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Syntax and Big Data

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The main goal of this paper is to analyze 638 KCI (Korea Citation Index) papers from 1980 to 2022. First, this paper provides information on published papers, their proportion, and their cumulative proportion. A point to note is that topic 8 was the most preferred one for authors, followed by topic 9, topic 5, and topic 1, in that order. A further point to note is that the word Syntax was the most used one in syntax papers, followed by the word study, the word paper, and the word analysis. With respect to the frequency of words occurred in 638 KCI papers, it is worth noting that the word *syntax* was the most frequently used one, followed by the word *space*, the word *study*, the word *analysis*, and the word *structure*. Finally, this paper provides the visualization of which words are neighboring ones with syntax. Simply put, the words way, paper, fact, theory, information, study, and *language* are linked to the word *syntax*.

Keywords: syntax, big data, biblio data collector, NetMiner, visualization, keyword, topic

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Introduction I.

The ultimate goal of this paper is to analyze 638 KCI papers in connection with the word syntax from 1980 to 2022. First, we look into the frequency of published articles, their proportion, and their cumulative proportion. Second, we examine 9 topics in which each topic is formed by five keywords. It must be noted that the so-called keyword analysis provides us with the information of which topic is mainly used in 638 KCI papers and that it provides us with the information of which topic is the preferred one. Third, a topic analysis shows us the information of which topic frequently occurs. Fourth, we are concerned with the term *degree* which refers to the frequency of documents.Fifth, we inquire into the frequency of words occurred with the word syntax. We examine the frequency of 88 words that were much used in syntax papers. Finally, we provide main words neighboring with the word syntax, which shows us the picture of which words co-occur with the word syntax. The organization of this paper is as follows. In section 3.1, we provide information on published papers, their proportion, and their cumulative proportion. In section 3.2, we provide 9 topics that are formed by 5 keywords. We argue that topic 8 was the most preferred one for authors, followed by topic 9, topic 5, and topic 1, in that order. In section 3.3, we further argue that the word Syntax was the most used one in syntax papers, followed by the word *study*, the word *paper*, and the word *analysis*. In section 3.5, we provide the visualization of which words are neighboring ones with syntax.

II. Methods

The main purpose of this paper is to analyze 638 KCI papers from 1980 to 2022. We used the biblio data collector and the software package NetMiner to analyze them. In this paper, we aim to answer the following questions: Can we provide information on papers published from 1980 to 2022 including their proportion and their cumulative proportion? Can we provide the keywords and topics of 638 KCI articles? Can we provide the frequency of documents in which words occur? Can we provide main words which were much used in 638 KCI articles? Finally, can we provide the information of which words are linked to the word syntax?

III. **Results**

3.1. Published papers

The goal of this section is to provide information on published papers, their proportion, and their cumulative proportion. Table 1 shows the published time of 638 KCI papers, their proportion, and their cumulative proportion:

Table 1 Information on published papers

Value	Frequency	Proportion	Cumulative Proportion
1985.04	1	0.002	0.002
1985.11	1	0.002	0.003
1995.12	1	0.002	0.005
1998.06	1	0.002	0.006
1999.11	1	0.002	0.008
2001.06	1	0.002	0.009
2001.09	1	0.002	0.011
2001.12	2	0.003	0.014
2002.03	1	0.002	0.016
2002.06	1	0.002	0.017
2002.07	1	0.002	0.019
2002.08	1	0.002	0.02
2002.09	4	0.006	0.027
2002.10	1	0.002	0.028
2002.11	3	0.005	0.033
2002.12	3	0.005	0.038
2003.03	1	0.002	0.039
2003.05	2	0.003	0.042
2003.06	9	0.014	0.056
2003.08	4	0.006	0.063
2003.09	1	0.002	0.064
2003.10	1	0.002	0.066
2003.11	2	0.003	0.069
2003.12	4	0.006	0.075
2004.02	2	0.003	0.078
2004.03	2	0.003	0.082
2004.06	5	0.008	0.089
2004.07	1	0.002	0.091
2004.08	3	0.005	0.096

2004.09	3	0.005	0.1
2004.10	1	0.002	0.102
2004.11	2	0.003	0.105
2004.12	4	0.006	0.111
2005.02	2	0.003	0.114
2005.03	2	0.003	0.118
2005.04	5	0.008	0.125
2005.05	1	0.002	0.127
2005.06	7	0.011	0.138
2005.07	2	0.003	0.141
2005.08	2	0.003	0.144
2005.09	1	0.002	0.146
2005.10	1	0.002	0.147
2005.12	4	0.006	0.154
2006.02	1	0.002	0.155
2006.03	3	0.005	0.16
2006.06	3	0.005	0.165
2006.07	1	0.002	0.166
2006.08	2	0.003	0.169
2006.10	1	0.002	0.171
2006.12	8	0.013	0.183
2007.02	2	0.003	0.187
2007.05	2	0.003	0.19
2007.06	9	0.014	0.204
2007.08	3	0.005	0.208
2007.09	2	0.003	0.212
2007.10	2	0.003	0.215
2007.11	7	0.011	0.226
2007.12	7	0.011	0.237
2008.01	1	0.002	0.238
2008.02	2	0.003	0.241

2008.03	2	0.003	0.245
2008.05	3	0.005	0.249
2008.06	4	0.006	0.255
2008.08	4	0.006	0.262
2008.09	5	0.008	0.27
2008.10	1	0.002	0.271
2008.11	3	0.005	0.276
2008.12	7	0.011	0.287
2009.02	1	0.002	0.288
2009.03	3	0.005	0.293
2009.04	3	0.005	0.298
2009.05	2	0.003	0.301
2009.06	4	0.006	0.307
2009.07	1	0.002	0.309
2009.08	2	0.003	0.312
2009.10	1	0.002	0.313
2009.11	4	0.006	0.32
2009.12	8	0.013	0.332
2010.02	2	0.003	0.335
2010.03	2	0.003	0.339
2010.04	2	0.003	0.342
2010.05	2	0.003	0.345
2010.06	4	0.006	0.351
2010.07	1	0.002	0.353
2010.08	2	0.003	0.356
2010.09	2	0.003	0.359
2010.10	2	0.003	0.362
2010.11	3	0.005	0.367
2010.12	3	0.005	0.371
2011.03	2	0.003	0.375
2011.04	1	0.002	0.376

2011.05	5	0.008	0.384
2011.06	3	0.005	0.389
2011.07	2	0.003	0.392
2011.08	5	0.008	0.4
2011.09	2	0.003	0.403
2011.10	2	0.003	0.406
2011.11	5	0.008	0.414
2011.12	5	0.008	0.422
2012.01	1	0.002	0.423
2012.02	1	0.002	0.425
2012.03	3	0.005	0.429
2012.04	2	0.003	0.433
2012.05	3	0.005	0.437
2012.06	3	0.005	0.442
2012.08	5	0.008	0.45
2012.09	2	0.003	0.453
2012.10	1	0.002	0.455
2012.11	4	0.006	0.461
2012.12	3	0.005	0.466
2013.01	1	0.002	0.467
2013.02	3	0.005	0.472
2013.03	1	0.002	0.473
2013.04	3	0.005	0.478
2013.05	3	0.005	0.483
2013.06	1	0.002	0.484
2013.08	2	0.003	0.487
2013.09	1	0.002	0.489
2013.10	3	0.005	0.494
2013.11	1	0.002	0.495
2013.12	3	0.005	0.5
2014.01	1	0.002	0.502

2014.02	6	0.009	0.511
2014.04	2	0.003	0.514
2014.05	1	0.002	0.516
2014.06	5	0.008	0.524
2014.08	2	0.003	0.527
2014.09	2	0.003	0.53
2014.10	1	0.002	0.531
2014.11	3	0.005	0.536
2014.12	3	0.005	0.541
2015.01	1	0.002	0.542
2015.02	1	0.002	0.544
2015.03	4	0.006	0.55
2015.04	4	0.006	0.556
2015.05	4	0.006	0.563
2015.06	3	0.005	0.567
2015.08	6	0.009	0.577
2015.09	5	0.008	0.585
2015.10	1	0.002	0.586
2015.11	2	0.003	0.589
2015.12	8	0.013	0.602
2016.01	1	0.002	0.603
2016.02	2	0.003	0.607
2016.03	6	0.009	0.616
2016.04	3	0.005	0.621
2016.05	1	0.002	0.622
2016.06	2	0.003	0.625
2016.08	4	0.006	0.632
2016.09	3	0.005	0.636
2016.10	2	0.003	0.639
2016.11	3	0.005	0.644
2016.12	6	0.009	0.654

2017.01 1 0.002 0.655 2017.02 1 0.002 0.657 2017.03 6 0.009 0.666 2017.04 3 0.005 0.671 2017.05 1 0.002 0.672 2017.06 2 0.003 0.676 2017.07 2 0.003 0.679 2017.08 1 0.002 0.682 2017.09 1 0.002 0.682 2017.10 2 0.003 0.685 2017.11 2 0.003 0.685 2017.12 7 0.011 0.696 2018.01 1 0.002 0.681 2018.02 4 0.006 0.704 2018.03 8 0.013 0.715 2018.04 1 0.002 0.718 2018.05 1 0.003 0.732 2018.06 8 0.013 0.735 2018.07 2 0.003				
2017.02 1 0.002 0.657 2017.03 6 0.009 0.666 2017.04 3 0.005 0.671 2017.05 1 0.002 0.672 2017.06 2 0.003 0.679 2017.07 2 0.003 0.689 2017.08 1 0.002 0.682 2017.09 1 0.002 0.682 2017.10 2 0.003 0.685 2017.11 2 0.003 0.685 2017.12 7 0.011 0.696 2018.01 1 0.002 0.697 2018.02 4 0.006 0.704 2018.03 8 0.013 0.716 2018.04 1 0.002 0.718 2018.05 1 0.003 0.735 2018.06 8 0.013 0.735 2018.07 2 0.003 0.735 2018.08 2 0.003	2017.01	1	0.002	0.655
2017.0360.0090.6662017.0430.0050.6712017.0510.0020.6722017.0620.0030.6762017.0720.0030.6792017.0810.0020.6822017.1020.0030.6852017.1270.0110.6962017.1270.0110.6962018.0110.0020.6872018.0240.0060.7042018.0380.0130.7162018.0410.0020.7182018.0510.0020.7182018.0680.0130.7322018.0720.0030.7352018.0820.0030.7352018.0920.0030.7352018.0920.0030.7482018.0940.0060.7742019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7882019.0560.0090.7922019.0560.0090.7922019.0560.0090.7922019.0560.0090.7922019.0560.0090.7982019.0560.0090.7932019.0560.0090.7932019.0560.0050.8032019.05 <t< td=""><td>2017.02</td><td>1</td><td>0.002</td><td>0.657</td></t<>	2017.02	1	0.002	0.657
2017.0430.0050.6712017.0510.0020.6722017.0620.0030.6792017.0720.0030.6792017.0810.0020.6822017.1020.0030.6852017.1170.0110.6962017.1270.0110.6962018.0110.0020.6872018.0240.0060.7042018.0380.0130.7162018.0410.0020.7182018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7352018.0920.0030.7352018.0940.0060.7482018.1040.0060.7482018.1150.0080.7552019.0250.0080.7552019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0560.0090.7922019.0560.0090.7982019.0530.0050.8032019.0930.0050.8052019.0930.0050.8052019.0930.0050.8052019.0930.0050.8052019.0930.0050.8052019.09 <t< td=""><td>2017.03</td><td>6</td><td>0.009</td><td>0.666</td></t<>	2017.03	6	0.009	0.666
2017.0510.0020.6722017.0620.0030.6792017.0720.0030.6892017.0810.0020.6822017.1120.0030.6852017.1270.0110.6962018.0110.0020.6972018.0240.0060.7042018.0380.0130.7162018.0410.0020.7192018.0510.0020.7192018.0680.0130.7162018.0720.0030.7322018.0820.0030.7352018.0510.0020.7192018.0640.0060.7482018.0720.0030.7352018.0820.0030.7552018.0940.0060.7552018.1040.0060.7552019.0110.0020.7552019.0250.0080.7552019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0560.0090.7922019.0560.0090.7922019.0560.0050.8032019.0560.0050.8032019.0530.0050.8032019.0560.0050.8032019.0560.0050.8032019.05 <t< td=""><td>2017.04</td><td>3</td><td>0.005</td><td>0.671</td></t<>	2017.04	3	0.005	0.671
2017.06 2 0.003 0.676 2017.07 2 0.003 0.679 2017.08 1 0.002 0.68 2017.09 1 0.002 0.682 2017.11 2 0.003 0.685 2017.12 7 0.011 0.696 2018.01 1 0.002 0.697 2018.02 4 0.006 0.704 2018.03 8 0.013 0.716 2018.04 1 0.002 0.718 2018.05 1 0.002 0.718 2018.05 1 0.002 0.719 2018.05 1 0.002 0.718 2018.05 1 0.002 0.718 2018.05 2 0.003 0.738 2018.05 2 0.003 0.738 2018.05 4 0.006 0.748 2018.01 1 0.002 0.763 2018.02 5 0.008	2017.05	1	0.002	0.672
2017.07 2 0.003 0.679 2017.08 1 0.002 0.68 2017.09 1 0.002 0.682 2017.11 2 0.003 0.685 2017.12 7 0.011 0.696 2018.01 1 0.002 0.697 2018.02 4 0.002 0.697 2018.03 8 0.013 0.716 2018.04 1 0.002 0.718 2018.05 1 0.002 0.718 2018.05 1 0.002 0.719 2018.05 1 0.002 0.719 2018.05 1 0.002 0.718 2018.05 2 0.003 0.735 2018.07 2 0.003 0.738 2018.09 2 0.003 0.741 2018.09 4 0.006 0.748 2018.01 1 0.002 0.765 2019.02 5 0.008	2017.06	2	0.003	0.676
2017.08 1 0.002 0.68 2017.09 1 0.003 0.682 2017.11 2 0.003 0.685 2017.12 7 0.011 0.696 2018.01 1 0.002 0.697 2018.02 4 0.006 0.704 2018.03 8 0.013 0.716 2018.04 1 0.002 0.718 2018.05 1 0.002 0.718 2018.05 1 0.002 0.719 2018.05 1 0.002 0.719 2018.05 1 0.003 0.732 2018.05 1 0.003 0.735 2018.07 2 0.003 0.738 2018.09 2 0.003 0.741 2018.01 4 0.006 0.748 2018.02 5 0.008 0.755 2018.11 5 0.008 0.755 2019.01 1 0.002	2017.07	2	0.003	0.679
2017.09 1 0.002 0.682 2017.11 2 0.003 0.685 2017.12 7 0.011 0.696 2018.01 1 0.002 0.697 2018.02 4 0.006 0.704 2018.03 8 0.013 0.716 2018.04 1 0.002 0.718 2018.05 1 0.002 0.718 2018.05 1 0.002 0.719 2018.05 1 0.002 0.718 2018.06 8 0.013 0.732 2018.07 2 0.003 0.735 2018.08 2 0.003 0.738 2018.09 2 0.003 0.744 2018.09 2 0.003 0.748 2018.01 4 0.006 0.748 2018.11 5 0.008 0.755 2019.02 5 0.008 0.773 2019.03 4 0.006	2017.08	1	0.002	0.68
2017.1120.0030.6852017.1270.0110.6962018.0110.0020.6972018.0240.0060.7042018.0380.0130.7162018.0410.0020.7182018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.0920.0030.805	2017.09	1	0.002	0.682
2017.1270.0110.6962018.0110.0020.6972018.0240.0060.7042018.0380.0130.7162018.0410.0020.7182018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7652018.1250.0080.7652019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0630.0050.8032019.072019.0840.0060.7982019.0930.0050.8032019.0930.0050.803	2017.11	2	0.003	0.685
2018.01 1 0.002 0.697 2018.02 4 0.006 0.704 2018.03 8 0.013 0.716 2018.04 1 0.002 0.718 2018.05 1 0.002 0.719 2018.05 1 0.002 0.719 2018.06 8 0.013 0.732 2018.07 2 0.003 0.735 2018.08 2 0.003 0.738 2018.09 2 0.003 0.741 2018.09 2 0.003 0.741 2018.10 4 0.006 0.748 2018.11 5 0.008 0.755 2018.12 5 0.008 0.755 2018.12 5 0.008 0.763 2019.01 1 0.002 0.765 2019.02 5 0.008 0.773 2019.03 4 0.006 0.779 2019.04 2 0.003	2017.12	7	0.011	0.696
2018.0240.0060.7042018.0380.0130.7162018.0410.0020.7182018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7652019.0250.0080.7732019.0340.0060.7492019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.0930.0050.8032019.0930.0050.8032019.0930.0050.803	2018.01	1	0.002	0.697
2018.0380.0130.7162018.0410.0020.7182018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.0930.0050.8032019.0930.0050.8032019.0930.0050.8032019.0930.0050.803	2018.02	4	0.006	0.704
2018.0410.0020.7182018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7652019.0110.0020.7652019.0250.0080.7792019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.0920.0030.8032019.0930.0050.8032019.0920.0030.8032019.0930.0050.8032019.0920.0030.805	2018.03	8	0.013	0.716
2018.0510.0020.7192018.0680.0130.7322018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.0930.0050.803	2018.04	1	0.002	0.718
2018.0680.0130.7322018.0720.0030.7352018.0820.0030.7412018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.0930.0050.803	2018.05	1	0.002	0.719
2018.0720.0030.7352018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.06	8	0.013	0.732
2018.0820.0030.7382018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.07	2	0.003	0.735
2018.0920.0030.7412018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.08	2	0.003	0.738
2018.1040.0060.7482018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.09	2	0.003	0.741
2018.1150.0080.7552018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.10	4	0.006	0.748
2018.1250.0080.7632019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.11	5	0.008	0.755
2019.0110.0020.7652019.0250.0080.7732019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2018.12	5	0.008	0.763
2019.02 5 0.008 0.773 2019.03 4 0.006 0.779 2019.04 2 0.003 0.782 2019.05 6 0.009 0.792 2019.08 4 0.006 0.798 2019.09 3 0.005 0.803 2019.10 2 0.003 0.806	2019.01	1	0.002	0.765
2019.0340.0060.7792019.0420.0030.7822019.0560.0090.7922019.0840.0060.7982019.0930.0050.8032019.1020.0030.806	2019.02	5	0.008	0.773
2019.04 2 0.003 0.782 2019.05 6 0.009 0.792 2019.08 4 0.006 0.798 2019.09 3 0.005 0.803 2019.10 2 0.003 0.806	2019.03	4	0.006	0.779
2019.05 6 0.009 0.792 2019.08 4 0.006 0.798 2019.09 3 0.005 0.803 2019.10 2 0.003 0.806	2019.04	2	0.003	0.782
2019.08 4 0.006 0.798 2019.09 3 0.005 0.803 2019.10 2 0.003 0.806	2019.05	6	0.009	0.792
2019.09 3 0.005 0.803 2019.10 2 0.003 0.806	2019.08	4	0.006	0.798
2019.10 2 0.003 0.806	2019.09	3	0.005	0.803
	2019.10	2	0.003	0.806

2019.11 2 0.003 0.809 2019.12 7 0.011 0.82 2020.01 5 0.008 0.828 2020.02 6 0.009 0.837 2020.03 7 0.011 0.848 2020.04 4 0.006 0.854 2020.05 1 0.002 0.856 2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.867 2020.09 3 0.005 0.873 2020.10 1 0.002 0.873 2020.12 7 0.011 0.887 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.05 4 0.006				
2019.12 7 0.011 0.82 2020.01 5 0.008 0.828 2020.02 6 0.009 0.837 2020.03 7 0.011 0.848 2020.04 4 0.006 0.854 2020.05 1 0.002 0.856 2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.09 3 0.005 0.871 2020.10 1 0.002 0.887 2020.12 7 0.011 0.887 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.912 2021.07 1 0.002	2019.11	2	0.003	0.809
2020.01 5 0.008 0.828 2020.02 6 0.009 0.837 2020.03 7 0.011 0.848 2020.04 4 0.006 0.854 2020.05 1 0.002 0.856 2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.912 2021.07 1 0.002 0.922 2021.08 6 0.009	2019.12	7	0.011	0.82
2020.02 6 0.009 0.837 2020.03 7 0.011 0.848 2020.04 4 0.006 0.854 2020.05 1 0.002 0.856 2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.05 4 0.006 0.922 2021.05 4 0.006 0.941 2021.06 4 0.006 0.941 2021.07 1 0.002 0.922 2021.08 6 0.009	2020.01	5	0.008	0.828
2020.03 7 0.011 0.848 2020.04 4 0.006 0.854 2020.05 1 0.002 0.856 2020.06 4 0.006 0.852 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.941 2021.10 4 0.006 0.947 2021.11 2 0.003	2020.02	6	0.009	0.837
2020.04 4 0.006 0.854 2020.05 1 0.002 0.856 2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.892 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.931 2021.10 4 0.006 0.947 2021.11 2 0.003 0.955 2022.01 1 0.002	2020.03	7	0.011	0.848
2020.05 1 0.002 0.856 2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2020.12 3 0.005 0.892 2021.02 3 0.005 0.897 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.959 2021.10 4 0.006 0.947 2021.11 2 0.003 0.959 2022.01 1 0.002	2020.04	4	0.006	0.854
2020.06 4 0.006 0.862 2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.914 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 4 0.006 0.944 2021.01 4 0.006 0.947 2021.11 2 0.003	2020.05	1	0.002	0.856
2020.08 3 0.005 0.867 2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2020.12 7 0.011 0.887 2020.12 3 0.005 0.892 2021.02 3 0.005 0.897 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.941 2021.10 4 0.006 0.947 2021.12 6 0.009 0.959 2021.12 6 0.009 0.959 2022.01 1 0.002	2020.06	4	0.006	0.862
2020.09 3 0.005 0.871 2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.02 3 0.005 0.897 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.941 2021.10 4 0.006 0.947 2021.11 2 0.003 0.955 2021.12 6 0.009 0.951 2022.01 1 0.002 0.961 2022.02 6 0.003 0.973 2022.04 2 0.003	2020.08	3	0.005	0.867
2020.10 1 0.002 0.873 2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.931 2021.10 4 0.006 0.944 2021.11 2 0.003 0.955 2021.12 6 0.009 0.951 2022.01 1 0.002 0.961 2022.02 6 0.009 0.973 2022.03 4 0.003 0.973 2022.04 2 0.003 0.973 2022.05 8 0.013	2020.09	3	0.005	0.871
2020.11 2 0.003 0.876 2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.05 4 0.006 0.922 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.944 2021.10 4 0.006 0.947 2021.10 4 0.006 0.947 2021.11 2 0.003 0.955 2021.12 6 0.009 0.959 2022.01 1 0.002 0.961 2022.02 6 0.009 0.973 2022.04 2 0.003 0.973 2022.05 8 0.013 0.986 2022.06 2 0.003	2020.10	1	0.002	0.873
2020.12 7 0.011 0.887 2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.914 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.931 2021.10 4 0.006 0.944 2021.10 4 0.006 0.947 2021.11 2 0.003 0.959 2021.12 6 0.009 0.959 2021.12 6 0.009 0.957 2022.01 1 0.002 0.961 2022.02 6 0.003 0.973 2022.04 2 0.003 0.973 2022.05 8 0.013 0.986 2022.06 2 0.003	2020.11	2	0.003	0.876
2021.02 3 0.005 0.892 2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.914 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.931 2021.10 4 0.006 0.944 2021.09 6 0.009 0.931 2021.10 4 0.006 0.947 2021.11 2 0.003 0.955 2021.12 6 0.009 0.959 2022.01 1 0.002 0.961 2022.02 6 0.003 0.973 2022.03 8 0.013 0.986 2022.04 2 0.003 0.973 2022.05 8 0.013 0.989 2022.06 2 0.003	2020.12	7	0.011	0.887
2021.03 3 0.005 0.897 2021.04 7 0.011 0.908 2021.05 4 0.006 0.914 2021.06 4 0.006 0.92 2021.07 1 0.002 0.922 2021.08 6 0.009 0.931 2021.09 6 0.009 0.931 2021.10 4 0.006 0.947 2021.11 2 0.003 0.959 2021.12 6 0.009 0.959 2021.12 6 0.009 0.959 2022.01 1 0.002 0.961 2022.02 6 0.009 0.973 2022.02 6 0.003 0.973 2022.04 2 0.003 0.973 2022.05 8 0.013 0.986 2022.06 2 0.003 0.989 2022.08 5 0.008 0.997 2022.09 2 0.003	2021.02	3	0.005	0.892
2021.0470.0110.9082021.0540.0060.9142021.0640.0060.922021.0710.0020.9222021.0860.0090.9312021.0960.0090.942021.1040.0060.9472021.1120.0030.9592021.1260.0090.9592022.0110.0020.9612022.0260.0090.9712022.0420.0030.9862022.0580.0130.9862022.0620.0030.9972022.0850.0080.997	2021.03	3	0.005	0.897
2021.0540.0060.9142021.0640.0060.922021.0710.0020.9222021.0860.0090.9312021.0960.0090.942021.1040.0060.9472021.1120.0030.952021.1260.0090.9592022.0110.0020.9612022.0260.0090.9732022.0380.0130.9862022.0420.0030.9892022.0580.0130.9862022.0620.0030.9972022.0850.0080.9972022.0920.0031	2021.04	7	0.011	0.908
2021.0640.0060.922021.0710.0020.9222021.0860.0090.9312021.0960.0090.942021.1040.0060.9472021.1120.0030.9592021.1260.0090.9592022.0110.0020.9612022.0260.0090.9732022.0420.0030.9732022.0580.0130.9862022.0620.0030.9972022.0850.0080.9972022.0920.0031	2021.05	4	0.006	0.914
2021.0710.0020.9222021.0860.0090.9312021.0960.0090.942021.1040.0060.9472021.1120.0030.952021.1260.0090.9592022.0110.0020.9612022.0260.0090.9732022.0420.0030.9732022.0580.0130.9892022.0850.0080.9972022.0920.0031	2021.06	4	0.006	0.92
2021.0860.0090.9312021.0960.0090.942021.1040.0060.9472021.1120.0030.952021.1260.0090.9592022.0110.0020.9612022.0260.0090.9732022.0420.0030.9732022.0580.0130.9862022.0620.0030.9972022.0850.0080.997	2021.07	1	0.002	0.922
2021.0960.0090.942021.1040.0060.9472021.1120.0030.952021.1260.0090.9592022.0110.0020.9612022.0260.0090.972022.0420.0030.9732022.0580.0130.9862022.0620.0030.9972022.0850.0080.9972022.0920.0030.913	2021.08	6	0.009	0.931
2021.1040.0060.9472021.1120.0030.952021.1260.0090.9592022.0110.0020.9612022.0260.0090.972022.0420.0030.9732022.0580.0130.9862022.0620.0030.9892022.0850.0080.997	2021.09	6	0.009	0.94
2021.11 2 0.003 0.95 2021.12 6 0.009 0.959 2022.01 1 0.002 0.961 2022.02 6 0.009 0.97 2022.04 2 0.003 0.973 2022.05 8 0.013 0.986 2022.06 2 0.003 0.989 2022.08 5 0.008 0.997 2022.09 2 0.003 1	2021.10	4	0.006	0.947
2021.1260.0090.9592022.0110.0020.9612022.0260.0090.972022.0420.0030.9732022.0580.0130.9862022.0620.0030.9892022.0850.0080.9972022.0920.0031	2021.11	2	0.003	0.95
2022.0110.0020.9612022.0260.0090.972022.0420.0030.9732022.0580.0130.9862022.0620.0030.9892022.0850.0080.9972022.0920.0031	2021.12	6	0.009	0.959
2022.02 6 0.009 0.97 2022.04 2 0.003 0.973 2022.05 8 0.013 0.986 2022.06 2 0.003 0.989 2022.08 5 0.008 0.997 2022.09 2 0.003 1	2022.01	1	0.002	0.961
2022.04 2 0.003 0.973 2022.05 8 0.013 0.986 2022.06 2 0.003 0.989 2022.08 5 0.008 0.997 2022.09 2 0.003 1	2022.02	6	0.009	0.97
2022.05 8 0.013 0.986 2022.06 2 0.003 0.989 2022.08 5 0.008 0.997 2022.09 2 0.003 1	2022.04	2	0.003	0.973
2022.06 2 0.003 0.989 2022.08 5 0.008 0.997 2022.09 2 0.003 1	2022.05	8	0.013	0.986
2022.08 5 0.008 0.997 2022.09 2 0.003 1	2022.06	2	0.003	0.989
2022.09 2 0.003 1	2022.08	5	0.008	0.997
	2022.09	2	0.003	1

Syntax and Big Data

Total	638	1	
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It is interesting to note that in June in 2003 and 2007, 9 papers were published, which indicates that the figure is the highest one. Quite interestingly, their proportion and cumulative proportion in June in 2007 are 0.014 and 0.204, respectively. On the other hand, in June in 2003, their proportion and cumulative proportion are 0.014 and 0.056, respectively. It is worth noting that there was a publication of 8 papers in 2006 (December), 2009 (December), 2015 (December), 2018 (March), 2018 (June), and 2022 (August). Their proportion is 0.013 and the figure is the second highest. It is worthwhile pointing out that many papers tended to be published in December in each year. It should be pointed out that there was a publication of 7 papers in 2005 (June), 2007 (November and December), 2008 (December), 2017 (December), 2019 (December), 2020 (March and December), and 2021 (April). The figure ranks third (the third highest) and their proportion is 0.011. This provides confirming evidence that many papers tended to be published in December in each year. We thus conclude that there was a publication of 9 papers in June in 2007, which in turn implies that the figure is the highest. The following graph briefly shows the frequency of published papers:



Figure 1 Frequency of published papers

3.2. Topics and Keywords

In this section, we are concerned with 9 topics and 5 keywords. Table 2 shows information on 9 topics that are formed by 5 keywords:

Table 2 Topic information					
	1st Keyword	2nd Keyword	3rd Keyword	4th Keyword	5th Keyword
Topic-1	sentence	syntax	study	grammar	language
Topic-2	space	Space	analysis	study	Syntax
Торіс-З	SS	Syntax	II	development	patient
Topic-4	English	learner	language	syntax	Syntax
Topic-5	construction	clause	noun	paper	syntax
Topic-6	child	language	group	study	ability
Topic-7	verb	syntax	meaning	structure	construction

Topic-8	paper	syntax	Korean	analysis	English
Topic-9	Space	study	Syntax	space	analysis

As illustrated in Table 2, there are 9 topics that are constituted by 5 keywords. These 9 topics are slightly different from one another in that 5 keywords constituting them are different. However, one thing is certain. Simply put, these topics are mainly used by authors. It is interesting to point out that topic 1 is constituted by 5 keywords *sentence*, *syntax*, *study*, *grammar*, and *language*. As indicated in Table 1, the 1st keyword is the word *sentence*, which in turn indicates that it is the most preferred one. It should be mentioned, on the other hand, that 5 keywords *space*, *Space*, *analysis*, *study*, and *Syntax* consist of topic 2. The 1st keyword is the word *space* and it is regarded as the most preferred. When it comes to topic 4, it is formed by 5 keywords *English*, *learner*, *language*, and *syntax*. More importantly, the word *English* is the 1st keyword and it is considered to be the most preferable one among authors. It is noteworthy that 5 keywords *construction*, *clause*, *noun*, *paper*, and *syntax*consist of topic 5. Note that the keyword *construction* is thought of as the most preferred. Quite interestingly, topic 7 is formed by the keywords *verb*, *syntax*, *meaning*, *structure*, and *construction*. This in turn suggests that the word *verb* was the most preferred one for authors in topic 7. Finally, 5 keywords *Space*, *study*, *syntax*, *space*, and *analysis* of topic 9. As expected, the word *Space* was the most widely used one in topic 9.

Now attention is paid to the frequency of documents. In the term of NetMiner, documents refer to papers. Table 3 shows how many times each topic occurred in papers:

	# of documents
Topic-1	79
Topic-2	69
Topic-3	34
Topic-4	49
Topic-5	85
Topic-6	31
Topic-7	74
Topic-8	115
Topic-9	102

Table 3	Frequency	of	documents
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It is significant to note that topic 8 occurred in 115 papers, which is the highest. As observed earlier, topic 8 is constituted by the keywords *paper*, *syntax*, *Korean*, *analysis*, and *English*. This in turn implies that authors were keen on using these keywords in their papers. It is worth pointing out, on the other hand, that topic 9 occurred in 102 papers, which is the second highest. As illustrated in Table 2, the keywords *Space*, *study*, *syntax*, *space*, and *analysis* consist of topic 9. Additionally, it should be noted that topic 5 appeared in 85 papers, which is the third highest. As indicated in Table 2, topic 5 is constituted by the keywords *construction*, *clause*, *noun*, *paper*, and *syntax*. It should be pointed out, on the other hand, that topic 1 appeared in 79 papers, which is the fourth highest. It can thus be concluded that topic 8 was the most preferred one for authors, followed by topic 9, topic 5, and topic 1, in that order.

3.3. Frequency of words

The goal of this section is to examine the frequency of words occurred in 638 KCI papers. The so-called *degree* is the term of NetMiner and refers to the frequency of documents. Table 4 shows the frequency of papers in which words occurred:

Table 4 Frequency of papers			
Number Word Degree			
1 Syntax 396			
2 syntax 350			
3 study 300			
4 paper 251			
5 analysis 246			
6 result 208			
7 structure 197			
8 Space 156			
9 space 153			
10 Korean 140			
11 language 136			
12 Study 127			
13 construction 115			
14 purpose 110			
15 type 110			
16 method 108			
10 Interiod 100			
17 characteristic 104 18 research 102			
10 research 103 10 contoneo 103			
19 selitence 103			
20 case 92			
21 Verb 88			
22 integration 87			
23 syntactic 85			
24 Analysis 84			
25 way 84			
26 system 83			
27 theory 83			
28 word 82			
29 English 81			
30 meaning 80			
31 order 79			
32 term 79			
33relationship78			
34 difference 75			
35 function 74			
36 property 74			
37 element 73			
38 value 71			
39 form 70			
40 area 69			
41 subject 69			
42 time 67			
43 datum 65			
44 pattern 64			
45 argument 62			
46 kongkankwumwunlon 62			
47 problem 60			
48 change 59			
48 change 59 49 development 59			

51	process	59
52	semantic	58
53	feature	57
54	clause	56
55	fact	56
56	object	55
57	factor	54
58	grammar	54
59	category	53
60	position	53
61	approach	52
62	relation	52
63	role	52
64	use	52
65	Korea	51
66	Spatial	51
67	addition	51
68	Semantics	50
69	level	50
70	model	50
71	phrase	50
72	plan	50
73	point	49
74	aspect	48
75	phenomenon	48
76	effect	47
77	expression	47
78	noun	47
79	unit	47
80	person	46
81	Structure	45
82	view	45
83	distribution	44
84	predicate	44
85	perspective	43
86	accessibility	42
87	context	42
88	movement	42
89	configuration	40
90	group	40
91	number	40
92	speaker	40
93	city	39
94	condition	39
95	work	39
96	component	38
97	concept	37
98	facility	37
99	learner	37

It is important to note that the word *Syntax* were the most frequently used one. More specifically, it occurred in 396 papers. This in turn suggests that the word *Syntax* was the most preferable one among authors. It

is worthwhile noting that the word *syntax* is the second highest. To be more specific, it appeared in 350 papers. We take this fact as suggesting that the word *Syntax* is followed by the word *syntax*. It should be mentioned, on the other hand, that the word *study* ranks third. It occurred in 300 papers. It seems thus reasonable to assume that the word *syntax* is followed by the word *study*. Additionally, it is noteworthy that the word *analysis* occurred in 246 papers. It seems thus reasonable to conclude that the word *Syntax* was the most preferable one for authors, followed by the word *study*, the word *paper*, and the word *analysis*, in that order. The following graph briefly shows the frequency of keywords:



3.4. Frequency of words related to syntax

In this section, we consider the overall frequency of words occurred in 638 KCI papers.

		Part of		Word
Number	Word	Speech(POS)	Frequency	length
1	syntax	Common Noun	816	4
2	space	Common Noun	758	7
3	study	Common Noun	653	8
4	Syntax	Proper Noun	643	8
5	analysis	Common Noun	477	3
6	structure	Common Noun	430	14
7	Space	Proper Noun	393	12
8	paper	Common Noun	374	4
9	sentence	Common Noun	355	5
10	construction	Common Noun	346	6
11	language	Common Noun	317	4
12	verb	Common Noun	310	9
13	result	Common Noun	287	6
14	Korean	Proper Noun	259	5
15	type	Common Noun	231	5
16	integration	Common Noun	205	9
17	meaning	Common Noun	195	10
18	English	Proper Noun	192	4
19	clause	Common Noun	187	6
20	research	Common Noun	179	7

Table 5 Frequency of words occurred in 638 KCI papers

21	method	Common Noun	173	11
22	characteristic	Common Noun	169	4
23	word	Common Noun	168	7
24	case	Common Noun	159	4
25	area	Common Noun	159	5
26	grammar	Common Noun	152	7
27	theory	Common Noun	145	13
28	noun	Common Noun	145	5
29	system	Common Noun	141	8
30	value	Common Noun	135	5
31	object	Common Noun	135	5
32	Study	Proper Noun	133	4
33	subject	Common Noun	129	6
34	phrase	Common Noun	129	5
35	difference	Common Noun	129	9
36	purpose	Common Noun	125	6
37	function	Common Noun	123	8
38	element	Common Noun	119	8
39	change	Common Noun	114	6
40	syntactic	Common Noun	113	8
41	plan	Common Noun	113	8
42	argument	Common Noun	113	3
43	model	Common Noun	111	6
44	form	Common Noun	111	7
45	relationship	Common Noun	110	10
46	factor	Common Noun	110	12
47	way	Common Noun	107	5
48	term	Common Noun	106	8
49	pattern	Common Noun	106	8
50	feature	Common Noun	106	8
51	unit	Common Noun	103	9
52	property	Common Noun	103	7
53	order	Common Noun	103	6
54	Analysis	Common Noun	103	4
55	information	Common Noun	102	7
56	time	Common Noun	97	6
57	development	Common Noun	97	5
58	person	Common Noun	96	5
59	expression	Common Noun	94	6
60	accessibility	Common Noun	94	5
61	predicate	Common Noun	92	7
62	position	Common Noun	90	11
63	category	Common Noun	90	4
64	datum	Common Noun	88	7
65	problem	Common Noun	84	8
66	aspect	Common Noun	83	4
67	approach	Common Noun	82	4
68	semantic	Common Noun	81	10
69	process	Common Noun	78	4
70	Korea	Proper Noun	75	8
71	relation	Common Noun	74	4
72	movement	Common Noun	73	7

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73	level	Common Noun	72	6
74	effect	Common Noun	71	8
75	view	Common Noun	69	6
76	role	Common Noun	69	12
77	Spatial	Proper Noun	67	6
78	use	Common Noun	66	7
79	phenomenon	Common Noun	66	7
80	fact	Common Noun	63	8
81	distribution	Common Noun	63	5
82	kongkankwumwunlon	Proper Noun	62	8
83	point	Common Noun	58	11
84	Structure	Proper Noun	57	6
85	addition	Common Noun	57	4
86	Semantics	Proper Noun	55	11
87	context	Common Noun	53	9
88	perspective	Common Noun	48	6

It is significant to note that the overall frequency of the word syntax is 816 tokens and that the word length including it is 4. As illustrated in Table 5, the word syntax ranks first, which in turn indicates that it was the most preferred by KCI authors. It is worth observing that the overall frequency of the word space is 758 tokens and that it ranks second (758 tokens). This in turn imply that KCI authors were keen on using this word in their papers. It should be pointed out, on the other hand, that the word *study* ranks third. More specifically, the overall frequency of it is 653 tokens and the word length including it is 8. Quite interestingly, the word Syntax ranks fourth and the word length containing it is 8. This indicates that the word Syntax was the fourth most frequently used one. It should be noted that the frequency of the word analysis is 477 tokens and the word length containing it is 3. As indicated in Table 5, the word *analysis* ranks fifth, which may imply that KCI authors liked using this word. Noteworthy is that the overall frequency of the word structure is 430 tokens and that it ranks sixth. From all of this, it is clear that the word syntax was the most preferred by KCI authors, followed by the word *space*, the word *study*, the word *Syntax*, the word *analysis*, and the word *structure*, in that order. Additionally, the overall frequency of the word *research* is 179 tokens (the twentieth highest) and the word length including it is 7. Finally, it should be mentioned that the overall frequency of the word theory is 145 tokens and that it ranks twenty seventh. We thus conclude that the word syntax was the most preferred one for KCI authors. Figure 3 briefly shows the frequency of 29 words occurred in 638 KCI papers:





3.5 Visualization of words neighboring with syntax

The goal of this section is to provide the picture of which words are linked to the word *syntax*. Figure 4 shows the visualization of words neighboring with *syntax*:



Figure 4 Visualization of words neighboring with syntax

Most interestingly, the words *order*, *person*, *problem*, *distribution*, *system*, *case*, *Semantics*, *process*, *role*, etc. are linked to the word *Syntax*. Such words are the main words neighboring with *Syntax*. Most importantly, the words *way*, *paper*, *fact*, *theory*, *information*, *study*, and *language*are also linked to the word *syntax*. These words are closely related to the word *syntax*. To sum up, Figure 4 provides the visualization of which words are neighboring ones with *syntax*. For the visualization of synonyms, see Kang (2022a, 2022b, 2022c, 2022d).

IV. Conclusion

To sum up, we have analyzed 638 KCI papers in connection with the word *syntax* from 1980 to 2022. In section 3.1, we have provided information on published papers, their proportion, and their cumulative proportion. In section 3.2, we have provided 9 topics that are formed by 5 keywords. We have also shown that topic 8 was the most preferred one for authors, followed by topic 9, topic 5, and topic 1, in that order. In section 3.3, we have argued that the word *Syntax* was the most widely usedone in syntax papers, followed by the word syntax, the word*study*, the word *paper*, and the word *analysis*. In section 3.4, we have further argued that that the word *syntax* was the most preferred by KCI authors, followed by the word *space*, the word *study*, the word *syntax*. More specifically, the words *way*, *paper*, *fact*, *theory*, *information*, *study*, and *language* are linked to the word *syntax*.

References

- Kang, N. (2022a). A Comparative Analysis of Search for and Look for in Four Corpora. Advances in Social Sciences Research Journal 9 (3): 168-178.
- [2]. Kang, N. (2022b). A Comparative Analysis of Impressed by and Impressed with in Two Corpora. Theory and Practice in Language Studies 12 (5): 819-827.
- [3]. Kang, N. (2022c). On Speak to and Talk to: A Corpora-based Analysis. Theory and Practice in Language Studies 12 (7):1262-1270.
- [4]. Kang, N. (2022d). On Speak with and Talk with: A Corpora-based Analysis. International Journal of Social Science and Human Research 5 (8): 3354-3360.