

A Bibliometric Analysis of Journals in Educational Research

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Abstract—The influence and impact of journals in the scientific community is a fundamental question for researchers worldwide because it measures the importance and quality of a publication. This study analyses all the journals that are currently ranked in any educational research category in Web of Science by using bibliometric indicators. The aim is to provide a general overview of their impact and influence between 1989 and 2013. The journals are divided in seven research categories that represent the whole field of educational research. The analysis also develops a general comparison between all the categories. The results show that many interdisciplinary journals obtain a broader impact than the core journals although these publications are also well positioned in the field.

Index Terms— Bibliometrics, journal analysis, educational research, Web of Science.

I. INTRODUCTION

In the fifties, Eugene Garfield [5] described the idea of a citation index for the sciences. Working with Irv Sher, he designed the impact factor calculation to analyze and identify influential journals [7]. Thus, in 1963, the first Science Citation Index appeared, for 1961. In 1976, Garfield published the first Journal Citation Reports (JCR) as part of the Science Citation Index [6]. This work presented the impact factors for 1975 as well as many other measures of journal use. By compiling articles' cited references, JCR helps to measure research influence and impact at the journal and category levels, and shows the relationship between citing and cited journals.

Bibliometric studies use the bibliographic material to provide a general overview of a research field by analysing the data quantitatively [2]. Although there are many authors that have studied educational research with bibliometric indicators [3-4,9], none of the studies have presented a general overview of the current status of the main leading journals in the field. Some of them have used education journals for the bibliometric analysis but not as a general overview [1,10]. Therefore, the aim of this paper is to analyze the educational research journals indexed in the Web of Science database and see their publication and citation structure over the last twenty-five years. The main advantage of this approach is that it takes into account a long period of time and deals with a wide range of bibliometric indicators that show different characteristics of the journals. Therefore,

the information provided is more complete because sporadic changes do not affect the analysis so much. Thus, the key contribution of this paper is to provide a general overview of the current state of all the educational research journals indexed in WoS. The journals are classified in seven general categories of education. The study ends with a general comparison of all the categories that takes into account their evolution between 1989 and 2013.

This rest of the paper is structured as follows. Section II briefly analyses the bibliometric methodology of the paper. Section III presents the results and Section IV the main conclusions of the paper.

II. BIBLIOMETRIC METHODS

This paper studies the information by using the Web of Science (WoS). The site belongs to Thomson and Reuters that acquired it from the Institute for Scientific Information (ISI). The search of information was carried out with the names of the publications contained in the database. These journals were obtained by filtering the WoS that includes four categories in educational research and 326 journals: Education, Psychology Education, Scientific Education and Education Special. However, the analysis divided educational research in seven fields in order to give a more specific classification of educational research: Education Studies, Education and Scientific Disciplines, Education and Technology, Psychology & Education, Education Special, Professional Development of Teachers and Curriculum Studies and Social Sciences Disciplines and Education. Note that in some particular cases, some journals were classified in an area different from the WoS category since their scope could be seen from different perspectives.

The journals are ranked by the total citations (TC). The main reason is that TC reflects the influence of a publication. TC is an indicator that shows how many times the article has been cited by papers published in WoS [11]. Total Papers (TP) was used in order to show the number of articles published in WoS and it reflects the productivity of a certain journal. Another indicator used was the average citation per item (TC/TP) and the *h*-index [8] which reflects the number of papers *X* that has received at least *X* citations [12]. This idea can be expressed with the following formulation: $\{H = X \Leftrightarrow TC_X \geq P_X\}$ where P_X is the *X*th paper of the set of articles ordered in a descending way according to the number of citations and TC_X is the number of citations of the *X*th paper.

For the journal analysis it was also used the Impact Factor (IF) [6-7]. Impact Factor is one of the most popular tools for judging the impact and importance of a journal [13]. It measures the influence of a specific journal according to the following procedure. First, it chooses the publications of the

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last year, in this paper 2013. Next, it goes back two years and takes the sum of citations obtained for the journal. This number is divided by the sum of the publications made in the past two years. In this way, the Impact Factor shows the average numbers of citations obtained by a journal in the last two years. Although, it has some criticisms because it only takes two years to compare the citations and often this may be an excessively short period. Because of that, the analysis also considers the Five Year Impact Factor (IF5) that has the same procedure as the Impact Factor, but considering the last five years of citations. Finally, note that the investigation considers a time space of 25 years (1989 – 2013) and the information was collected in October 2014.

III. RESULTS

In this section, let us present the results of the study. The following tables contain all the indicators described in the previous section and are separated by the seven categories. Observe that only the top 20 journals in each category are presented. First, let us look into the Education Studies category which is at the core of the educational research discipline. Table 1 presents a ranking of the journals in this category ordered according to the total number of citations.

Next, let us present the Professional Development and Curriculum Studies of Teachers category. Note that this category could be divided in two groups. The reason for including the Professional Development and Curriculum Studies of Teachers together is that many journals are publishing papers that could be classified in both groups. Therefore, it is better to group all of them together to avoid omissions in one of the categories. Table 2 presents the results.

The category of Education and Technology is still small although it is growing a lot due to the fact that technology has become in the last years a powerful tool for improving and adding new educational techniques. The results of this category are shown in Table 3.

The category of Psychology and Education is the biggest one of all. The main reason for this is that it includes journals

from education and psychology, which are very broad subjects. Table 4 presents the journal rankings.

Next, let us present the category of Scientific Disciplines and Education. This category includes journals that integrate two big areas: scientific disciplines and education. This produces an overlap between citations because it collects cites from many topics. Table 5 shows the results.

Special Education is a category that includes all the journals related to research regarding learning differences and disabilities. The results are shown in Table 6.

Social Sciences Disciplines and Education it is also a category that includes journals from different fields. Among others it is worth noting history, anthropology, sociology and economics. The results of this category are presented in Table 7.

Each educational category shows a different profile regarding the publication and citation structure. In order to see the differences between them, let us compare each category from a global perspective. Table 8 presents several bibliometric indicators for each category.

As we can see, the most cited category is Psychology & Education. Indeed this reaffirms the individual results found in this category where the interdisciplinary nature brings a higher degree of citations than in other areas. The huge differences between this category and the rest can be seen in the TC/TP ratio where the value of Psychology & Education is two to four times higher than the rest of categories. This occurs because this category aligns with Psychology which is a research field with a higher citation rate than the common social sciences. The rest of the categories obtain results in accordance to their size.

Next, let us classify the citation evolution of each category by years. Table 9 presents the number of annual citations received in each category.

Psychology & Education is the field with the highest number of citations although during the last decade, Professional Development of Teachers and Curriculum Studies and Education and Scientific Disciplines are receiving more citations. The citation level of the last five years is still very low because these papers still need more time to consolidate their citation structure.

Table 1. Journals in Education Studies

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|--|-------|------|----|-------|------|----|-------|-------|
| 1 | Review of Educational Research | 32198 | 505 | 97 | 63,76 | 1989 | 59 | 5.000 | 6.261 |
| 2 | American Educational Research Journal | 26509 | 809 | 82 | 32,77 | 1989 | 26 | 2.275 | 3.618 |
| 3 | International Journal of Science Education | 25097 | 2068 | 56 | 12,14 | 1989 | 11 | 1.516 | 2.023 |
| 4 | Science Education | 21760 | 1329 | 64 | 16,37 | 1989 | 73 | 2.921 | 3.623 |
| 5 | Language Learning | 12673 | 747 | 56 | 16,97 | 1989 | 39 | 1.433 | 2.248 |
| 6 | Harvard Educational Review | 11112 | 1159 | 55 | 9,59 | 1989 | 59 | 1.080 | 1.317 |
| 7 | Journal of Educational Research | 10449 | 978 | 42 | 10,68 | 1989 | 82 | 0.847 | 1.282 |
| 8 | Journal of the Learning Sciences | 9929 | 390 | 53 | 25,46 | 1995 | 4 | 2.862 | 3.260 |
| 9 | British Educational Research Journal | 6513 | 1115 | 36 | 5,84 | 2000 | 26 | 1.172 | 1.760 |
| 10 | Journal of Experimental Education | 5846 | 540 | 35 | 10,83 | 1989 | 57 | 0.643 | 1.278 |
| 11 | Oxford Review of Education | 5832 | 971 | 29 | 6,01 | 1989 | 15 | 0.537 | 0.897 |
| 12 | Educational Research | 4970 | 975 | 28 | 5,10 | 1989 | 31 | 0.339 | 0.750 |
| 13 | Review of Research in Education | 4885 | 165 | 38 | 29,61 | 1990 | 16 | 0.900 | 2.423 |
| 14 | Comparative Education | 4705 | 1091 | 28 | 4,31 | 1989 | 25 | 0.724 | 0.848 |
| 15 | Comparative Education Review | 4281 | 1527 | 27 | 2,80 | 1989 | 33 | 0.907 | 1.115 |
| 16 | Gender and Education | 3756 | 903 | 27 | 4,16 | 2000 | 12 | 0.705 | 0.757 |
| 17 | Educational Studies | 3476 | 922 | 23 | 3,77 | 1989 | 15 | 0.351 | 0.563 |
| 18 | British Journal of Educational Studies | 3340 | 1848 | 22 | 1,81 | 1989 | 37 | 0.636 | 1.046 |
| 19 | Educational Review | 2931 | 1807 | 22 | 1,62 | 1989 | 41 | 0.544 | 0.711 |
| 20 | Educational Researcher | 2761 | 319 | 25 | 8,66 | 2008 | 37 | 2.963 | 3.914 |

Table 2. Journals in Professional Development and Curriculum Studies of Teachers

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|---|-------|------|----|-------|------|----|-------|-------|
| 1 | Journal of Research in Science Teaching | 36001 | 1630 | 74 | 22,09 | 1989 | 26 | 3.020 | 3.782 |
| 2 | Health Education Research | 30001 | 1713 | 71 | 17,51 | 1991 | 6 | 1.944 | 2.508 |
| 3 | Teaching and Teacher Education | 22236 | 2011 | 54 | 11,06 | 1989 | 5 | 1.607 | 1.612 |
| 4 | Aids Education and Prevention | 20054 | 1200 | 56 | 16,71 | 1992 | 4 | 1.505 | 2.298 |
| 5 | Learning and Instruction | 14942 | 672 | 53 | 22,24 | 1997 | 7 | 3.079 | 4.071 |
| 6 | Journal of American College Health | 14787 | 1120 | 55 | 13,20 | 1994 | 43 | 1.397 | 2.223 |
| 7 | Higher Education | 14689 | 1876 | 48 | 7,83 | 1989 | 18 | 1.124 | 1.354 |
| 8 | Reading Research Quarterly | 14539 | 738 | 59 | 19,70 | 1989 | 24 | 1.650 | 2.681 |
| 9 | Tesol Quarterly | 13964 | 1667 | 54 | 8,38 | 1989 | 23 | 1.000 | 1.179 |
| 10 | Teacher College Record | 13515 | 2589 | 46 | 5,22 | 1989 | 90 | 0.722 | 1.169 |
| 11 | Journal of College Student Development | 12733 | 2210 | 37 | 5,76 | 1989 | 30 | 0.355 | 0.796 |
| 12 | Elementary School Journal | 11223 | 755 | 47 | 14,86 | 1989 | 89 | 1.111 | 1.641 |
| 13 | Research in Higher Education | 11065 | 911 | 43 | 12,15 | 1989 | 30 | 1.141 | 1.656 |
| 14 | Phi Delta Kappan | 10979 | 5758 | 35 | 1,91 | 1989 | 70 | 0.214 | 0.190 |
| 15 | Studies in Higher Education | 10876 | 1600 | 45 | 6,80 | 1989 | 14 | 1.278 | 1.985 |
| 16 | Early Childhood Research Quarterly | 10869 | 763 | 47 | 14,25 | 1994 | 9 | 2.058 | 3.657 |
| 17 | Journal of Higher Education | 10624 | 1324 | 45 | 8,02 | 1989 | 60 | 1.051 | 1.626 |
| 18 | Journal of Teacher Education | 10534 | 1093 | 41 | 9,64 | 1989 | 40 | 2.208 | 3.110 |
| 19 | Reading and Writing | 10383 | 737 | 47 | 14,09 | 1990 | 2 | 1.331 | 1.828 |
| 20 | Instructional Science | 7771 | 650 | 38 | 11,96 | 1989 | 18 | 1.130 | 2.016 |

Table 3. Journals in Education & Technology

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|---|-------|------|----|-------|------|----|-------|-------|
| 1 | Computers & Education | 29269 | 2847 | 61 | 10,28 | 1989 | 13 | 2.630 | 3.242 |
| 2 | ETR-D Educational Techn. Research and Development | 11929 | 1076 | 49 | 11,09 | 1989 | 37 | 0.919 | 1.535 |
| 3 | British Journal of Education Technology | 9844 | 2793 | 37 | 3,52 | 1989 | 20 | 1.394 | 1.912 |
| 4 | IEEE Transactions on Education | 9767 | 1683 | 33 | 5,80 | 1989 | 32 | 1.220 | 1.383 |
| 5 | Journal of Computer Assisted Learning | 8750 | 817 | 42 | 10,71 | 1995 | 11 | 1.023 | 1.836 |
| 6 | Journal of Educational Computing Research | 5838 | 806 | 33 | 7,24 | 1989 | 5 | 0.659 | 0.858 |
| 7 | Educational Technology Society | 5797 | 1006 | 30 | 5,76 | 2003 | 6 | 0.824 | 1.340 |
| 8 | Language Learning Technology | 2693 | 334 | 29 | 8,06 | 2003 | 7 | 1.929 | 2.362 |
| 9 | Int. J. Computer Supported Collaborative Learning | 2121 | 196 | 24 | 10,82 | 2006 | 1 | 1.830 | 2.609 |
| 10 | Computer Applications in Engineering Education | 1914 | 717 | 14 | 2,67 | 1997 | 5 | 0.449 | 0.725 |
| 11 | Australasian Journal of Educational Technology | 1910 | 443 | 18 | 4,31 | 2007 | 23 | 0.875 | 1.198 |
| 12 | Internet and Higher Education | 1459 | 212 | 18 | 6,88 | 2008 | 11 | 2.048 | 2.635 |
| 13 | Journal of Science Education and Technology | 1241 | 368 | 14 | 3,37 | 2008 | 17 | 0.869 | 1.296 |
| 14 | Int. Journal of Technology and Design Education | 1098 | 340 | 15 | 3,23 | 2000 | 10 | 0.733 | 0.902 |
| 15 | Interactive Learning Environments | 1060 | 256 | 15 | 4,14 | 2003 | 11 | 0.750 | 1.032 |
| 16 | System | 983 | 446 | 12 | 2,20 | 2008 | 36 | 0.889 | 1.142 |
| 17 | Learning Media and Technology | 705 | 199 | 13 | 3,54 | 2008 | 33 | 0.958 | 1.529 |
| 18 | IEEE Transactions on Learning Technologies | 671 | 202 | 12 | 3,32 | 2008 | 1 | 1.220 | 1.383 |
| 19 | Computer Assisted Language Learning | 626 | 154 | 11 | 4,06 | 2008 | 21 | 1.023 | 1.836 |
| 20 | Recall | 354 | 120 | 10 | 2,95 | 2009 | 21 | 1.226 | N/A |

Table 4. Journals in Psychology & Education

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|--|--------|------|-----|-------|------|----|-------|-------|
| 1 | Child Development | 206420 | 3190 | 194 | 64,71 | 1989 | 60 | 4.235 | 5.834 |
| 2 | Journal of Educational Psychology | 82429 | 1665 | 133 | 49,51 | 1989 | 81 | 2.909 | 5.301 |
| 3 | Journal of Counseling Psychology | 42281 | 1348 | 85 | 31,37 | 1989 | 36 | 2.955 | 3.608 |
| 4 | Educational and Psychological Measurement | 26010 | 1943 | 62 | 13,39 | 1989 | 49 | 1.167 | 1.582 |
| 5 | Educational Psychologist | 23220 | 553 | 78 | 41,99 | 1989 | 24 | 4.844 | 4.161 |
| 6 | School Psychology Review | 18695 | 1168 | 58 | 16,01 | 1989 | 18 | 1.655 | 2.645 |
| 7 | Contemporary Educational Psychology | 17305 | 731 | 58 | 23,67 | 1989 | 14 | 2.000 | 3.159 |
| 8 | British Journal of Educational Psychology | 16917 | 1734 | 58 | 9,76 | 1989 | 59 | 2.250 | 2.468 |
| 9 | Educational Psychology Review | 15198 | 562 | 67 | 27,04 | 1989 | 1 | 2.846 | 3.974 |
| 10 | Journal of School Psychology | 13398 | 828 | 53 | 16,18 | 1989 | 27 | 2.282 | 3.470 |
| 11 | Cognition and Instruction | 11986 | 354 | 57 | 33,86 | 1989 | 6 | 1.750 | 2.403 |
| 12 | Discourse Processes | 11887 | 647 | 50 | 18,37 | 1989 | 12 | 0.962 | 1.411 |
| 13 | Psychology in the Schools | 11811 | 1719 | 38 | 6,87 | 1989 | 26 | 0.566 | 1.283 |
| 14 | Journal for Research in Mathematics Education | 9792 | 891 | 46 | 10,99 | 1989 | 20 | 1.000 | 1.730 |
| 15 | Learning and Individual Differences | 8760 | 933 | 38 | 9,39 | 1993 | 5 | 1.565 | 2.158 |
| 16 | Creativity Research Journal | 8161 | 767 | 42 | 10,64 | 1994 | 7 | 1.514 | 1.605 |
| 17 | Journal of Educational Measurement | 7384 | 650 | 39 | 11,36 | 1989 | 26 | 0.867 | 1.064 |
| 18 | School Psychology Quarterly | 6932 | 538 | 39 | 12,88 | 1994 | 9 | 1.000 | 2.508 |
| 19 | J. Applied Research in Intellectual Disabilities | 6833 | 2073 | 31 | 3,30 | 1996 | 9 | 0.982 | 1.465 |
| 20 | Journal of Psychoeducational Assessment | 5661 | 988 | 30 | 5,73 | 1990 | 8 | 1.120 | 1.280 |

Table 5. Journals in Scientific Disciplines & Education

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|---|-------|-------|----|-------|------|----|-------|-------|
| 1 | Academic Medicine | 94353 | 8560 | 97 | 11,02 | 1989 | 64 | 3.468 | 3.654 |
| 2 | Journal of Chemical Education | 54580 | 12026 | 60 | 4,54 | 1989 | 66 | 1.001 | 1.046 |
| 3 | Medical Education | 53778 | 4879 | 77 | 11,02 | 1989 | 23 | 3.617 | 3.963 |
| 4 | American Journal of Physics | 41560 | 6017 | 67 | 6,91 | 1989 | 57 | 0.804 | 0.853 |
| 5 | Medical Teacher | 24180 | 3619 | 51 | 6,68 | 1989 | 11 | 2.045 | 2.170 |
| 6 | Journal of School Health | 20531 | 2150 | 57 | 9,55 | 1989 | 59 | 1.659 | 2.132 |
| 7 | Nurse Education Today | 15333 | 2644 | 31 | 5,80 | 1994 | 14 | 1.456 | 1.641 |
| 8 | American Journal of Pharmaceutical Education | 9281 | 3019 | 23 | 3,07 | 1989 | 53 | 1.188 | 1.461 |
| 9 | Journal of Nutrition Education and Behavior | 7709 | 1080 | 34 | 7,14 | 2002 | 34 | 1.474 | 2.072 |
| 10 | Advances in Health Sciences Education | 6753 | 728 | 32 | 9,28 | 1996 | 1 | 2.705 | 2.976 |
| 11 | Teaching and Learning in Medicine | 6298 | 924 | 30 | 6,82 | 1996 | 8 | 1.118 | 1.173 |
| 12 | European Journal of Physics | 5731 | 1821 | 24 | 3,15 | 2001 | 22 | 0.619 | 0.652 |
| 13 | International Journal of Engineering Education | 5334 | 1994 | 20 | 2,68 | 1997 | 13 | 0.360 | 0.434 |
| 14 | Advances in Physiology Education | 5085 | 883 | 29 | 5,76 | 1995 | 13 | 1.237 | 1.389 |
| 15 | Journal of Cancer Education | 4431 | 1089 | 23 | 4,07 | 2000 | 15 | 1.054 | 0.978 |
| 16 | Journal of Engineering Education | 4389 | 393 | 29 | 11,17 | 2004 | 93 | 2.717 | 2.801 |
| 17 | American Biology Teacher | 4271 | 2837 | 20 | 1,51 | 1989 | 51 | 0.369 | 0.295 |
| 18 | J. Continuing Education in the Health Professions | 3585 | 408 | 24 | 8,79 | 2005 | 25 | 1.190 | 1.729 |
| 19 | Journal of Biological Education | 3009 | 1195 | 22 | 2,52 | 1989 | 23 | 0.424 | 0.566 |
| 20 | Biochemistry and Molecular Biology Education | 2948 | 1131 | 19 | 2,61 | 2000 | 28 | 0.593 | 0.610 |

Table 6. Journals in Special Education

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|--|-------|------|----|-------|------|-----|-------|-------|
| 1 | Journal of Intellectual Disability Research | 29388 | 6521 | 63 | 4,51 | 1992 | 36 | 2.411 | 2.800 |
| 2 | Journal of Learning Disabilities | 29093 | 1561 | 69 | 18,64 | 1989 | 22 | 2.025 | 2.807 |
| 3 | Research in Developmental Disabilities | 23404 | 2231 | 58 | 10,49 | 1989 | 10 | 2.735 | 2.869 |
| 4 | Exceptional Children | 18000 | 920 | 59 | 19,57 | 1989 | 55 | 1.941 | 2.943 |
| 5 | Journal of Special Education | 9248 | 626 | 42 | 14,77 | 1989 | 23 | 1.359 | 2.022 |
| 6 | Remedial and Special Education | 9050 | 1025 | 36 | 8,83 | 1989 | 10 | 1.013 | 1.070 |
| 7 | Journal of Emotional and Behavioral Disorders | 7701 | 453 | 44 | 17,00 | 1994 | 2 | 0.846 | 1.479 |
| 8 | Topics in Early Childhood Special Education | 7036 | 649 | 39 | 10,84 | 1989 | 9 | 1.364 | 1.814 |
| 9 | Research in Autism Spectrum Disorders | 6273 | 782 | 31 | 8,02 | 2007 | 1 | 2.378 | 2.665 |
| 10 | Learning Disability Quarterly | 6184 | 595 | 34 | 10,39 | 1989 | 12 | 0.643 | 1.440 |
| 11 | Journal of Fluency Disorders | 6069 | 1009 | 32 | 6,01 | 1989 | 14 | 1.082 | 1.571 |
| 12 | Annals of Dyslexia | 5974 | 378 | 42 | 15,80 | 1989 | 39 | 1.792 | 2.357 |
| 13 | Journal of Intellectual Developmental Disability | 5085 | 714 | 31 | 7,12 | 1996 | 21 | 1.061 | 1.556 |
| 14 | American Annals of the Deaf | 4702 | 1079 | 24 | 4,36 | 1989 | 134 | 0.885 | 1.080 |
| 15 | Journal of Early Intervention | 4640 | 600 | 30 | 7,73 | 1991 | 15 | 1.030 | 1.190 |
| 16 | Gifted Child Quarterly | 4221 | 825 | 24 | 5,12 | 1989 | 33 | 1.000 | 0.881 |
| 17 | Journal of Positive Behavior Interventions | 3547 | 310 | 30 | 11,44 | 2002 | 4 | 1.163 | 2.052 |
| 18 | Journal of Deaf Studies and Deaf Education | 2447 | 425 | 23 | 5,76 | 2005 | 10 | 1.754 | 2.045 |
| 19 | Intervention in School and Clinic | 2097 | 1018 | 17 | 2,06 | 1994 | 30 | 0.274 | 0.440 |
| 20 | Dyslexia | 2054 | 234 | 21 | 8,78 | 2003 | 9 | 1.189 | 1.918 |

Table 7. Journals in Social Sciences Disciplines & Education

| R | Name | TC | TP | H | TC/TP | Y | V | IF | IF5 |
|----|--|-------|------|----|-------|------|----|-------|-------|
| 1 | Sociology of Education | 15089 | 491 | 64 | 30,73 | 1989 | 62 | 2.270 | 2.941 |
| 2 | Educational Leadership | 10781 | 5239 | 37 | 2,06 | 1989 | 46 | 0.123 | 0.225 |
| 3 | Economics of Education Review | 10778 | 1384 | 43 | 7,79 | 1995 | 14 | 1.146 | 1.565 |
| 4 | Educational Evaluation and Policy Analysis | 9749 | 487 | 45 | 20,02 | 1992 | 14 | 2.021 | 2.685 |
| 5 | British Journal of Sociology of Education | 8423 | 1322 | 36 | 6,37 | 1989 | 10 | 0.753 | 0.957 |
| 6 | Journal of Educational and Behavioral Statistics | 8284 | 513 | 38 | 16,15 | 1994 | 19 | 1.016 | 1.304 |
| 7 | Academy of Management Learning Education | 6845 | 769 | 37 | 8,90 | 2002 | 1 | 2.121 | 3.579 |
| 8 | Educational Gerontology | 6487 | 2071 | 27 | 3,13 | 1989 | 15 | 0.368 | 0.603 |
| 9 | Quest | 6399 | 841 | 36 | 7,61 | 1989 | 41 | 0.902 | 0.994 |
| 10 | Journal of Education Policy | 6289 | 853 | 33 | 7,37 | 1999 | 14 | 0.921 | 1.557 |
| 11 | Educational Administration Quarterly | 6227 | 726 | 34 | 8,58 | 1989 | 25 | 0.723 | 1.375 |
| 12 | Academic Psychiatry | 6155 | 1409 | 25 | 4,37 | 1995 | 19 | 1.243 | 1.479 |
| 13 | Journal of Social Work Education | 5926 | 1669 | 25 | 3,55 | 1989 | 25 | 0.439 | 0.771 |
| 14 | Journal of Geography in Higher Education | 5569 | 981 | 27 | 5,68 | 1989 | 13 | 0.859 | 1.135 |
| 15 | Anthropology Education Quarterly | 5063 | 1079 | 29 | 4,69 | 1989 | 20 | 0.765 | 0.930 |
| 16 | Urban Education | 4078 | 928 | 25 | 4,39 | 1989 | 23 | 0.657 | 0.753 |
| 17 | Journal of Economic Education | 3931 | 999 | 24 | 3,93 | 1989 | 20 | 0.329 | 0.429 |
| 18 | Educational Policy | 3920 | 860 | 26 | 4,56 | 1989 | 3 | 0.409 | 0.722 |
| 19 | Journal of Moral Education | 3753 | 1242 | 22 | 3,02 | 1989 | 18 | 0.306 | 0.604 |
| 20 | Education and Urban Society | 3305 | 777 | 22 | 4,25 | 1989 | 21 | 0.365 | 0.484 |

Table 8. Global results for each of the seven categories of educational research

| R | Name | NJ | H | TC | TP | TC/TP | T200 |
|---|---|----|-----|--------|-------|-------|------|
| 1 | Psychology & Education | 41 | 220 | 593781 | 31781 | 18,68 | 122 |
| 2 | Professional Development of Teachers and Curriculum Studies | 73 | 139 | 405354 | 63449 | 6,39 | 15 |
| 3 | Scientific Disciplines & Education | 38 | 139 | 390636 | 63678 | 6,13 | 22 |
| 4 | Education Studies | 59 | 146 | 223691 | 35979 | 6,22 | 29 |
| 5 | Special Education | 39 | 99 | 198774 | 26018 | 7,64 | 6 |
| 6 | Social Sciences Disciplines & Education | 52 | 97 | 160932 | 35151 | 4,58 | 5 |
| 7 | Education & Technology | 25 | 88 | 98749 | 15789 | 6,25 | 1 |

Table 9. Citation evolution in educational research classified by the seven categories

| Years | ES | ET | PDTCS | PE | SDE | SSDE | SE | Total |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 1989 | 7422 | 1370 | 9924 | 21595 | 8947 | 3476 | 6712 | 59446 |
| 1990 | 8021 | 1261 | 12104 | 24295 | 13464 | 4158 | 5711 | 69014 |
| 1991 | 8565 | 1405 | 13198 | 23719 | 10838 | 4596 | 7010 | 69331 |
| 1992 | 9245 | 1136 | 13240 | 21782 | 12634 | 5353 | 6843 | 70233 |
| 1993 | 9004 | 1640 | 13965 | 24532 | 11964 | 5142 | 7498 | 73745 |
| 1994 | 9021 | 2021 | 13662 | 25504 | 11268 | 5111 | 8365 | 74952 |
| 1995 | 10319 | 1845 | 18264 | 25568 | 11697 | 6165 | 7707 | 81565 |
| 1996 | 10463 | 2022 | 17032 | 33226 | 13459 | 5954 | 8616 | 90772 |
| 1997 | 9459 | 2535 | 18244 | 21613 | 13939 | 7028 | 8433 | 81251 |
| 1998 | 11177 | 1966 | 18923 | 26135 | 16582 | 7691 | 8373 | 90847 |
| 1999 | 9226 | 2895 | 18479 | 21939 | 19155 | 8860 | 8304 | 88858 |
| 2000 | 12819 | 3783 | 23629 | 29578 | 19621 | 8247 | 9510 | 107187 |
| 2001 | 11789 | 3521 | 20664 | 27633 | 20054 | 7568 | 8097 | 99326 |
| 2002 | 10787 | 3631 | 23270 | 24439 | 22858 | 9749 | 8904 | 103638 |
| 2003 | 11124 | 5888 | 20915 | 23733 | 20926 | 10165 | 10006 | 102757 |
| 2004 | 11659 | 5144 | 22208 | 24506 | 25810 | 9003 | 9541 | 107871 |
| 2005 | 9988 | 7063 | 20396 | 18742 | 24840 | 8945 | 11219 | 101193 |
| 2006 | 11245 | 6281 | 22103 | 20104 | 23022 | 8394 | 9441 | 100590 |
| 2007 | 9225 | 7884 | 18660 | 18345 | 23117 | 7718 | 9812 | 94761 |
| 2008 | 11582 | 11906 | 20571 | 15267 | 20455 | 8303 | 8203 | 96287 |
| 2009 | 10451 | 11242 | 17878 | 12642 | 20383 | 7905 | 10059 | 90560 |
| 2010 | 7833 | 9800 | 14145 | 11012 | 18833 | 5831 | 8668 | 76122 |
| 2011 | 5428 | 6227 | 9192 | 7272 | 14075 | 3911 | 7499 | 53604 |
| 2012 | 3095 | 4075 | 5392 | 3758 | 9402 | 2146 | 3932 | 31800 |
| 2013 | 1293 | 2023 | 2098 | 1783 | 5754 | 916 | 1792 | 15659 |

IV. CONCLUSION

This article presents a general overview of the publication and citation structure of all the journals that are currently indexed in WoS in any of the four educational categories. In order to be more specific, this study has classified education research in seven categories: Education Studies, Professional Development and Curriculum Studies of Teachers, Education & Technology, Psychology & Education, Scientific Disciplines & Education, Special Education and Social Sciences Disciplines & Education.

Education Studies is the core category in educational research having many of the leading general education journals. However, Psychology & Education is the discipline with the highest results according to the total number of articles and cites. Another interesting issue seen in the analysis is that most of the journals are English-speaking although some non-English speaking journals are found in the list, but usually far away from the top.

Note that in future research we expect to develop further developments by analysing other general variables including leading authors, universities and countries in the field. Additionally, sometimes it also becomes interesting to focus on a specific region such as Europe or Asia [14].

REFERENCES

- [1] B.S. Aylward, M.C. Roberts, J. Colombo, R.G. Steele, Identifying the classics: an examination of articles published in the *Journal of Pediatric Psychology* from 1976–2006. *Journal of Pediatric Psychology*, 33: 576-589, 2008.
- [2] R.N. Broadus, Toward a definition of “Bibliometrics”. *Scientometrics*, 12:373-379, 1987.
- [3] Y.H. Chang, C.Y. Chang, Y.H. Tseng, Trends of science education research: An automatic content analysis. *Journal of Science Education and Technology*, 19: 315-331, 2010.
- [4] B. Cheng, M.H. Wang, A.I. Morch, N.S. Chen, H.W.H. Kinshuk, J.M. Spector, Research of e-learning in the workplace 2000-2012: A bibliometric analysis of the literature. *Educational Research Review*, 11:56-72, 2014.
- [5] E. Garfield, Citation Indexes for Science. *Science*, 122: 108-111, 1955.
- [6] E. Garfield, Significant journals of science. *Nature*, 264: 609-615, 1976.
- [7] E. Garfield, I.H. Sher, New factors in the evaluation of scientific literature through citation indexing. *American Documentation*, 14: 195-201, 1963.
- [8] J.E. Hirsch, An index to quantify an individual’s scientific research output. *Proceedings of the National Academy of Sciences of the United States of America*, 102:16569-16572, 2005.
- [9] P.H. Hsieh, T. Acee, W.H. Chung, Y.P. Hsieh, H. Kim, G.D. Thomas, J. You, D.H. Robinson, An alternate look at educational psychologist's productivity from 1991 to 2002. *Contemporary Educational Psychology*, 29: 333-343, 2004.
- [10] H.W.H. Kinshuk, D. Sampson, N.S. Chen, Trends in educational technology through the lens of the highly cited articles published in the journal of educational technology and society. *Educational Technology & Society*, 16:3-20, 2013.

- [11] J.M. Merigó, A.M. Gil-Lafuente, R.R. Yager, An overview of fuzzy research with bibliometric indicators. *Applied Soft Computing*, 27: 420-433, 2015.
- [12] J.M. Merigó, A. Mas-Tur, N. Roig-Tierno, D. Ribeiro-Soriano, A bibliometric overview of the Journal of Business Research between 1973 and 2014. *Journal of Business Research*, 68: 2645-2653, 2015.
- [13] A. Togia, N. Tsigilis, Impact factor and education journals: A critical examination and analysis. *International Journal of Educational Research*, 45:362-379, 2006.
- [14] C.C. Tsai, Y.T. Wu, Y.C. Lin, J.C. Liang, Research regarding science learning in Asia: An analysis of selected science education journals. *The Asia-Pacific Education Researcher*, 20:352-363, 2011.