junior 782

by Gomit Id

Submission date: 08-Jan-2024 05:52AM (UTC-0800)
Submission ID: 2267900802
File name: jurnal_782_revision.docx (190.39K)
Word count: 2172
Character count: 11976

OPEN ACCESS
Journal of Early Childhood Learning Vol 1 No 1 (2024) https://doi.org : xxxx.xxxx
Check for updates
Research Article

The Effect of Number Media Games on the Counting Ability of 5-6 Year Old Children at Dharma Wanita Kindergarten, Kedurang District

Received : December 5, 2023	Revised : December 24, 2023	Accepted: January 10, 2024	Publish : January 15, 2024

Rinzi Iswi*, Mona Ardina, Wembrayali

Abstract:
The purpose of this study was to find out the effect of the number block media on the numeracy ability of group B TK Dharma Wanita Kedurang District. This study used a quantitative approach with the type of research True experimental with Pretest-posttest Control Group Design. The population in this study was 26 children of group B. Determination of the sample in this study using saturated sampling. The data collected by using observation and test methods. Data analysis techniques to test in this study using the t-test. Based on the analysis by using a t-test, the t count was (4,005) while the t table was (2.056), which means t count > t table. So based on these results, it concluded that HO can't be accepted and Ha is accepted. Thus, it can be concluded that there is a significant effect of numbers media on the numeracy ability of group B children in Dharma Wanita Kindergarten, Kedurang District. It suggested that the teachers could follow up on the use of numbers media on early childhood numeracy ability and teachers should make other games that can also determine children's numeracy abilities.
Keywords: Numbers Block, Numbers Media, Numeracy Ability, Childhood, Group B

1. INTRODUCTION

Education in Indonesia starts from early childhood education to higher education. Early childhood education has now sprung up in many communities, both in formal and non-formal education (Feruza & Rano, 2021). Formally, TK/RA provides educational services for early childhood. In TK/RA, children will be educated and trained in various areas of habituation development which include morals. Religious values, social and independence. In TK/RA children are also educated with various fields of development of learning activities which include language, cognitive, physical motor and art (Denkowska et al., 2020). Education at an early age is the most important education for children in later life. The quality of experience gained by children in early childhood will make it more meaningful for their future, naturally children are active learners they really like to observe, explore, imagine, investigate, gather information and share experiences (Bustamante et al., 2018).

Publisher Note:
CV Media Inti Teknologi stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Copyright
©2024 by the author(s).
Licensee CV Media Inti Teknologi, Bengkulu, Indonesia. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution-ShareAlike (CC BY-SA) license. (https://creativecommons.org/licenses/by-sa/4.0/).

Childhood is an important period in the development of human life because childhood is a very early period in the life span that will ensure development in the following stages. So that is why education in kindergarten is one form of early childhood education that has an important role in preparing them to enter the next level of education (Sumiati & Ismawati, 2018).

Providing stimulation through education given to early childhood can help them to optimize the development of all aspects. One of them is the cognitive aspect. The development of cognitive abilities is a very important stage of development in early childhood. Cognitive development is a thinking process that consists of the ability to connect, take initiative, and reason (Mabtuhah et al., 2022). Because cognitive is the intelligence of the mind that can be used quickly and precisely for the brain's thinking process. The mind is used to recognize, know and understand. Human cognitive development develops from early childhood to adulthood. Each aspect of child development supports each other. Cognitive abilities consist of general knowledge and science, concepts of shape, color, size and pattern, concepts of number development, number symbols and letters (Fridberg et al., 2018).

For early childhood, cognitive stimulation is very important to help them develop various abilities such as logical thinking, problem solving, and counting. Counting itself is known to be an ability that parents expect their children to master, especially if they are about to enter elementary school.

Even so, it should still be noted that the development of children's reading skills can be caused by various factors including: a) heredity, b) environment, c) maturity, d) formation, e) talent and interest, f) freedom (Annisa, 2019). These factors need to be considered so that the stimulation provided can have an optimal impact on children.

The aspects of counting ability possessed by children aged 5 - 6 years are mentioning 1 - 10 numbers, counting by numbers, matching objects, with numbers, recognizing letter shapes and consonants, sorting number symbols (Sari & Zainuddin, 2021). These abilities need to be developed by children to be used in everyday life.

Based on the results of preliminary observations made by researchers at Dharma Wanita Kindergarten, Kedurang District, it was found that when teaching counting skills, learning media was still lacking. In the classroom, teachers stimulate children's counting skills using whiteboard media, LKA, and counting using seeds or small stones. Meanwhile, the use of educational game tools is less than optimal and media limitations.

Learning media is a very important and necessary tool, especially for cognitive development of children who still need concrete examples (Mayasari & Roesminigsih, 2012). There are so many media or APE that teachers can use in stimulating children's counting skills, one of which is using number block media. This media is said to make it easier for children to understand and understand counting or sorting numbers, and can affect children's counting skills which can develop when children are 5 - 6 years old (Restina et al., 2022).

The absence of the use of number block media in Dharma Wanita Kindergarten, Kedurang Subdistrict in stimulating the counting ability of children 5 - 6 years old is one of the reasons for researchers to raise the title of this study. Aims to describe how the influence of number block media on the counting ability of children aged 5 - 6 at Dharma Wanita Kindergarten, Kedurang Subdistrict.

2. MATERIAL AND METHOD

This research uses an experimental method with a quantitative approach. The experimental method is a quantitative research method used to determine the effect of independent variables (treatment / treatment) on dependent variables (results) under controlled conditions (Raco, 2018). With the design of true exsperimental design this research is Pretest-Posttest Control Group Design, said to be true experimental (actual experiment), because in this design, researchers can control all external variables that affect the course of the experiment (Abdussamad, 2021).

The population in this study were all class B students, where class B1 with 13 students and B2 with 13 students at Dharma Wanita Kindergarten, Kedurang District, totaling 26 students. The sampling technique used in this study was Nonprobability sampling and used saturated sampling. This means that all members of the population are sampled.

Data collection procedures using observation in the form of observing all processes in the number block game at Dharma Wanita Kindergarten, Kedurang Subdistrict. Second, the use of test instruments. The instruments used are oral tests and question sheets through number block media and number card media conducted on children. The data analysis technique used is the Kolmogorov-Smirnov test for data normality, the F test for homogeneity, and the T test for testing the hypothesis of the study.

3. RESULT AND DISCUSSION

3.1 Result

After it was found that the prerequisite tests had been met, namely normally distributed and homogeneous data, then testing with the T test was carried out with the following results:

Table 1. SPSS Output Hypothesis Test Using T Test

Independent Samples Test							
	t-test for Equality of Means						
	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper

Numeracy Skills	Equal variances assumed	4.005	24	.001	7.154	1.786	3.467	10.840
	Equal variances not assumed	4.005	21.693	.001	7.154	1.786	3.447	10.861

From the results of the data processing above with the SPSS application, it is known that the significance value is 0.001 <0.005. And when looking at the value of r count of 0.853 > r table 0.361 which means Ha is accepted and Ho is rejected. So, the number block media has an effect in improving the counting skills of children aged 5-6 years. This effect can be seen through an increase in the results of descriptive statistics. As the minimum, maximum, and average values of the data collected in the control increased during the experiment. Can be seen in table 2 below.

Table 2. SPSS Output Hypothesis Test Using T Test

No	Question Item Count	Post-test	
		Experiment	Control
1.	Maximum Value	81	75
2.	Minimum Value	68	58
3.	Mean	74.1	67.0
4.	Std.Deviation	3.73823	5.24404
5.	N	13	13
6.	Total Score	964	871

3.2 Discussion

In this study, through the number block media, children were able to mention the number symbols of 10 numbers (from the range of 1 - 99), children were able to match pictures with number symbols 1 - 25, children were able to complete the addition of numbers 1 - 10, children were able to complete the subtraction of numbers 1 - 10. This is in line with research conducted by previous researchers who stated that Cuisenaire block media can help children in mentioning number symbols, and can match numbers with number symbols well, and mention the results of addition and subtraction (Astuti, 2018). Not only that, some previous researchers have also stated that there is an effect of number block media games on children's counting and number symbol recognition skills (Pradana, 2016; Raudah et al., 2021). This is in line with the results in this study.

After being given treatment by applying number block games in group B of Dharma Wanita Kindergarten, Kedurang Subdistrict, there were no more children who had not developed their counting skills. Through hearing and seeing directly the shape of numbers, children can mention numbers properly and correctly. When the teacher asks the child to mention the number pointed to the child can correctly mention the number and when the teacher asks the child to show the number mentioned the child can correctly point to the number. In addition, children are also able to develop basic math skills such as the ability to see, distinguish, and recognize numbers. It can be seen from the results of the post-test that children get higher scores, so it can be seen that there is an effect of playing number blocks on counting skills.

Based on the results of collecting and analyzing literature review sources that have been carried out by the author, it states that both the use of number blocks packaged in the form of games or not, both have an influence on the counting skills of children aged 5-6 years. Because the number block game has advantages that make this game one of the right treatments to be given to children aged five to six years in mentioning the number symbol of 10 numbers (from the range of 1 - 99), matching pictures with number symbols 1 - 25, completing addition of numbers 1 - 10, completing subtraction of numbers 1 - 10.

4. CONCLUSION

Based on the results of the study, it shows that there is a difference in children's counting ability between students who learn with number blocks and number cards in group B at Dharma Wanita Kindergarten, Kedurang Subdistrict. The effect can be seen from the results of the analysis using the t-test obtained t count (4.005) while t table (2.056), which means t count> t table. So based on these results it is concluded that HO is rejected and Ha is accepted. Thus, it can be concluded that the number block media has an effect on the counting ability of children aged 5-6 years.

AUTHOR INFORMATION

Corresponding Authors

Mona Ardina, Faculty Of Teacher Training And Education, Bengkulu University, Indonesia;
https://orcid.org/0009-0000-6685-9131
Email: mona.ardina@gmail.com
Wembrayarli, Faculty Of Teacher Training And Education, Bengkulu University, Indonesia;
https://orcid.org/0009-0005-4956-9753
Email: wembrayarli@gmail.com

Authors

Rinzi Iswi, Faculty Of Teacher Training And Education, Bengkulu University, Indonesia;
https://orcid.org/0009-0007-1426-0232
Email: rinziiswi123@gmail.com

REFFERENCE

Abdussamad, H. Z. (2021). *Metode Penelitian Kualitatif* (Rapannam Patta, Ed.; 1st ed., Vol. 1). CV. Syakir Media Press.

Astuti, R. D. (2018). Pengaruh Penguuna Media Balok Cuisenaire Terhadap Kemampuan Berhitung Permulaan Anak Usia Dini Kelompok B di TK Nusa Indah Bulutengger Sekaran Lamongan. *Inovatif*, *4*(2), 92–114.

Bustamante, A. S., White, L. J., & Greenfield, D. B. (2018). Approaches to learning and science education in Head Start: Examining bidirectionality. *Early Childhood Research Quarterly*, *44*, 34–42.

Denkowska, S., Fijorek, K., & Wegrzyn, G. (2020). Formal and Non-formal education and training as an instrument fostering innovation and competitiveness in EU member countries. *Journal of Competitiveness*, *12*(3), 82–98. https://doi.org/10.7441/joc.2020.03.05

Feruza, U. U., & Rano, S. S. (2021). Development and education of preschool children. *Academicia: An International Multidciplinary Research Journal*, *11*(2), 326–329.

Fridberg, M., Thulin, S., & Redfors, A. (2018). Preschool children's Collaborative Science Learning Scaffolded by Tablets. *Research in Science Education*, *48*(5), 1007–1026. https://doi.org/10.1007/s11165-016-9596-9

Mabtuhah, Ridlwan, M., & Abidin, R. (2022). Pengaruh Permainan Menyusun Balok Terhadap Kemampuan Membilang Anak Usia 4-5 Tahun Di TK. Sejahtera Dusun Manceng, Desa. *Conference of Elementary Studies*, *1*(1), 261–275.

Mayasari, K., & Roesminigsih, E. (2012). Pengaruh Penggunaan Balok-Balok Angka Terhadap Kemampuan Mengenal Lambang Bilangan Pada Anak Kelompok A Di TK Aisyiyah Bustanul Athfal 7 Padangbandung Dukun Gresik. *Surabaya: PG. PAUD Universitas Surabaya*, 1–7.

Pradana, P. H. (2016). Pengaruh Permainan Balok Angka Terhadap Kemampuan Mengenal Lambang Bilangan Pada Anak Usia Dini. *Jurnal PAUD Tambusai*, *2*(2), 18–25.

Raco, J. R. (2018). *Metode Penelitian Kualitatif* (A. L, Ed.). PT Grasindo.

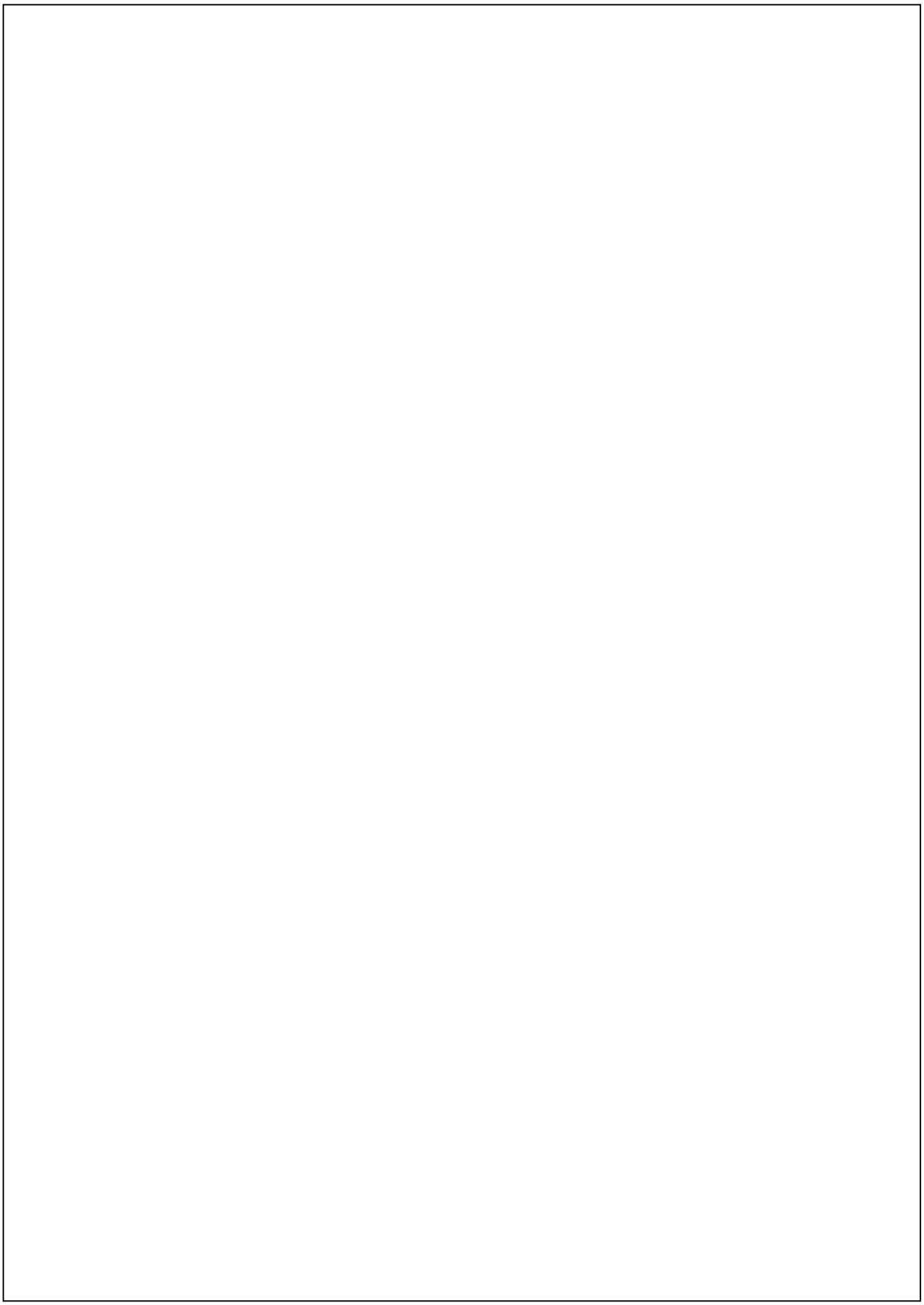
Raudah, R., Amilda, A., Sofyan, F. A., & Marlina, L. (2021). Pengaruh Permainan Balok Angka Terhadap Kemampuan Berhitung Anak Usia 5-6 Tahun di PAUD Marqisah. *Zuriah : Jurnal Pendidikan Anak Usia Dini*, *2*(2), 119. https://doi.org/10.29240/zuriah.v2i2.3588

Restina, Y., Salmina, M., & Hanum, C. F. (2022). Efektivitas Permainan Balok Angka Dalam Meningkatkan Kemampuan Berhitung Pada Anak Kelompok B Di TK Negeri 5 Banda Aceh. *Jurnal Ilmiah Mahasiswa*, *3*(2).

Sari, D. R., & Zainuddin, M. (2021). Kemampuan Berhitung Pada Anak Usia 5-6 Tahun. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, *5*(11), 1535–1539.

Sumiati, & Ismawati, P. (2018). Pengaruh Permainan Balok Angka Terhadap Kemampuan Berhitung Anak Pada Kelompok B Di RA Mu'awanah Al

Hasyimiah Di Mojoagung Kabupaten Jombang. *In PROCEEDING: The Annual International Conference on Islamic Education*, *3*(2), 69–75.



junior 782

ORIGINALITY REPORT

20%	16%	10%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Muhammad Munif, Muhammad Sali, Zaenol Fajri, Mahmuda Mahmuda, Tutik Farlina. "Implementation of Number Block Game Techniques for Learning Number Symbol in Early Childhood", Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 2022 Publication	2%
2	journal.pandawainstitute.com Internet Source	2%
3	jurnal.univpgri-palembang.ac.id Internet Source	2%
4	Muhammad Taufik Lesmana, Muhammad Arif, Muhammad Irfan Barus. "THE EFFECT OF COMPENSATION, WORK ENVIRONMENT AND WORK DISCIPLINE ON EMPLOYEE PERFORMANCE", International Journal of Economic, Technology and Social Sciences (Injects), 2021 Publication	1%
5	ejournal.lppmunidayan.ac.id Internet Source	1%

6	jurnal.narotama.ac.id Internet Source	1 %
7	eprints.uad.ac.id Internet Source	1 %
8	repo.uinsatu.ac.id Internet Source	1 %
9	j-innovative.org Internet Source	1 %
10	discovery.researcher.life Internet Source	1 %
11	repository.unusa.ac.id Internet Source	1 %
12	repository.unib.ac.id Internet Source	1 %
13	www.jurnal.ideaspublishing.co.id Internet Source	1 %
14	Tika Aryanti, Bukman Lian, Rahman Novianti. "Pengaruh Media Manipulatif Terhadap Kemampuan Mengenal Konsep Bilangan pada Anak Usia 4-5 Tahun di PAUD Zayyan Palembang", Indonesian Research Journal On Education, 2022 Publication	1 %
15	mojc.um.edu.my Internet Source	1 %

16	bimbelcalistungjogja.blogspot.com Internet Source	<1 %
17	caritulisan.com Internet Source	<1 %
18	enrichment.iocspublisher.org Internet Source	<1 %
19	etheses.uin-malang.ac.id Internet Source	<1 %
20	garuda.kemdikbud.go.id Internet Source	<1 %
21	Isabella Hasiana, Aniek Wirastania. "Pengaruh Musik dalam Mengembangkan Kemampuan Mengenal Bilangan Siswa Kelompok A di TK Lintang Surabaya", Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini, 2017 Publication	<1 %
22	arabtec-eg.com Internet Source	<1 %
23	early-childhood-education-degrees.zdzrf.com Internet Source	<1 %
24	journal.citradharma.org Internet Source	<1 %
25	www.neliti.com Internet Source	<1 %

26	www.researchgate.net Internet Source	<1%
27	Afifah Choirul Chotimah, Christina Kartika Sari, Annisa Swastika, Rini Setyaningsih. "Siswa Field Dependent dan Field Independent: Bagaimana Kemampuan Berpikir Kritisnya dalam Memecahkan Masalah HOTS?", Jurnal Cendekia : Jurnal Pendidikan Matematika, 2023 Publication	<1%

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		