on. The analysis reviewed 35 master's theses and 1 Ph.D. dissertation completed in the period of 2005-2010. The theses were found to focus mostly on the 4th and 5th grades of primary education. Studies based on a survey model constituted the vast majority (94.4%) of the studies analyzed. In terms of approach, quantitative research was found to greatly outnumber qualitative ones. A review of the dissertation topics revealed a focus on the teachers' opinions.

Another analysis carried out by Kablan (2011) involves a review of the primary school mathematics curriculum. The analysis investigated, with reference to certain variables, the research on the evaluation of the primary school mathematics instruction program implemented within the framework of national education system of Turkey from 2004-2005 on. A significant number of the 53 studies which intended to delve into the primary school mathematics instruction program were found to be master's theses. In a similar vein, the majority of the research was found to be carried out using general survey model, employing quantitative methods, and executed to gather views through data gathering tools such as questionnaires. Furthermore, the analysis revealed that a significant part of the samples studied in the reviewed research works had been sets of teachers.

Aktaş (2013) also carried out a similar analysis, and identified the tendencies prevalent in the master's and Ph.D. theses completed with respect to new mathematics curricula (of primary and secondary schools). In this context, 85 graduate dissertations were reviewed using "5 wh- questions and how" as an investigative tool. The document analysis revealed that the researchers focused mostly on the primary school mathematics curriculum, and that they analyzed the curriculum as a whole. The number of studies was found to rise till 2008, and to exhibit a geographically heterogeneous distribution. Furthermore, the researchers were found to engage mostly in quantitative research and to employ survey method, which offers a particularly descriptive model of research. Their research objectives were, on the other hand, found to converge under the themes of program new methods and approaches, evaluation, instruction materials and comparisons.

Kazu and Aslan (2013)'s work titled "Review of the Studies on the 'Evaluation-Assessment' aspect of the 2004 Primary Curriculum" is yet another piece of content analysis.

For this purpose, the analysis employed a descriptive survey model, combined with meta-analysis and content analysis used to review the studies. The analysis focuses on 49 conference presentations and 40 articles which were published on the evaluation of the new primary school programs and the complementary evaluationassessment approaches in the period 2004-2011, and which the researchers were able to access. Kazu and Aslan concluded that the studies were more frequent in the period 2006-2010; that the research models employed were qualitative, based on descriptive surveys: that questionnaires and interviews were the most often utilized tools of data gathering; that target groups were mostly composed of teachers; and that the studies focused mostly in the central and western parts of the country. Furthermore, their analysis discussed the conclusions and recommendations of the studies reviewed. Finally, they developed their own recommendations taking into account the conclusions and recommendations of the studies reviewed, and the considerations based on the studies.

Hazır-Bıkmaz et al. (2013), in their content analysis, reviewed Ph.D. dissertations submitted in the field of Curricula and Instruction with reference to various variables, and analyzed 358 Ph.D. dissertations submitted in this field in Turkey, up to year 2009. They found that the Ph.D. dissertations in the field of Curricula and Instruction mostly investigated the impact of instruction-learning perspectives, methods, and techniques. The other foci of investigation were teacher training programs and practices, and evaluation/efficiency of formal curricula. The analysis also found a significant increase in the number of Ph.D. dissertations in the field of Curricula and Instruction. Furthermore, the studies were found to employ experimental and descriptive research patterns in comparable numbers, whereas mixed methodology was found to

register a significant rise in the recent years.

The objectives and importance of the research

As it should be clear in the overview above, the number of analyses of the studies investigating curricula has been rather limited. The available content-analyses focus either only on one specific field (such as mathematics, science or technology) or only on one specific aspect (such as evaluation) of all programs. Although these analyses have made significant contributions to the field. their limited numbers and scope renders them inadequate for reaching a definite verdict on the efficacy of the supposed education reform of 2004, and the new programs provisioned in this context. This issue is exacerbated by the fact that in 2013 another revision of the curricula was initiated, barely after 10 years of service for the previous programs. In this environment, it is of vital importance to take a holistic look at the totality of the studies that examined the existing system, and use it to inform and guide the imminent program revisions. In a similar vein, the goal of the current study is to look at the studies on the new curricula that were introduced in the 2004-2005 academic year and investigate various properties (such as distribution across journals, years, language of publication, engaged discipline, studied level of education, research and sampling methods, and publication contents) of these studies. In this regard, we aim to address the following problems:

- 1. What is the publication frequency of the studies investigating curricula?
- 2. How are these studies distributed according to their year of publication?
- 3. How are these studies distributed according to their language of publication?
- 4. How are these studies distributed according to the disciplines they engaged?
- 5. How are these studies distributed according to the level of education they investigate?
- 6. How are these studies distributed according to their contents?
- 7. Which research methods were applied in these studies?
- 8. Which data collection instruments were commonly used in these studies?
- 9. What are the sampling characteristics (sample groups, sample size and the geographic location) of these studies and how do they vary?
- 10. What are the data analysis methods used in these studies?

METHOD

The objective of the present study, which examined the articles published on curricula in Turkey, and indexed in SSCI and ULAKBIM databases, is descriptive. Descriptive studies attempt at

describing and explaining "what" objects, entities, institutions, groups and various other things are (Kaptan, 1998). While doing this explanation, descriptive content analysis (Çalık and Sözbilir, 2014), which follows a systematic way including the depictive assessment of tendency and research results of a specific issue, is used. In this respect, it is aimed to analyze and organize the qualitative and quantitative studies conducted independently and to determine their overall tendencies (Cohen et al., 2007; Calık and Sözbilir, 2014; Selçuk et al., 2014). The author followed the following steps in the study and in the given order: (1) identify the journals which published studies on curricula, using SSCI and ULAKBIM databases; (2) conduct a search spanning 362 articles through these journals and archived the articles that fit the description. So as to minimize the risk of missing any relevant studies, he repeated the same research using the same set of journals, after a respite of three months. After gathering the data, they were analyzed; the findings were compiled as a report based on the analyses.

Scope of research

Since the pilot application of the reformed curricula was launched in 2004, the first studies addressing them were published in year 2005. So, the analysis focuses on studies that were published between 2005 and 2013. The sample consists of studies published in 26 journals which offer full-text access online. Three among these journals are published in Turkey and indexed in Web of Science SSCI. A full list of the journals we examined and the date brackets of the search are given in Appendix-1. In the selection of journals, it has been paid attention to the continuous publishing and not to contain a particular area or one discipline.

The author primarily relied on online access service of the journals to recover the full-text of the studies the search yielded. However, on occasions when online access was not an option, the author obtained and examined a print copy of the relevant study. The author used the following criteria regarding the selection of the studies included in the analysis.

- 1. Only those studies which investigated the primary and secondary curricula implemented since the 2004-2005 academic year were analyzed.
- 2. The "title," "summary," "abstract" and "keyword" sections of published studies were searched for phrases such as the following: "öğretim programı" [i.e. "curriculum"], "müfredat" [i.e. "curricula"], "curriculum," or "program." those studies, for which the search yielded no results for these phrases in the aforementioned sections were excluded from the analysis.
- So as to achieve the objective of this study, the author analyzed the studies that were published in Turkish journals based in the indexed SSCI and ULAKBİM.

Data collection tool

An article classification form was used as data collection tool. When the literature is analyzed, it is seen that similar ways of collecting data are improved in descriptive content analysis (Sözbilir and Canpolat, 2006; Sözbilir et al., 2012; Hazır-Bıkmaz et al., 2013; Polat, 2013). Besides, it is determined that researchers use similar tools by making some changes in accordance with their purposes in developed data collection tools. Sözbilir and Kutu, 2008; Çiltaş, 2012; Çiltaş et al., 2012; Göktaş et al., 2012a; Göktaş et al., 2012b; Selçuk et al., 2014). Accordingly, it is inspired from the "publication classification form" originated by Sözbilir et al. (2012), which is used in development of article classification form as a data collection tool. After the form was designed according to the scope and purpose of the study, two experts in classification revised the form to its final shape. The article classification form consists of the following sections: definitive information about the study, discipline

engaged, level of education under analysis, subject of the study, geographic region where the study was conducted, research methods, data collection tools and data analysis techniques used by the study, and the keywords specified by the authors of the study in question.

However, as the current study intends to make a content analysis for the articles concerning curricula, the form developed through the procedure described above had to be revised in line with the purpose. The end result comprised the following sections: (a) research method, (b) data collection tools, (c) sample, (d) data analysis methods, and (e) keywords for the study, as well as (f) the discipline to which the curriculum belongs, (g) the year or grade where the curricula is used, (h) contents of the study, and (i) the region where the study was carried out.

Analysis of Data

Content-analysis method was used for the analysis. The author searched through the education journals indexed by SSCI and ULAKBIM databases, compiled a sample of studies published between 2005-2013 on curricula, and conducted content-analysis. Content-analysis entails a detailed examination of the data collected for the purposes of the. Through this detailed examination, the patterns of similarity found in the data are identified, rearranged and interpreted according to concepts and themes guiding the analysis (Yıldırım and Şimşek, 2006). In order to ensure the soundness of the analysis, each study was analyzed twice, with a 3 month interval in between. Miles and Huberman (1994) reliability scale was used to calculate the reliability of the findings where, (reliability=number of agreements/(total number of agreements + disagreements). The lowest reliability level computed for all subcoding was (0.79). When reliability measure is above 70%, it is generally recognized as sufficiently reliable for research purposes (Miles and Huberman, 1994, 64). Based on this, the findings are reliable. On occasions where a study examined did not specify/explain certain technical details (research methodology, sampling technique, etc.) an expert specializing in mathematics education was consulted; a co-analysis of the study in question was conducted. The data were processed and thus complied through SPSS 16.0 statistical analysis software, and the findings were presented in the form of frequency and percentage tables in the next section.

FINDINGS

These findings are derived from a multi-variable analysis of the studies which investigate curricula, and which were accessed through SSCI and ULAKBIM databases. The findings are presented in the following order: the distribution of sampled studies according to the journal of publication, year of publication, language of publication, engaged discipline, studied level of education, study content, research approach, data collection tools, sampling techniques (sample selection, sampled group, sample size, sampled region and province), and data analysis methods utilized. The findings are presented in separate tables containing frequency and percentages for each tabulated item. The study sample consists of 362 studies investigating "curriculum(s)" which were published in the period 2005-2013 in 26 national or international journals. Appendix-1 presents the distribution of studies according to the journal of publication.

Table 1.	Distribution	of	studies	according	to	year	and	language	of
publication	n.								

Years	Language of	f Publication	Frequency (f)	Percentage (%)
	English	Turkish		
2005	0	21	21	5,8
2006	1	17	18	5,0
2007	2	38	40	11,0
2008	2	33	35	9,7
2009	0	40	40	11,0
2010	2	54	56	15,5
2011	0	57	57	15,7
2012	3	44	47	13,0
2013	2	46	48	13,3
Total	12	350	362	100,0

Appendix- 1 indicates that the largest fractions (16.6%) of studies were published in National Education, which is followed by Educational Sciences: Theory & Practice (KUYEB) (8.6%), Journal of Kırşehir Education Faculty (8.0%), Elementary Education Online (6.6%), Hacettepe University Faculty of Education Journal (5.5%) and Kastamonu University Kastamonu Education Journal (5.5%). The journals that published the fewest number of sampled studies are Ege Journal of Education (0.6%) and Mersin University Journal of the Faculty of Education (0.8%).

Findings also indicate that the annual publication rate of studies investigating the curricula enacted in 2005 increased after 2007 (Table 1). The year during which the highest number of studies was published was 2011, which was followed by a decline in the number of published studies. The year during which the lowest number of studies was published was 2006. The ratios of the number of studies published during each year versus the total number of published studies are respectively: 15.7% in 2011, 15.5% in 2010, 5.8% in 2005, and 5% in 2006. Table 1 indicates that the language of publication of 350 (96.7%) out of 362 studies is Turkish. The language of publication of the remaining 12 (3.3%) is English.

Table 2 presents the findings of the analysis of the studies according to the disciplines of education they engaged. Since several among the studies engaged more than one discipline of education at once, the author used the frequency values associated with each item in the table to signify the number of studies to which it applies. This explains why the total for Table 2 (371) differs from the sample size (n=362).

Table 2 indicates that the highest number (19.3%) of studies engaged curricula generally without focusing on programs used in a specific discipline. These studies amount to 70 out of 362. The table also indicates that the disciplines that are most commonly engaged by studies are Science and Technology (14.8%), Social Sciences (14.3%), Mathematics (13.7%) and Turkish (10.8%). The table also makes it clear that the following disciplines

were also engaged by studies: Chemistry (3.5%), Social Studies (3.0%), Geography (2.7%), Physics (2.4%), History (1.9%), Information Technologies/Computing (1.9%), Biology (1.6%), English (1.6%), Music (1.3%), Turkish Language and Literature (1.1%), Physical Education (0.8%). The disciplines that were engaged by one or two studies (Religious Culture and Ethics, Philosophy, Geometry, Visual Arts, History of Republican Reforms, Logic, Media Literacy, Foundations of Programming, Art History, Counseling, Sociology, Technology and Design, Basic Sports Education, Civic Education and Democracy) are grouped under the item.

"Other." The studies that engage curricula in these other disciplines amount to 5.7% of the total.

Table 3 presents the distribution of the studies according to the level of education investigated. The studies' focus was most pronounced concerning primary education (1st-5th grade). 119 studies (32.9%) investigated the first phase of primary education (1st-5th grade), 85 studies (23.5%) investigated the entirety of primary education (1st-8th grade), 82 studies (22.7%) investigated the second phase of primary education (6th-8th grade) and 64 studies (17.7%) investigated secondary education. 9 studies (2.5%) investigated all grades between 1st and 12th. 2 studies (0.6%) investigated the curricula in the combined classroom setting whereas 1 study (0.3%) investigated the 6th-12th grade interval, again as indicated by Table 3.

Table 4 presents the distribution of the studies according to their contents. A large portion (31.2%) of the studies investigating curricula engaged in multidimensional program evaluation. Other studies display the following content-related characteristics: 22.7% engage the learning and/or instruction process, 10.2% engages in an examination of program contents, 9.4% address evaluation, 6.4% engage how the program is oriented towards textbooks, 5.2% compare previous and current curricula, 4.1% aim to contribute to program development, 3.6% engages in international program

Table 2. Distribution of studies according to disciplines they engaged in.

Discipline	Frequency (f)	Percentage (%)
General	70	18.9
Science and Technology	55	14.8
Social Sciences	53	14.3
Mathematics	51	13.7
Turkish	40	10.8
Chemistry	13	3.5
Social Studies	11	3.0
Geography	10	2.7
Physics	9	2.4
History	7	1.9
Information Tech./Computing	7	1.9
Biology	6	1.6
English	6	1.6
Music	5	1.3
Turkish Lang. and Literature	4	1.1
Physical Education	3	0.8
Other	21	5.7
Total	371	100.0

Table 3. Distribution of studies according to studied level of education.

Studied Level of Education	Frequency (f)	Percentage (%)
Primary (1 st -5 th grade)	121	33.4
Primary (1 st -8 th grade)	85	23.5
Primary (6 th -8 th grade)	82	22.7
Secondary (9 th -12 th grade)	64	17.7
All Grades (1 st -12 th grade)	9	2.5
Other	1	0.3
Total	362	100.0

comparison, 2.8% conduct literature analysis, whereas 1.9% investigates the expectations associated with curricula. The table also indicates that there were studies in the sample whose content-related characteristics do not fall under any of these categories, which were tabulated as "Other."

Table 5 summarizes their findings on the research approaches adopted by the studies published on curricula. These findings indicate that more than half (53%) of the sampled studies adopted a qualitative approach to research, whereas quantitative studies amounted to 40.6%. The studies that adopted a mix of qualitative and quantitative approaches are in the minority (6.4%).

Table 6 presents the findings of the analysis of the sampled studies according to the data collection tools they employed. Since several among the studies investigated more than one discipline of education at once, the researchers used the frequency values associated with each item in the table to signify the number of studies to

which it applies. Some articles utilized more than one data collection tools. This is why the number of articles in Table 6 is greater than the total number of the articles in the sample. This fact accounts for the difference of the grand total shown on Table 6 (405) in comparison to the sample size (n=362).

Table 6 indicates that a large portion (35.1%) of the sampled studies use surveys as a data collection tool, which is followed by the use of documentation (curricula, textbooks, theses, newspapers, etc.) (30.9%), interviews (21%), attitude measurement scales (4.4%), success tests (3.7%), observation (3.0%) and alternative measurement tools (worksheets, conceptual puzzles, self-assessment forms) (2.0%).

Table 7 presents the distribution of the studies according to sampling technique. Researchers had a pronounced preference for random sampling (29.3%), which is followed by the use of selective sampling (11%), sampling that prioritizes convenience (5.2%) and other sampling techniques (8.6%). The remainder either did not

Table 4. Distribution of studies according to contents.

Study Content	Frequency (f)	Percentage (%)
Multidimensional Program Evaluation	113	31.2
Learning/instruction Process	82	22.7
Content of Curriculum	37	10.2
Evaluation	34	9.4
Textbook Utilization	23	6.4
Comparison between Previous and Current Programs	19	5.2
Contribution to Program Development	15	4.1
International Program Comparison	13	3.6
Literature Analysis	10	2.8
Expectations Associated with Curricula	7	1.9
Other	9	2.5
Total	362	100.0

Table 5. Distribution of studies according to approach.

Approach	Frequency (f)	Percentage (%)
Qualitative	192	53.0
Quantitative	147	40.6
Mixed	23	6.4
Total	362	100.0

Table 6. Distribution of studies according to data collection tool used.

Data Collection Tools	Frequency (f)	Percentage (%)
Survey	142	35.1
Documentation	125	30.9
Interview	85	20.9
Attitude Measurement Scale	18	4.4
Success Test	15	3.7
Observation	12	3.0
Alternative Measurement Tools	8	2.0
_Total	405	100.0

Table 7. Distribution of studies according to sampling technique.

Sampling Technique	Frequency (f)	Percentage (%)
Random	106	29.3
Purposive	40	11.0
Convenience	19	5.2
Other	31	8.6
Unspecified	53	14.6
No Sampling	113	31.2
Total	362	100.0

specify a sampling technique (14.6%) or did not use sampling (31.2%) at all. Tables 8 and 9 present the

distribution of the analyzed studies according to the groups they sampled and according to sample size. Since several among the studies involved more than the sampled group or sample size, the author used the frequency values associated with each item on the table to signify the number of studies to which it applies. This explains why the totals for Table 8 and 9 (389) differ from the sample size (n=362). Table 8 indicates that the studies sampled teachers (48.1%) more often than other groups, which were students (12.6%), prospective teachers (3.3%), legal guardians (2.3%), inspectors (1.8%), school administrators (1%) and academics (0.5%). Similarly, Table 9 indicates that the most common sample sizes were in the 31-100 (19.5%) and 101-300 (16.7%) ranges. These were followed closely by the 11-30 range (11.8%) and the 301-1000 interval (13.4%). The

Table 8. Distribution of studies according to sampled groups.

Sample	Frequency (f)	Percentage (%)
Teacher	187	48.1
Student	49	12.6
	13	3.3
Prospective Teacher		
Legal guardian	9	2.3
Inspector	7	1.8
School Administrator	4	1.0
Academic	2	0.5
Document	118	30.3
Total	389	100.0

Table 9. Distribution of studies according to sample size.

Sample Size	Frequency (f)	Percentage (%)
1-10 People	32	8.2
11-30 People	46	11.8
31-100 People	76	19.5
101-300 People	65	16.7
301-1000 People	52	13.4
Documentation	118	30.3
Total	389	100.0

least number of sample sizes were found in the 1-10 range. Again as Table 9 indicates, there have been no studies whose sample size was greater than 1000 individuals. Finally, the table also indicates that 30.3% of the studies did not employ sampling. As these studies engaged documentation directly either by way of article analysis or via workgroups dedicated to documentation review, the author grouped them together under the item "Documentation." Table 10 presents the distribution of the studies according to geographic location. The geographic region that hosted most studies was Central Anatolia (15.7%), which was followed by Marmara (10.2%), Black Sea (9.9%), Aegean (6.9%), Eastern Anatolia (6.6%), Mediterranean (2.8%), Southeastern Anatolia (2.8%) regions. Since 113 of the analyzed studies (31.2%) do not use sampling and instead utilize textual analysis or literature reviews, they are not limited to or associated with any region or province as far as sampling is concerned. Finally, Table 10 also indicates that 3 studies (0.8%) used samples from other counties for the purposes of comparing 2 to 3 different countries and their curricula. Table 11 presents the distribution of studies according to the number of data analysis methods they utilized. The overwhelming majority (88.1%) of the studies conducted on curricula utilized a single data analysis method, which is followed by 11.6% utilizing two methods, and 0.3% utilizing three (Table 11). There were no studies utilizing more than three data analysis methods.

Table 10. Distribution of studies according to geographic location.

Geographic Region	Frequency (f)	Percentage (%)
Mediterranean	10	2.8
Eastern Anatolia	24	6.6
Aegean	25	6.9
Southeastern Anatolia	10	2.8
Central Anatolia	57	15.7
Black Sea	36	9.9
Marmara	37	10.2
More than one region	25	6.9
Nation-wide (Turkey)	17	4.7
Unspecified	5	1.4
No Sample	113	31.2
Different Country	3	0.8
Total	362	100.0

Table 11. Distribution of studies according to number of utilized data analysis methods.

Number of Data Analysis Methods	Frequency (f)	Percentage (%)
Single Data Analysis Method	319	88.1
Two Distinct Data Analysis Methods	42	11.6
Three Distinct Data Analysis Methods	1	0.3
Total	362	100.0

Table 12 presents the distribution of studies according to the data analysis methods they used. Qualitative data analysis is more common (53.9%) than quantitative (46.1%). Among the studies that utilized qualitative data analysis, 9.1% of the entire sample used the descriptive analysis method whereas 44.8% did content-analysis. Among the studies that utilized quantitative data analysis, 24.4% of the entire sample used the descriptive statistics method whereas 21.7% opted for predictive statistics. The analysis also revealed that the researchers using descriptive statistics preferred reporting their findings in terms of frequencies and percentages, whereas predictive statistical studies used additional statistical notions such as the t-test, ANOVA, and correlation.

DISCUSSION AND CONCLUSION

The current study reviewed 362 articles published in 26 international and national journals publishing in Turkish. The reviewed articles were analyzed with reference to their publication frequencies, year of publication, language of publication, disciplines engaged, level of education analyzed, contents, research methods, data collection tools, sampling characteristics, and data

Data Analysis Methods		Frequency (f)	Percentage (%)
		219	53.9
Qualitative Data Analysis	Descriptive Analysis	37	9.1
	Content-Analysis	182	44.8
Quantitative Data Analysis		187	46.1
	Descriptive Statistics	99	24.4
	Predictive Statistics	88	21.7
Total		406	100.0

analysis methods. The findings of the analysis show that the highest number of articles regarding curricula was published on National Education. In comparison to the remaining journals, KUYEB, Journal of Kırşehir Education Faculty, Elementary Education Online and Hacettepe University Faculty of Education Journal also published a higher number of articles on curricula. One can argue that National Education Journal accounted for the largest number of articles because it is the publication owned by the Ministry of National Education.

A review of the year of publication data revealed that the highest numbers of articles were produced in years 2011 and 2010. Taking into account the fact that the curricula were applied throughout the country from 2005 on, it is only natural to have a five year gap between the introduction of the variable and an intensification of studies, given the time required for data gathering and analysis processes and the journals' review procedures. Furthermore, a second increase in the number of publications in 2013 can be explained away by the revisions discussed and introduced about the curricula providing another incentive for the researchers to delve into this topic. This finding, however, diverges from the conclusions of other analyses of the research on curricula. For instance, Cansız-Aktas (2013) found through the analysis of the graduate theses regarding mathematics curricula, which the number of theses investigating the issue increased till 2008, and thereafter showed a decrease. On the other hand, Kablan (2011) states in the study analyzing the presentations made in and published by congresses as well as the graduate theses which the researcher was able to access, that the research volume was higher on the year which saw the mass implementation of the curricula in all primary schools, only to subside gradually as the years progress. It is possible that the conclusions of both analyses conflict with each other, as well as with the present analysis, as Kablan's (2011) and Cansız-Aktaş's (2013) works were focused on the curriculum of a specific discipline. Moreover, the fact that one analyzed graduate theses, while the other analyzed a different set of studies (theses, articles, presentations) on primary school mathematics curriculum contribute to may explanation of the difference.

The analysis found that 96.7% of the studies were

published in Turkish, while 3.3% were published in English. A vast majority of the articles published in Turkish is possibly related with the fact that most studies were published in national journals. A detailed analysis of the articles published in English language revealed the journals indexed in SSCI as the publication involved. A similar conclusion was reached by Selçuk *et al* (2014) analyzing the contents of the articles published on Education and Science journal. The researchers underline the fact that recent years saw a surge of English as the language of publication of studies in this journal.

The majority of the articles cover the whole gamut of curricula, and not a specific field. Following these general articles are groups of articles to cover Science and Technology, Social Sciences, Mathematics, and Turkish curricula. This picture indicates that the researchers focus more on the curricula for the courses which are considered as the core of education. Furthermore, the analysis revealed the presence of articles covering the curricula of many other courses taught in primary school's first (1st-5th grades) and second (6th - 8th grades) stages and in secondary schools. Moreover, the articles in the limelight exhibited more of a focus on the curricula of the first stage of primary school (1st - 5th grades). This group was followed by articles covering the curricula for the whole primary school education (1st - 8th grades) and the second stage of primary school (6th - 8th grades).

It is observed with reference to the level of education shows that the articles covering the curricula of the secondary schools are in the minority compared to those investigating the curricula for primary schools. This finding is similar to the conclusions of Cansız-Aktaş's (2013) study analyzing the theses on mathematics curricula. Cansız-Aktaş's (2013) analysis found that the researchers mostly focus on the mathematics curriculum for primary schools, and had a tendency to focus on the whole curriculum.

One of the significant findings of the study concerns the contents of the articles analyzed. The articles concerning the curricula assessed the curricula as a whole, discussing more than one aspect at a time. In a parallel vein, the studies covering the learning-teaching process are more numerous compared to the studies discussing other aspects of the curricula (i.e. contents, evaluation-assessment, and gains). Moreover, there are studies

which investigate the connection between the curricula and the textbook sets (i.e. teacher's guide book, student textbook, and student exercise book). There are also studies, albeit in smaller numbers, which compare the curricula against previous curricula or curricula applied in other countries. Finally some articles were found to engage in literature review regarding the curricula, or the development of curricula.

More than half of the studies on curricula employed qualitative research perspectives. The conclusions of existing research show that the qualitative studies are mostly based on textual analysis regarding the programs, investigating one or more facets of the curricula. The higher number of qualitative studies for in-depth review and evaluation of curricula is considered a natural conclusion of the research on curricula. On the other hand, a review of literature reveals the numerical superiority of quantitative works in the group of content analysis studies (Göktas et al. 2012a; Hazır-Bıkmaz et al., 2013; Polat, 2013). Kaban's analysis of the studies on primary school mathematics curriculum also revealed a higher number of quantitative works. On the other hand, the present analysis revealed a preference away from quantitative or mixed research perspectives among the articles investigating the curricula. One can forcefully note that the number of articles which employ a mixed perspective is no more than a few. Selçuk et al. (2014) and Ciltas et al. (2012) also found a tendency to avoid mixed approaches. Against this background, it is possible to claim that mixed perspective studies have yet to become commonplace in Turkey. Moreover, no metaanalysis or meta-synthesis works were found among the articles analyzed.

The most common tool of data collection in the articles published on curricula had been surveys. These were followed by the use of various documents. In this context, curricula, textbook sets (i.e. teacher's guide book, student textbook, student exercise book), curricula of other countries, student files, exam questions, and collected works in the literature were employed as the objects of document analysis. Moreover, interview forms, attitude and achievement tests, observation forms and alternative assessment tools were also used for data collection. Surveys as a data collection tools make it possible to reach out to a substantial sample, and to save time and efforts while doing so. Data gathered through surveys can be analyzed more easily and quickly compared to the data derived from other tools. These advantages are arguably at the forefront when the researchers opt for surveys as their data collection tools. Polat (2013), Göktaş et al (2012b), Kablan (2011), Kurtoğlu and Seferoğlu (2011), Sert (2010), and Alper and Gülbahar (2009) also conclude that the surveys are the data collection tool for the majority of studies. However, the preference for surveys as the data collection tool, despite the majority of the researchers employs a qualitative research perspective, may indicate intent to depict the

whole picture while focusing on the details over a smaller sample.

The majority of the curricula-related articles reviewed herein did not engage with sampling, and instead collected data over documentation. The articles which did work with samples, on the other hand, employed random sampling as the choice of the majority of the researchers. The affordability of this method of sampling is arguably the underlying reason for this finding. Selçuk *et al.* (2014) also found in their content-analysis that random sampling was more frequent among the studies published in Education and Science. Furthermore, other purposive, convenience, and other sampling techniques were also utilized. In addition, some researchers were found to withhold the specifics of the sampling technique employed.

The analysis of the studies under the limelight revealed that the researchers mostly dealt with teachers, followed by the students, as the members of their samples. This finding concurs with the findings reached by Kablan (2011) in the analysis of the studies concerning mathematics curriculum. Moreover, there are a few studies where the sample was composed of trainee teachers, parents, inspectors, school administrators, and academicians. Against this background, one can conclude that the views and experiences of the teachers and students, who are the most important stakeholders with respect to the curricula, command the emphasis in the studies. However, the views and experiences of other stakeholders, in comparison to teachers who are the implementers of the curricula, can be considered extremely underrepresented.

The sample sizes of the studies revealed a conglomeration in the 31-100 range. This finding is similar to that of Çiltaş et al. (2012) in their content analysis on the studies published with respect to the mathematics education. Even though the articles were sometimes based on data from all over the country, the sample sizes were always found to be limited. No studies engaged with a sample exceeding a population of 1000.

Samples from the Central Anatolian region were the most frequent ones, whereas those from Southeastern Anatolia were rarest. The geographical distribution of samples is arguably a product of the geographical locations of the faculties of education in Turkey. The provinces which produced the highest numbers of samples in their respective regions –Ankara, Istanbul, Trabzon, İzmir, Erzurum, Adana, and Diyarbakır– are also the provinces where the faculties of education are located. It is probable that the researchers have selected their samples from within the provinces where they carried out their studies.

There is also a group of studies, albeit very few in numbers, which engage in a comparison of the curriculum of various countries.

This analysis reviewed the set of studies with reference to the data analysis methods as well. The studies on curriculum mostly employed the qualitative content analysis method for the analysis of data. Quantitative studies on the other hand employed descriptive (frequency, percentile, arithmetic mean) and predictive (ttest, ANOVA) statistics. Another crucial finding of the analysis is that the overwhelming majority of the studies in question employed a single data analysis method. Just one study utilized three distinct types of data analysis methods. This result may raise concerns about validity and reliability of the studies. The use of just a single data analysis method rules out the triangulation method, which helps ensure validity and reliability of the research. Çiltaş et al. (2012) also observed that the single data analysis method was the frequent choice among researchers.

Finally, one can note that this analysis of the studies on the curricula, which was put into application in 2004 through a change in the basic perspective regarding curricula in Turkey, and published in the period 2005-2013, is more comprehensive in terms of number of journals and articles covered, in comparison to similar analyses. Moreover, the analysis adopted an integral perspective on the curricula as well as more comprehensive research problems. The findings thus reached will contribute to the literature with an understanding of the distribution of studies of curricula per each discipline, and will make it possible to unearth weaknesses and strengths in existing literature. Therefore, one can think of this analysis as a guiding light for future studies. However, it could be expected from viewed article results to help program development experts about whether targeted innovation and changes take place or not. Moreover, the competence and willingness of the implementers of programs could be presented. In addition, it could be provided information about organizational structure of the schools and necessary infrastructure support for implementation. However, the results were not incorporated in the purpose of the research. The reviews of article results were not analyzed in the scope of study. Future studies will contribute to the program development experts in the sense of evaluation of the programs.

The following recommendations may be proposed in line with the findings:

The studies concerning primary school curricula were more numerous, and focused on the curricula of four core courses (Science and Technology, Social Sciences, Mathematics, and Turkish). Therefore, an increase in the number of publications concerning the secondary school curricula should be called for.

This analysis reviewed the studies published in the education journals published in Turkey and indexed in SSCI and ULAKBİM databases. Future research may expand this scope, and include master's and Ph.D. theses submitted as well, as objects of content analysis.

Furthermore, the articles regarding the curricula put in place through the revisions in 2013 may also be analyzed.

The studies published so far mostly investigated more than one aspect of the curricula. However, a more focused approach investigating a single aspect (learning-teaching process, contents, gains, evaluation-assessment) may lead to a more detailed and in-depth set of studies.

Most of the studies were found to employ surveys and documents as the means of data collection. Future studies should employ assessment tools such as knowledge, skill, attitude or product assessments, which may provide a better understanding of the curriculum's contribution to the students' cognitive, affective, and psychomotor developments.

A review of the studies regarding curriculum revealed the need to engage in better sampling to represent the whole country, through an expansion of the sample size. In this context, wider samples would be asked of future studies. In this context, the samples are often selected from the provinces where a faculty of education is located. Increases in the numbers of studies focusing on other provinces should contribute to the development of curricula.

The content analysis of the studies revealed the need to diversify the data collection and data analysis techniques utilized. Specifically, an emphasis on the data collection and analysis in the graduate courses offered to young researchers would bring improvements against this background.

Conflict of Interests

The author have not declared any conflict of interests

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Appendix 1.

Journals	Years	(f)	(%)
Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi		11	3,0
Buca Faculty of Education Journal (Buca Eğitim Fakültesi Dergisi)		11	3,0
Cukurova University Faculty of Education Journal (Çukurova Üniversitesi Eğitim Fakültesi Dergisi)		6	1,7
Dicle University Journal of Ziya Gökalp Faculty of Education (Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi)		12	3,3
Ege Journal of Education (Ege Eğitim Dergisi)	2005-2013	2	0,6
Education and Science Journal (Eğitim ve Bilim)	2005-2013	10	2,8
Journal of Research in Education and Teaching (Eğitim ve Öğretim Araştırmaları Dergisi)		8	2,2
Erzincan University Journal of Education Faculty (Erzincan Üniversitesi Eğitim Fakültesi Dergisi)		12	3,3
Eurasian Journal of Educational Research (EJER)		4	1,1
Gazi University Faculty of Education Journal (Gazi Üniversitesi Eğitim Fakültesi Dergisi)		13	3,6
Hacettepe University Faculty of Education Journal (Hacettepe Üniversitesi Eğitim Fakültesi Dergisi)		20	5,5
Elementary Education Online (İlköğretim Online)		24	6,6
İnönü University Faculty of Education Journal (İnönü Üniversitesi Eğitim Fakültesi Dergisi)	2007-2013	5	1,4
Kastamonu University, Kastamonu Education Journal (Kastamonu Eğitim Dergisi)		20	5,5
Journal of Kazım Karabekir Educatıon Faculty (Kazım Karabekir Eğitim Fakültesi Dergisi)	2005-2013	9	2,5
Journal of Kırşehir Education Faculty (Kırşehir Eğitim Fakültesi Dergisi)	2005-2013	29	8,0
Educational Sciences: Theory & Practice (KUYEB)	2005-2013	31	8,6
Marmara University Journal of Educational Sciences (Marmara Üniversitesi Eğitim Bilimleri Dergisi)		13	3,6
Mehmet Akif Ersoy University Journal of Education Faculty (Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi)	2006-2013	14	3,9
Mersin University Journal of the Faculty of Education (Mersin Üniversitesi Eğitim Fakültesi Dergisi)	2005-2013	3	0,8
National Education (Milli Eğitim Dergisi)	2005-2013	60	16,6
Necatibey Faculty of Education, Electronic Journal of Science and Mathematics Education (Necatibey Eğitim Fakültesi Elektronik Fen ve Matematik Eğitimi Dergisi)		10	2,8
Ondokuz Mayis University Journal of Faculty of Education (Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi)		9	2,5
Pamukkale University Journal of Education (Pamukkale Üniversitesi Eğitim Fakültesi Dergisi)	2005-2013	7	1,9
Uludag University The Journal of Education (Uludağ Üniversitesi Eğitim Fakültesi Dergisi)		7	1,9
YYU Journal of Education Faculty (Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi)	2005-2013	12	3,3
Total		362	100