Principle Component Aanalysis

Data

The data you will be using comes from the Assistments online intelligent tutoring system (https://www.assistments.org/). It describes students working through online math problems. Each student has the following data associated with them:

- id
- prior prob count: How many problems a student has answered in the system prior to this session
- prior_percent_correct: The percentage of problems a student has answered correctly prior to this session
- problems attempted: The number of problems the student has attempted in the current session
- mean_correct: The average number of correct answers a student made on their first attempt at problems in the current session
- mean_hint: The average number of hints a student asked for in the current session
- mean_attempt: The average number of attempts a student took to answer a problem in the current session
- mean_confidence: The average confidence each student has in their ability to answer the problems in the current session

Start by uploading the data

```
library(dplyr)
## Warning: package 'dplyr' was built under R version 3.5.2
##
## Attaching package: 'dplyr'
  The following objects are masked from 'package:stats':
##
##
      filter, lag
##
  The following objects are masked from 'package:base':
##
##
      intersect, setdiff, setequal, union
library(tidyverse)
## -- Attaching packages ------
## <U+221A> ggplot2 3.2.1
                          <U+221A> readr
                                         1.3.1
## <U+221A> tibble 2.1.3
                                         0.2.5
                          <U+221A> purrr
## <U+221A> tidyr 0.8.1
                          <U+221A> stringr 1.3.1
## <U+221A> ggplot2 3.2.1
                          <U+221A> forcats 0.3.0
## Warning: package 'ggplot2' was built under R version 3.5.2
## Warning: package 'tibble' was built under R version 3.5.2
## -- Conflicts ------ tidyverse
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()
                  masks stats::lag()
```

```
library(tidyr)

D1 <- read.csv("~/Desktop/master fall/hudk4050/assignment4/Assistments-confidence.csv")

D1 <- select(D1,-id)
    #We won't need the id variable, so remove that.</pre>
```

Create a correlation matrix of the relationships between the variables, including correlation coefficients for each pair of variables/features.

```
#You can install the corrplot package to plot some pretty correlation matrices (sometimes called correl
library(corrplot)
## corrplot 0.84 loaded
#Generate pairwise correlations
COR <- cor(D1)
corrplot(COR, order="AOE", method="circle", tl.pos="lt", type="upper",
t1.col="black", t1.cex=0.6, t1.srt=45,
        addCoef.col="black", addCoefasPercent = TRUE,
        sig.level=0.50, insig = "blank")
                                                                        pilot
                                                               Diop.
                                                                                  1
                           31
                                    2
                                                      -7
prior_percent_correct
                                            -20
                                                               8
                                                                        8
                                                                                  8.0
                                                                                 0.6
     mean_correct
                                    8
                                            -50
                                                      -9
                                                               9
                                                                        8
                                                                                 0.4
  mean_confidence
                                             -1
                                                      2
                                                              -8
                                                                        3
                                                                                 0.2
                                                     36
                                                              28
                                                                       20
                                                                                  0
       mean_hint
                                                                                 -0.2
    mean_attempt
                                                              21
                                                                        6
                                                                                 -0.4
problems_attempted
                                                              100
                                                                        6
                                                                                 -0.6
                                                                                  -0.8
  prior_prob_count
```

#Study your correlogram image and save it, you will need it later

Create a new data frame with the mean_correct variables removed

```
D2 <- select(D1,-mean_correct)

#The, scale and center your data for easier interpretation
D2 <- scale(D2, center = TRUE)
```

Now run the PCA on the new data frame

Standard deviation

```
pca <- prcomp(D2, scale = TRUE)</pre>
pca
## Standard deviations (1, ..., p=6):
## [1] 1.2825140 1.0543565 1.0245688 0.9621486 0.8556715 0.7320146
##
## Rotation (n \times k) = (6 \times 6):
##
                             PC1
                                       PC2
                                                  PC3
                                                            PC4
## prior_prob_count
                      ## prior_percent_correct 0.16840319 0.81617867 0.09267306 0.2640040
## problems_attempted -0.45568733 0.31685183 0.36387724 0.3168141
## mean hint
                     -0.63337594 -0.12501620 -0.08008842 -0.1122586
## mean_confidence
## mean_attempt
                     -0.54200011 -0.08510858 -0.04585364 0.3108682
                     PC5
                                        PC6
## prior_prob_count
                     -0.007142834 -0.29280482
## prior_percent_correct 0.298843852 0.37134715
## problems_attempted
                     -0.592336569 -0.32911025
## mean_hint
                     -0.102302115 0.74412634
## mean_attempt
                     0.697232132 -0.33781385
## mean_confidence
                      -0.251357022 -0.01452143
```

Although princomp does not generate the eigenvalues directly for us, we can print a list of the standard deviation of the variance accounted for by each component.

```
pca$sdev

## [1] 1.2825140 1.0543565 1.0245688 0.9621486 0.8556715 0.7320146

#To convert this into variance accounted for we can square it, these numbers are proportional to the ei

pca$sdev^2

## [1] 1.6448423 1.1116675 1.0497412 0.9257299 0.7321737 0.5358454

#A summary of our pca will give us the proportion of variance accounted for by each component

summary(pca)

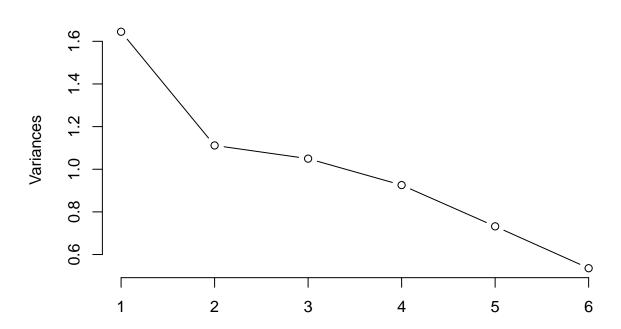
## Importance of components:

## PC1 PC2 PC3 PC4 PC5 PC6
```

1.2825 1.0544 1.0246 0.9621 0.8557 0.73201

```
## Proportion of Variance 0.2741 0.1853 0.1750 0.1543 0.1220 0.08931
## Cumulative Proportion 0.2741 0.4594 0.6344 0.7887 0.9107 1.00000
#We can look at this to get an idea of which components we should keep and which we should drop
plot(pca, type = "lines")
```

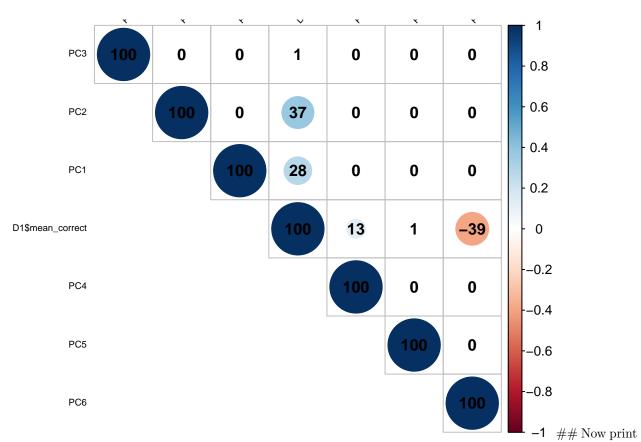
pca



Decide which components you would drop and remove them from your data set.

I would remove pc6 since it has lowest proportion of variance and standard deviation.

Part II



out the eigenvectors (often called loadings) for the components you generated:

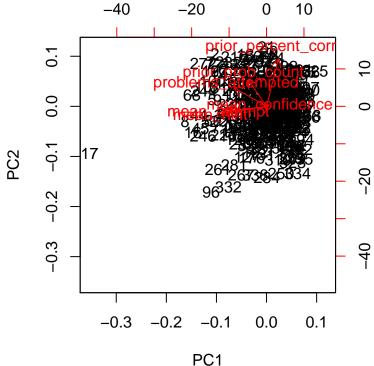
pca\$rotation

```
PC2
                                                  PC3
##
                             PC1
                                                           PC4
                      ## prior_prob_count
## prior_percent_correct 0.16840319 0.81617867 0.09267306 0.2640040
## problems_attempted
                     ## mean_hint
                      -0.63337594 -0.12501620 -0.08008842 -0.1122586
## mean_attempt
                     -0.54200011 -0.08510858 -0.04585364 0.3108682
## mean_confidence
                      ##
                              PC5
                                        PC6
## prior_prob_count
                      -0.007142834 -0.29280482
## prior_percent_correct 0.298843852 0.37134715
## problems_attempted
                     -0.592336569 -0.32911025
## mean_hint
                      -0.102302115 0.74412634
## mean_attempt
                      0.697232132 -0.33781385
## mean_confidence
                     -0.251357022 -0.01452143
#Examine the eigenvectors, notice that they are a little difficult to interpret. It is much easier to m
loadings <- abs(pca$rotation) #abs() will make all eigenvectors positive</pre>
#sweep() computes each row as a proportion of the column. (There must be a way to do this with dplyr()
sweep(loadings, 2, colSums(loadings), "/")
                            PC1
                                     PC2
                                               PC3
                      0.12423113 0.25081186 0.22101700 0.31516257
## prior_prob_count
```

prior_percent_correct 0.08035956 0.44677621 0.05108998 0.12062699

```
## mean_hint
                         0.30223780 0.06843387 0.04415217 0.05129246
## mean attempt
                         0.25863458 0.04658844 0.02527878 0.14203987
## mean_confidence
                         0.01708956 \ 0.01394492 \ 0.45785919 \ 0.22612148
                                 PC5
                                             PC6
                         0.003664468 0.14011651
## prior_prob_count
## prior_percent_correct 0.153315014 0.17770154
## problems_attempted
                         0.303884750 0.15748983
## mean_hint
                         0.052483764 0.35608836
## mean_attempt
                         0.357699023 0.16165478
## mean_confidence
                         0.128952980 0.00694897
#Now examine your components and try to come up with substantive descriptions of what some might repres
#You can generate a biplot to help you, though these can be a bit confusing. They plot the transformed
biplot(pca)
```

0.21744737 0.17344469 0.20060288 0.14475664



 $\#Calculate\ values\ for\ each\ student\ that\ represent\ these\ your\ composite\ variables\ and\ then\ create\ a\ new$

Part III

problems_attempted

Also in this repository is a data set collected from class that shows how many students thought that a TC program was related to andother TC program. Use PCA to look for components of related programs. Explain why you think there are relationships between these programs.

```
library(readr)
TC1 <- read_table2("~/Desktop/master fall/hudk4050/assignment4/TCprograms.csv")
## Parsed with column specification:
## cols(
##
     .default = col_double(),
##
      `"program"` = col_character()
## )
## See spec(...) for full column specifications.
TC1 <- as.data.frame(TC1)</pre>
colnames(TC1) <- gsub('"', '', colnames(TC1))</pre>
TC1$program <- gsub('"','',TC1$program)</pre>
TC2 <- select(TC1,-program)</pre>
TC2 <- scale(TC2, center = TRUE)
COR_TC1 <- cor(TC2)</pre>
corrplot(COR_TC1, order="AOE", method="circle", tl.pos="lt", type="upper",
tl.col="black", tl.cex=0.4, tl.srt=45,
        addCoef.col="black", addCoefasPercent = TRUE,
        sig.level=0.50, insig = "blank")
                                                                                 8.0
                                                                                 0.6
      Curriculum.ar
Higher.and.Postsecondar
                                                                                 0.4
                                                                                 0.2
                                                                                  0
                                                                                 -0.2
                                                                                 -0.4
                                                                                 -0.6
                                                                                 -0.8
pca_tc <- prcomp(TC2, scale = TRUE)</pre>
pca_tc$sdev
```

[1] 2.68011880 2.35819295 2.08837623 1.85475444 1.74647546 1.61465215 ## [7] 1.59207113 1.49680316 1.46950799 1.39832279 1.34151368 1.32522578

```
## [13] 1.31615350 1.26719779 1.25935680 1.22415686 1.22080005 1.18665936
## [19] 1.13146408 1.12827714 1.10440089 1.07271133 1.01963172 0.99708101
## [25] 0.96874724 0.95056018 0.93258920 0.90798884 0.86457609 0.83635957
## [31] 0.81899867 0.78695006 0.76919631 0.73491065 0.72285573 0.67387137
## [37] 0.66466155 0.65147914 0.62613316 0.60459014 0.56852565 0.56052200
## [43] 0.51101216 0.50160350 0.47899354 0.45246821 0.43523791 0.41820282
## [49] 0.38199790 0.37257692 0.35015828 0.33573567 0.33081883 0.30735088
## [55] 0.28101557 0.27365616 0.23738382 0.21258776 0.18887083 0.17204118
## [61] 0.16184845 0.14754491 0.11100915 0.09770357 0.04475296 0.03938161
## [67] 0.02820270 0.00484107
```

PC2

PC1

PC3

PC4

PC5

PC6

summary(pca_tc)

##

Importance of components:

```
2.6801 2.35819 2.08838 1.85475 1.74648 1.61465
## Standard deviation
## Proportion of Variance 0.1056 0.08178 0.06414 0.05059 0.04486 0.03834
  Cumulative Proportion 0.1056 0.18741 0.25155 0.30214 0.34700 0.38534
                              PC7
                                      PC8
                                               PC9
                                                      PC10
                                                              PC11
                                                                      PC12
## Standard deviation
                          1.59207 1.49680 1.46951 1.39832 1.34151 1.32523
## Proportion of Variance 0.03727 0.03295 0.03176 0.02875 0.02647 0.02583
## Cumulative Proportion 0.42261 0.45556 0.48731 0.51607 0.54253 0.56836
                             PC13
                                     PC14
                                              PC15
                                                      PC16
                                                              PC17
                                                                      PC18
                          1.31615 1.26720 1.25936 1.22416 1.22080 1.18666
## Standard deviation
## Proportion of Variance 0.02547 0.02361 0.02332 0.02204 0.02192 0.02071
  Cumulative Proportion 0.59384 0.61745 0.64077 0.66281 0.68473 0.70544
                             PC19
                                     PC20
                                              PC21
                                                      PC22
                                                              PC23
##
                                                                      PC24
## Standard deviation
                          1.13146 1.12828 1.10440 1.07271 1.01963 0.99708
## Proportion of Variance 0.01883 0.01872 0.01794 0.01692 0.01529 0.01462
## Cumulative Proportion 0.72426 0.74298 0.76092 0.77784 0.79313 0.80775
##
                            PC25
                                    PC26
                                             PC27
                                                     PC28
                                                             PC29
                                                                     PC30
## Standard deviation
                          0.9687 0.95056 0.93259 0.90799 0.86458 0.83636
## Proportion of Variance 0.0138 0.01329 0.01279 0.01212 0.01099 0.01029
  Cumulative Proportion 0.8216 0.83484 0.84763 0.85975 0.87075 0.88103
##
                             PC31
                                     PC32
                                             PC33
                                                     PC34
                                                             PC35
                                                                     PC36
## Standard deviation
                          0.81900 0.78695 0.7692 0.73491 0.72286 0.67387
## Proportion of Variance 0.00986 0.00911 0.0087 0.00794 0.00768 0.00668
## Cumulative Proportion 0.89090 0.90001 0.9087 0.91665 0.92433 0.93101
##
                            PC37
                                                     PC40
                                    PC38
                                             PC39
                                                             PC41
                                                                     PC42
## Standard deviation
                          0.6647 0.65148 0.62613 0.60459 0.56853 0.56052
## Proportion of Variance 0.0065 0.00624 0.00577 0.00538 0.00475 0.00462
## Cumulative Proportion 0.9375 0.94375 0.94951 0.95489 0.95964 0.96426
                                    PC44
##
                             PC43
                                             PC45
                                                     PC46
                                                             PC47
                                                                     PC48
## Standard deviation
                          0.51101 0.5016 0.47899 0.45247 0.43524 0.41820
## Proportion of Variance 0.00384 0.0037 0.00337 0.00301 0.00279 0.00257
  Cumulative Proportion 0.96810 0.9718 0.97518 0.97819 0.98097 0.98355
##
##
                             PC49
                                     PC50
                                            PC51
                                                     PC52
                                                             PC53
                                                                     PC54
                          0.38200 0.37258 0.3502 0.33574 0.33082 0.30735
## Standard deviation
  Proportion of Variance 0.00215 0.00204 0.0018 0.00166 0.00161 0.00139
##
  Cumulative Proportion 0.98569 0.98773 0.9895 0.99119 0.99280 0.99419
                                    PC56
                                             PC57
                                                     PC58
##
                             PC55
                                                             PC59
## Standard deviation
                          0.28102 0.2737 0.23738 0.21259 0.18887 0.17204
## Proportion of Variance 0.00116 0.0011 0.00083 0.00066 0.00052 0.00044
## Cumulative Proportion 0.99535 0.9965 0.99728 0.99795 0.99847 0.99891
##
                             PC61
                                     PC62
                                              PC63
                                                      PC64
                                                              PC65
                                                                      PC66
```

```
## Standard deviation 0.16185 0.14754 0.11101 0.09770 0.04475 0.03938

## Proportion of Variance 0.00039 0.00032 0.00018 0.00014 0.00003 0.00002

## Cumulative Proportion 0.99929 0.99961 0.99980 0.99994 0.99997 0.99999

## PC67 PC68

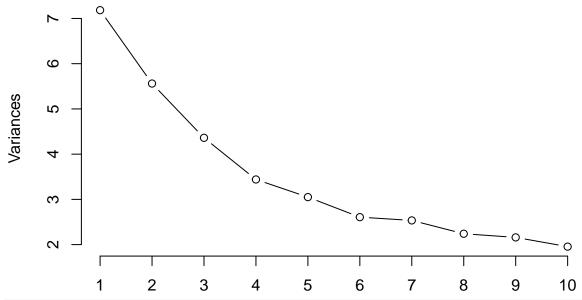
## Standard deviation 0.02820 0.004841

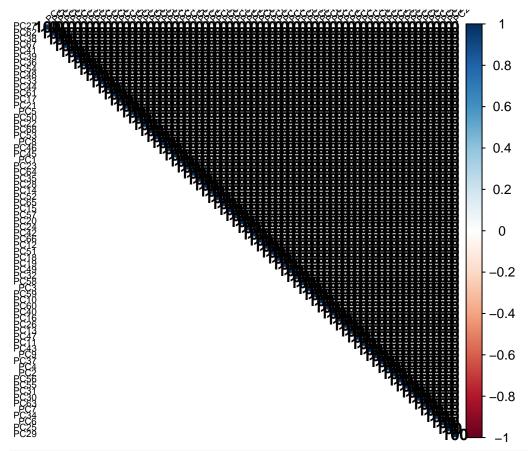
## Proportion of Variance 0.00001 0.000000

## Cumulative Proportion 1.00000 1.000000

plot(pca_tc, type = "lines")
```

pca_tc





##Absolute values near zero indicate that a variable contributes little to the component, whereas large
loadings1 <- abs(pca_tc\$rotation)
sweep(loadings1, 2, colSums(loadings), "/")</pre>

```
\mbox{\tt \#\#} Warning in sweep(loadings1, 2, colSums(loadings), "/"): STATS does not \mbox{\tt \#\#} recycle exactly across MARGIN
```

	3		
##		PC1	PC2
##	Adult.Education	0.0916762220	0.048334485
##	Anthropology	0.0270096995	0.034326958
##	Social.Studies	0.0624067943	0.002095421
##	Physiology	0.0470056845	0.132665916
##	Behavior.Analysis	0.0439397769	0.088712419
##	Linguistics	0.0171551145	0.023129633
##	Art.Education	0.0501743019	0.007394024
##	Teaching.English	0.0539652194	0.031738841
##	Arts.Administration	0.1067948676	0.022108996
##	Bilingual.Bicultural.Education	0.0890404545	0.048396797
##	Clinical.Psychology	0.0827316809	0.112073387
##	Cognitive.Science	0.0016398359	0.055125405
##	College.Advising	0.0656300637	0.035285317
##	Communication.Sciences.and.Disorders	0.0455423767	0.065099209
##	Cooperation.and.Conflict.Resolution	0.1057933435	0.027964776
##	Creative.Technologies	0.0203318846	0.032646126
##	Curriculum.and.Teaching	0.0238342863	0.061093533
##	Dance.Education	0.0106171547	0.008620394
##	Deaf.and.Hard.of.Hearing	0.0015584829	0.109361889

```
## Design.and.Development.of.Digital.Games
                                                  0.0236824527 0.043415547
## Developmental.Psychology
                                                  0.0466812233 0.071988816
## Diabetes.Education
                                                  0.0043417003 0.104701311
## Early.Childhood.Education
                                                  0.0608022258 0.008245246
## Early.Childhood.Special.Education
                                                  0.0152858337 0.080633994
## Economics.and.Education
                                                  0.1083435723 0.032151449
## Education.Technology
                                                  0.0385356119 0.044411776
## Education.Leadership
                                                  0.0831579307 0.015109420
## Education.Policy
                                                  0.1042632115 0.031744307
## Inclusive.Education
                                                  0.0635743539 0.032905087
## English.Education
                                                  0.0321744115 0.012396640
## Change.Leadership
                                                  0.1285760574 0.005442919
## Nursing
                                                  0.0025689987 0.095985928
## Gifted.Education
                                                  0.0322092421 0.013924424
## Health.Education
                                                  0.0287977836 0.123267510
## Higher.and.Postsecondary.Education
                                                  0.0280472695 0.034305099
## History
                                                  0.0924571595 0.007708619
## Instructional.Technology.and.Media
                                                  0.0039669881 0.005180363
## Intellectual.Disability.Autism
                                                  0.0166651319 0.032626735
## International.and.Comparative.Education
                                                  0.0732728403 0.067271629
## Kinesiology
                                                  0.0296628001 0.136777981
## Learning.Analytics
                                                  0.0210378810 0.008383275
                                                  0.0528895207 0.024387746
## Literacy
## Mathematics
                                                  0.0153980889 0.006581251
## Measurement.. Evaluation.and. Statistics
                                                  0.0239776784 0.004985030
## Motor.Learning.and.Control
                                                  0.0359273302 0.024489505
## Movement.Science
                                                  0.0430333975 0.080688819
                                                  0.0049607723 0.028608368
## Music
## Neuroscience
                                                  0.0287159875 0.109367524
## Nutrition
                                                  0.0422402631 0.062305242
## Leadership
                                                  0.1083111541 0.025808420
## Philosophy
                                                  0.0249318004 0.018070562
## Physical.Education
                                                  0.0001631985 0.107809810
## Politics
                                                  0.1158442190 0.050996735
## Private.School.Leadership
                                                  0.1026084852 0.028730633
## Psychological.Counseling
                                                  0.0183061215 0.108921291
## Psychology
                                                  0.0761517920 0.090396895
## Reading
                                                  0.0708790265 0.003734697
## School.Psychology
                                                  0.0456648050 0.040941229
## Science.Education
                                                  0.0006890185 0.019153362
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0751125178 0.085078053
## Social.Organizational.Psychology
                                                  0.1026966870 0.030472330
                                                  0.0804197940 0.073073634
## Sociology
## Spirituality.Mind.Body
                                                  0.0657546146 0.080301174
## School.Principals
                                                  0.1029558337 0.019430754
## Urban.Education
                                                  0.1049131713 0.014796394
## Counseling.Psychology
                                                  0.0427388322 0.093972027
## Communication.Media.and.Learning.Technologies 0.0242916837 0.004317325
## cluster
                                                  0.0622945074 0.077866874
                                                          PC3
                                                                       PC4
## Adult.Education
                                                  0.003912886 0.0271079831
## Anthropology
                                                  0.015636735 0.0746047279
## Social.Studies
                                                  0.031793569 0.0192464544
## Physiology
                                                  0.012639702 0.0549560027
```

##	Dehavrion Analysis	^	052240175	0 0072620001
	Behavior.Analysis			0.0273638891 0.1851973338
	Linguistics Art.Education			0.1051973338
	Teaching.English			0.1391654841
	Arts.Administration			0.0219631756
	Bilingual.Bicultural.Education			0.0809381262
	Clinical.Psychology			0.0035611452
	Cognitive.Science			0.0769074676
	College.Advising Communication.Sciences.and.Disorders			0.0247535556
				0.0649207689
	Cooperation.and.Conflict.Resolution			0.0204229202
	Creative.Technologies			0.0511469580
	Curriculum.and.Teaching			0.0631028765
	Dance.Education			0.0476336043
	Deaf.and.Hard.of.Hearing			0.0950586243
	Design.and.Development.of.Digital.Games			0.0937703847
	Developmental.Psychology			0.0005383014
	Diabetes. Education			0.0057143011
	Early.Childhood.Education			0.0779577796
	Early.Childhood.Special.Education			0.1074741911
	Economics.and.Education			0.0548530571
	Education.Technology			0.0043082285
	Education.Leadership			0.0484553120
	Education.Policy			0.0327440720
	Inclusive.Education			0.0017537655
	English. Education			0.1818887966
	Change.Leadership			0.0605934644
	Nursing			0.0446393175
	Gifted.Education			0.0594520332
	Health.Education			0.0538598261
##	Higher.and.Postsecondary.Education	0.	040417018	0.0137652770
	History	0.	004482885	0.0072872135
	Instructional.Technology.and.Media			0.0397709234
	Intellectual.Disability.Autism	0.	039023548	0.0526987781
	International.and.Comparative.Education			0.0090380044
	Kinesiology	0.	032633975	0.0063836895
##	Learning.Analytics			0.0197404109
##	Literacy			0.1166370462
	Mathematics	0.	154433942	0.0249030712
##	MeasurementEvaluation.and.Statistics	0.	134026949	0.0271231538
##	Motor.Learning.and.Control	0.	080076182	0.0444647249
##	Movement.Science			0.0239155393
##	Music	0.	068703521	0.0119732237
##	Neuroscience	0.	078987052	0.0159235402
##	Nutrition	0.	056085405	0.0071723407
	Leadership	0.	026756223	0.0925244107
##	Philosophy	0.	004495838	0.0315404205
##	Physical.Education	0.	057587561	0.0198291967
##	Politics	0.	009167226	0.0717241495
##	Private.School.Leadership	0.	012067311	0.0121501726
##	Psychological.Counseling	0.	044142154	0.0776836335
##	Psychology	0.	085532041	0.0013012510
	Reading	0.	022994660	0.0516042212
##	School.Psychology	0.	030194446	0.0152379583

```
## Science.Education
                                                  0.050162956 0.0483768344
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.011421894 0.0431418005
## Social.Organizational.Psychology
                                                  0.038744289 0.0051186869
## Sociology
                                                  0.014044777 0.0834671933
## Spirituality.Mind.Body
                                                  0.013727102 0.0045772576
## School.Principals
                                                  0.019831454 0.0042046851
## Urban.Education
                                                  0.023731142 0.0358169787
## Counseling.Psychology
                                                  0.025468151 0.0443079502
## Communication.Media.and.Learning.Technologies 0.119625836 0.0129848314
## cluster
                                                  0.125656828 0.1113291734
##
                                                           PC5
                                                                       PC6
                                                  0.0689834362 0.083019347
## Adult.Education
## Anthropology
                                                  0.0452576757 0.074946986
## Social.Studies
                                                  0.0646678085 0.095137510
## Physiology
                                                  0.0201909546 0.015053163
## Behavior.Analysis
                                                  0.0099075080 0.041273464
                                                  0.0772021273 0.007614258
## Linguistics
## Art.Education
                                                  0.0790559265 0.028399034
## Teaching.English
                                                  0.0050016263 0.033660738
## Arts.Administration
                                                  0.1040589771 0.029913618
## Bilingual.Bicultural.Education
                                                  0.0187065260 0.059110772
## Clinical.Psychology
                                                  0.0152611739 0.052593033
## Cognitive.Science
                                                  0.0360981119 0.036403161
## College.Advising
                                                  0.0840202653 0.046361811
## Communication.Sciences.and.Disorders
                                                  0.0370541079 0.112237984
## Cooperation.and.Conflict.Resolution
                                                  0.0111456480 0.013372422
## Creative.Technologies
                                                  0.0150968553 0.052058405
## Curriculum.and.Teaching
                                                  0.0068069579 0.061263624
## Dance.Education
                                                  0.1108832152 0.048584299
## Deaf.and.Hard.of.Hearing
                                                  0.0286818300 0.055629279
## Design.and.Development.of.Digital.Games
                                                  0.0387953719 0.072420325
## Developmental.Psychology
                                                  0.0398029701 0.001983245
## Diabetes.Education
                                                  0.0104498436 0.061088225
## Early.Childhood.Education
                                                  0.0418567513 0.043798582
## Early.Childhood.Special.Education
                                                  0.0599624323 0.022725513
## Economics.and.Education
                                                  0.0627570092 0.006270402
## Education.Technology
                                                  0.0851167592 0.012709635
## Education.Leadership
                                                  0.0953889180 0.011084697
## Education.Policy
                                                  0.0052846950 0.004012167
## Inclusive.Education
                                                  0.0717705471 0.107615218
## English.Education
                                                  0.0370217023 0.017318199
                                                  0.0342915449 0.059334049
## Change.Leadership
                                                  0.0626303624 0.047135669
## Nursing
## Gifted.Education
                                                  0.0877655607 0.008391222
## Health.Education
                                                  0.0182024638 0.092393413
## Higher.and.Postsecondary.Education
                                                  0.0988299644 0.145518370
## History
                                                  0.1966800839 0.016899651
## Instructional.Technology.and.Media
                                                  0.0182772944 0.058292741
## Intellectual.Disability.Autism
                                                  0.0232988107 0.045290862
## International.and.Comparative.Education
                                                  0.0567671108 0.047081705
## Kinesiology
                                                  0.0231890925 0.031749172
## Learning.Analytics
                                                  0.0059477565 0.092612272
## Literacv
                                                  0.0707911173 0.006397875
## Mathematics
                                                  0.0647632014 0.023544949
```

```
## Measurement.. Evaluation.and. Statistics
                                                  0.0165791013 0.106191360
## Motor.Learning.and.Control
                                                  0.0641845819 0.053431097
## Movement.Science
                                                  0.0071141950 0.087897225
## Music
                                                  0.1067580302 0.002090607
## Neuroscience
                                                  0.0257095717 0.051514890
## Nutrition
                                                  0.0132938973 0.074494690
## Leadership
                                                  0.0118195129 0.006768211
                                                  0.0801570262 0.066251295
## Philosophy
## Physical.Education
                                                  0.0002034653 0.003297446
## Politics
                                                  0.0233045754 0.001599713
## Private.School.Leadership
                                                  0.1148180505 0.080803889
## Psychological.Counseling
                                                  0.0796064947 0.058558963
## Psychology
                                                  0.0495432493 0.003734117
## Reading
                                                  0.1053648742 0.039572110
## School.Psychology
                                                  0.0230668437 0.115472300
## Science.Education
                                                  0.0528468172 0.205772813
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0860596016 0.072732104
## Social.Organizational.Psychology
                                                  0.0335859184 0.043110129
## Sociology
                                                  0.0089937856 0.022173731
## Spirituality.Mind.Body
                                                  0.1002004783 0.046406128
## School.Principals
                                                  0.0273700275 0.030243535
## Urban.Education
                                                  0.0939806995 0.027596745
## Counseling.Psychology
                                                  0.1047946506 0.054158981
## Communication.Media.and.Learning.Technologies 0.0470426445 0.001911112
## cluster
                                                  0.0694938841 0.054294027
##
                                                          PC7
## Adult.Education
                                                  0.061407868 0.0487645552
                                                  0.091164237 0.0368856036
## Anthropology
## Social.Studies
                                                  0.138732841 0.1403447063
## Physiology
                                                  0.025864069 0.0435188287
## Behavior.Analysis
                                                  0.007374421 0.0656293410
## Linguistics
                                                  0.076502547 0.0536327062
## Art.Education
                                                  0.074221384 0.0242117971
                                                  0.030238105 0.0513413192
## Teaching.English
## Arts.Administration
                                                  0.017669308 0.0254231073
## Bilingual.Bicultural.Education
                                                  0.086353754 0.0157417309
## Clinical.Psychology
                                                  0.071868877 0.0290236105
## Cognitive.Science
                                                  0.025882856 0.0282359257
## College.Advising
                                                  0.033359442 0.0540618884
## Communication.Sciences.and.Disorders
                                                  0.158425186 0.0605678914
## Cooperation.and.Conflict.Resolution
                                                  0.047650409 0.0272301088
## Creative.Technologies
                                                  0.046364748 0.1060131976
## Curriculum.and.Teaching
                                                  0.010803734 0.0337208345
## Dance.Education
                                                  0.154968393 0.0540445657
## Deaf.and.Hard.of.Hearing
                                                  0.089630082 0.0402479880
## Design.and.Development.of.Digital.Games
                                                  0.012116341 0.0138794389
## Developmental.Psychology
                                                  0.004708007 0.0786192230
## Diabetes.Education
                                                  0.062281649 0.1235680918
## Early.Childhood.Education
                                                  0.073041837 0.0991286398
## Early.Childhood.Special.Education
                                                  0.069355984 0.0559415872
## Economics.and.Education
                                                  0.023932287 0.0349260882
## Education.Technology
                                                  0.042197802 0.0104088211
## Education.Leadership
                                                  0.046123335 0.0396441252
## Education.Policy
                                                  0.112468199 0.0034342653
```

```
## Inclusive.Education
                                                  0.053579470 0.0213747400
## English.Education
                                                  0.027878079 0.0229597666
                                                  0.013550180 0.0001705178
## Change.Leadership
                                                  0.029922990 0.0078962280
## Nursing
## Gifted.Education
                                                  0.149332596 0.1008637483
## Health.Education
                                                  0.018433267 0.0013286726
## Higher.and.Postsecondary.Education
                                                  0.064302809 0.0370961959
                                                  0.007918761 0.0498943481
## History
## Instructional.Technology.and.Media
                                                  0.047697260 0.0613470071
## Intellectual.Disability.Autism
                                                  0.010557059 0.0059415386
## International.and.Comparative.Education
                                                  0.001899017 0.1558328229
## Kinesiology
                                                  0.016939843 0.0414191573
## Learning.Analytics
                                                  0.081869601 0.0705482847
## Literacy
                                                  0.122815600 0.1062813265
## Mathematics
                                                  0.035570058 0.0819366703
## Measurement.. Evaluation.and. Statistics
                                                  0.072381860 0.0042231283
                                                  0.003054120 0.0905221763
## Motor.Learning.and.Control
## Movement.Science
                                                  0.012050505 0.0359704121
## Music
                                                  0.139844305 0.0238599492
## Neuroscience
                                                  0.010453377 0.0188757549
## Nutrition
                                                  0.003140575 0.0032753785
## Leadership
                                                  0.012968155 0.0408007340
                                                  0.004890474 0.0231582866
## Philosophy
## Physical.Education
                                                  0.033177881 0.0653054620
## Politics
                                                  0.023990644 0.0623015541
## Private.School.Leadership
                                                  0.033894330 0.0262953405
## Psychological.Counseling
                                                  0.003499529 0.0024896907
                                                  0.033389761 0.0342845297
## Psychology
## Reading
                                                  0.009559962 0.0731617984
## School.Psychology
                                                  0.034994619 0.0578472452
## Science.Education
                                                  0.031937932 0.0313254019
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.053856451 0.0419299266
## Social.Organizational.Psychology
                                                  0.010002012 0.0874421630
                                                  0.039661949 0.0211936639
## Sociology
## Spirituality.Mind.Body
                                                  0.064966953 0.0059264398
## School.Principals
                                                  0.070286311 0.0212908069
## Urban.Education
                                                  0.033142005 0.1107129746
## Counseling.Psychology
                                                  0.074992271 0.0183982440
## Communication.Media.and.Learning.Technologies 0.063577517 0.1413272785
## cluster
                                                  0.024218079 0.0333172703
##
                                                          PC9
                                                                      PC10
## Adult.Education
                                                  0.005076986 0.0340988031
## Anthropology
                                                  0.085571726 0.0342047498
## Social.Studies
                                                  0.039701199 0.0144309067
                                                  0.047424971 0.0287176569
## Physiology
                                                  0.064519592 0.0227899313
## Behavior.Analysis
## Linguistics
                                                  0.040891214 0.1183612939
## Art.Education
                                                  0.003824236 0.1020365517
## Teaching.English
                                                  0.029558940 0.0003900566
## Arts.Administration
                                                  0.049169617 0.0059495345
## Bilingual.Bicultural.Education
                                                  0.079702853 0.0652617759
## Clinical.Psychology
                                                  0.025572673 0.0133465998
## Cognitive.Science
                                                  0.029446389 0.0067808552
## College.Advising
                                                  0.006804119 0.0572918968
```

```
## Communication.Sciences.and.Disorders
                                                  0.012456620 0.0303487515
## Cooperation.and.Conflict.Resolution
                                                  0.092987762 0.0683373724
## Creative.Technologies
                                                  0.038337222 0.0290691842
## Curriculum.and.Teaching
                                                  0.149834608 0.0074176263
## Dance.Education
                                                  0.007626301 0.0808032076
## Deaf.and.Hard.of.Hearing
                                                  0.062173205 0.0425919165
## Design.and.Development.of.Digital.Games
                                                  0.013397776 0.0527840250
                                                  0.100690222 0.1218041585
## Developmental.Psychology
## Diabetes.Education
                                                  0.093186419 0.0240973003
## Early.Childhood.Education
                                                  0.073139709 0.0591317621
## Early.Childhood.Special.Education
                                                  0.095584563 0.0527921595
## Economics.and.Education
                                                  0.064722919 0.0458778554
## Education.Technology
                                                  0.021201812 0.0005520096
## Education.Leadership
                                                  0.006583628 0.1318937702
## Education.Policy
                                                  0.088782764 0.0380132120
## Inclusive.Education
                                                  0.031793065 0.0542190903
## English.Education
                                                  0.017739845 0.0944585567
## Change.Leadership
                                                  0.013624551 0.0515258467
## Nursing
                                                  0.018115167 0.0709141697
## Gifted.Education
                                                  0.051023632 0.0139947084
## Health.Education
                                                  0.089404972 0.0568546213
## Higher.and.Postsecondary.Education
                                                  0.085473466 0.0490184411
                                                  0.004518735 0.0099610299
## History
## Instructional.Technology.and.Media
                                                  0.003193319 0.0184786700
## Intellectual.Disability.Autism
                                                  0.038874183 0.1801416443
## International.and.Comparative.Education
                                                  0.030001455 0.0053508943
## Kinesiology
                                                  0.013837528 0.0421270113
## Learning.Analytics
                                                  0.032013010 0.0461439391
## Literacy
                                                  0.003394425 0.0073672392
## Mathematics
                                                  0.019120429 0.0766478478
## Measurement.. Evaluation.and. Statistics
                                                  0.061044584 0.0718684759
## Motor.Learning.and.Control
                                                  0.010614151 0.0165511174
## Movement.Science
                                                  0.036927531 0.0836436830
## Music
                                                  0.078832772 0.0434990734
## Neuroscience
                                                  0.077190591 0.0291009078
## Nutrition
                                                  0.165633445 0.0082832382
## Leadership
                                                  0.050158155 0.0349249860
## Philosophy
                                                  0.006259723 0.2144746763
## Physical.Education
                                                  0.076607176 0.0380015412
## Politics
                                                  0.031306021 0.0676214331
## Private.School.Leadership
                                                  0.013914092 0.0062439706
## Psychological.Counseling
                                                  0.065627604 0.0022326970
## Psychology
                                                  0.078315790 0.0178362742
## Reading
                                                  0.013234536 0.0453881473
## School.Psychology
                                                  0.116596850 0.0112952466
## Science.Education
                                                  0.093857677 0.0092365436
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.065123091 0.0458285223
## Social.Organizational.Psychology
                                                  0.080031343 0.0380435473
## Sociology
                                                  0.004399705 0.0453851199
## Spirituality.Mind.Body
                                                  0.100360715 0.0298348155
## School.Principals
                                                  0.135735900 0.0199425824
## Urban.Education
                                                  0.068076014 0.0206070357
## Counseling.Psychology
                                                  0.043516679 0.0115824557
## Communication.Media.and.Learning.Technologies 0.030034669 0.0849943917
```

	_	
	cluster	0.035661195 0.0430334006
##	A1 7: 71	PC11 PC12
	Adult.Education	0.0199139378 0.0135882769
	Anthropology	0.0004460438 0.0423588368
	Social.Studies	0.0301856377 0.0136891744
	Physiology Palassias Assissias	0.1189368165 0.0519411498
	Behavior.Analysis	0.0216842141 0.0112457888
	Linguistics	0.0400771153 0.0109223672
	Art.Education	0.1164824652 0.0743908787
	Teaching.English	0.0211073349 0.1017994125
	Arts. Administration	0.0318877612 0.0257928477
	Bilingual.Bicultural.Education	0.0904617250 0.0161625069 0.0009975125 0.0770081738
	Clinical.Psychology	0.1186131343 0.0044241038
	Cognitive.Science	
	College.Advising Communication.Sciences.and.Disorders	0.0828356350 0.0051483191 0.0863521657 0.0108775744
		0.0374314344 0.0727895710
	Cooperation.and.Conflict.Resolution	0.0574314344 0.0727893710
	Creative.Technologies	0.0858116815 0.0202364269
	Curriculum.and.Teaching Dance.Education	0.0565033515 0.0410443096
	Deaf.and.Hard.of.Hearing	0.0524567712 0.0554043911
	Design.and.Development.of.Digital.Games	0.0272416738 0.0783030838
	Developmental.Psychology	0.0698666630 0.0518638271
	Diabetes.Education	0.0068893770 0.0040353778
	Early.Childhood.Education	0.0224397052 0.0051381534
	Early.Childhood.Special.Education	0.0389506156 0.0320923411
	Economics.and.Education	0.0354985939 0.0284448122
	Education. Technology	0.0224734468 0.0407922634
	Education.Leadership	0.0657497528 0.0572909605
	Education.Policy	0.0136935459 0.0080073213
	Inclusive.Education	0.1126636348 0.0484250086
##	English.Education	0.0205050729 0.0232294586
	Change.Leadership	0.0473567148 0.0080494362
	Nursing	0.0002108677 0.0198615498
	Gifted.Education	0.0206293823 0.0999096259
##	Health.Education	0.0417756819 0.0795043988
##	Higher.and.Postsecondary.Education	0.0280130912 0.0881915877
##	History	0.0192688664 0.0491373890
##	Instructional.Technology.and.Media	0.1350484681 0.0973238067
##	Intellectual.Disability.Autism	0.0364755781 0.1290170294
##	International.and.Comparative.Education	0.1481780668 0.0217467124
##	Kinesiology	0.0373121881 0.0738367989
##	Learning.Analytics	0.0627744429 0.0412996810
##	Literacy	0.0394057083 0.0099447682
##	Mathematics	0.0249796806 0.0007287418
##	MeasurementEvaluation.and.Statistics	0.0411040584 0.0910753648
	Motor.Learning.and.Control	0.0927416878 0.1441145492
##	Movement.Science	0.0399734982 0.0550964517
##	Music	0.0772879451 0.0776188633
	Neuroscience	0.0046799508 0.0271803623
	Nutrition	0.1343157754 0.0604536256
	Leadership	0.0515861054 0.1990945896
	Philosophy	0.0087572768 0.0821061074
##	Physical.Education	0.0093907341 0.0563637315

```
0.0243303455 0.0165677285
## Politics
## Private.School.Leadership
                                                 0.0033505783 0.0274074490
## Psychological.Counseling
                                                 0.0771625473 0.0156570016
## Psychology
                                                  0.0336429192 0.0703456756
## Reading
                                                  0.0554729375 0.0955913891
## School.Psychology
                                                  0.0139322160 0.0091337827
## Science.Education
                                                  0.0398259059 0.0605292300
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.1025972085 0.0398151505
## Social.Organizational.Psychology
                                                  0.1132023125 0.0840875692
## Sociology
                                                  0.0828770747 0.0308365314
## Spirituality.Mind.Body
                                                  0.0022790083 0.0114042906
## School.Principals
                                                  0.0116382165 0.0369914532
## Urban.Education
                                                  0.0571091939 0.0193557619
## Counseling.Psychology
                                                  0.0543169784 0.0388526631
## Communication.Media.and.Learning.Technologies 0.0824387078 0.0905395612
## cluster
                                                  0.0427406706 0.0042658202
##
                                                         PC13
                                                                      PC14
## Adult.Education
                                                  0.008546089 0.0655581390
## Anthropology
                                                  0.076844679 0.0091541774
## Social.Studies
                                                  0.037447462 0.0880755401
## Physiology
                                                  0.034900091 0.0005804805
## Behavior.Analysis
                                                  0.086277028 0.1220653835
                                                 0.065385381 0.0088116542
## Linguistics
## Art.Education
                                                  0.099935949 0.0282707417
## Teaching.English
                                                 0.037478891 0.0308864624
## Arts.Administration
                                                  0.002230798 0.0115031108
## Bilingual.Bicultural.Education
                                                 0.031682679 0.0040800466
## Clinical.Psychology
                                                  0.001121600 0.0176799012
## Cognitive.Science
                                                 0.001979726 0.0094727643
## College.Advising
                                                  0.120360984 0.0201445987
## Communication.Sciences.and.Disorders
                                                 0.022939397 0.0363646053
## Cooperation.and.Conflict.Resolution
                                                  0.061211903 0.0281192782
## Creative.Technologies
                                                  0.055150755 0.0002770321
## Curriculum.and.Teaching
                                                  0.055180639 0.0278459825
## Dance.Education
                                                  0.076815598 0.0105312683
## Deaf.and.Hard.of.Hearing
                                                  0.088522093 0.0175780607
## Design.and.Development.of.Digital.Games
                                                  0.049442715 0.0756001737
## Developmental.Psychology
                                                  0.081797901 0.0006832481
## Diabetes.Education
                                                  0.070716154 0.0003968957
## Early.Childhood.Education
                                                 0.091245698 0.0091096575
## Early.Childhood.Special.Education
                                                 0.016099345 0.0608742236
## Economics.and.Education
                                                 0.018721430 0.1081588118
## Education.Technology
                                                  0.141867118 0.0945101526
## Education.Leadership
                                                 0.045551701 0.1553732954
## Education.Policy
                                                  0.027646731 0.0030012436
                                                 0.002374091 0.0349585327
## Inclusive.Education
## English.Education
                                                  0.011709788 0.0023638751
## Change.Leadership
                                                  0.023143977 0.0499587828
## Nursing
                                                  0.067808460 0.0385113736
## Gifted.Education
                                                 0.070353862 0.0471951944
## Health.Education
                                                 0.096308619 0.0724933915
## Higher.and.Postsecondary.Education
                                                 0.026854857 0.0191628725
## History
                                                 0.004445665 0.0674119281
## Instructional.Technology.and.Media
                                                 0.083758326 0.0085283213
```

```
## Intellectual.Disability.Autism
                                                  0.107196722 0.0500170462
## International.and.Comparative.Education
                                                  0.015158245 0.0341636106
## Kinesiology
                                                  0.042367322 0.1172334220
## Learning.Analytics
                                                  0.124051882 0.0016722716
## Literacy
                                                  0.108592130 0.0313384944
## Mathematics
                                                  0.040316964 0.1357646295
## Measurement.. Evaluation.and. Statistics
                                                  0.110334957 0.0514759541
## Motor.Learning.and.Control
                                                  0.006571278 0.0237646156
## Movement.Science
                                                  0.088650590 0.0232528617
## Music
                                                  0.067309246 0.0339823746
## Neuroscience
                                                  0.009124260 0.0027321983
## Nutrition
                                                  0.079742410 0.0273602194
## Leadership
                                                  0.052167356 0.0593268097
                                                  0.091627410 0.1428397775
## Philosophy
## Physical.Education
                                                  0.037965709 0.0349431948
## Politics
                                                  0.014982968 0.0402091568
## Private.School.Leadership
                                                  0.022970868 0.1020156811
## Psychological.Counseling
                                                  0.016173114 0.0835440735
## Psychology
                                                  0.099058196 0.0390021724
## Reading
                                                  0.099011608 0.0057304130
                                                  0.005924169 0.1183658577
## School.Psychology
## Science.Education
                                                  0.096819923 0.0691116129
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.032459254 0.0084438703
## Social.Organizational.Psychology
                                                  0.057722480 0.0519507495
## Sociology
                                                  0.001407507 0.0586209325
## Spirituality.Mind.Body
                                                  0.012721235 0.0999057634
## School.Principals
                                                  0.001650138 0.0287281676
## Urban.Education
                                                  0.003702129 0.0639021050
## Counseling.Psychology
                                                  0.005880673 0.0097587228
## Communication.Media.and.Learning.Technologies 0.011146502 0.1021857158
## cluster
                                                  0.034283641 0.0397446239
##
                                                          PC15
                                                                      PC16
## Adult.Education
                                                  0.0812421046 0.061615536
                                                  0.1242899454 0.147657789
## Anthropology
## Social.Studies
                                                  0.0521631760 0.008093539
## Physiology
                                                  0.0224395921 0.054992042
## Behavior.Analysis
                                                  0.0263669207 0.027649404
## Linguistics
                                                  0.0339340695 0.051280603
## Art.Education
                                                  0.0560551985 0.127883304
## Teaching.English
                                                  0.0540574242 0.039930719
## Arts.Administration
                                                  0.0370517249 0.046873714
## Bilingual.Bicultural.Education
                                                  0.0361241986 0.046527088
## Clinical.Psychology
                                                  0.0135553123 0.014480954
## Cognitive.Science
                                                  0.0200827872 0.018985538
## College.Advising
                                                  0.0733297940 0.038599991
## Communication.Sciences.and.Disorders
                                                  0.0305596373 0.046112821
## Cooperation.and.Conflict.Resolution
                                                  0.0563115174 0.010113386
## Creative.Technologies
                                                  0.0425308679 0.075434138
## Curriculum.and.Teaching
                                                  0.1715771540 0.086257251
## Dance.Education
                                                  0.0042651476 0.006566933
## Deaf.and.Hard.of.Hearing
                                                  0.0952240010 0.076441920
## Design.and.Development.of.Digital.Games
                                                  0.0631337196 0.036789142
## Developmental.Psychology
                                                  0.0290489088 0.099322668
## Diabetes.Education
                                                  0.0947618822 0.035148192
```

```
## Early.Childhood.Education
                                                  0.0925517028 0.101585356
## Early.Childhood.Special.Education
                                                  0.0338540157 0.026327948
## Economics.and.Education
                                                  0.0004969401 0.012607926
## Education.Technology
                                                  0.0368128051 0.095338370
## Education.Leadership
                                                  0.0546826244 0.018872562
## Education.Policy
                                                  0.0858577484 0.039095330
## Inclusive.Education
                                                  0.0721712283 0.039327822
## English.Education
                                                  0.0798634633 0.086924940
## Change.Leadership
                                                  0.0456632502 0.034929674
## Nursing
                                                  0.0563843657 0.045841575
## Gifted.Education
                                                  0.0308808106 0.016518924
## Health.Education
                                                  0.0276286638 0.016055567
## Higher.and.Postsecondary.Education
                                                  0.0022609508 0.075851629
                                                  0.0475842912 0.027348294
## History
## Instructional.Technology.and.Media
                                                  0.0387290974 0.075810617
## Intellectual.Disability.Autism
                                                  0.0075421302 0.056257986
## International.and.Comparative.Education
                                                  0.0403422994 0.008581608
## Kinesiology
                                                  0.0942978300 0.085732448
## Learning.Analytics
                                                  0.0450859964 0.029031365
## Literacy
                                                  0.0633435968 0.089721600
## Mathematics
                                                  0.0917620992 0.061009945
## Measurement.. Evaluation.and. Statistics
                                                  0.0284850310 0.035281756
## Motor.Learning.and.Control
                                                  0.0542343361 0.014294496
## Movement.Science
                                                  0.0187589964 0.155390352
## Music
                                                  0.0917800137 0.025346184
## Neuroscience
                                                  0.1268907585 0.110741542
## Nutrition
                                                  0.0512911900 0.017937664
                                                  0.0155469772 0.051828085
## Leadership
## Philosophy
                                                  0.0167694914 0.006719528
## Physical.Education
                                                  0.0279391749 0.100014772
## Politics
                                                  0.0355686963 0.065544627
## Private.School.Leadership
                                                  0.0315515237 0.020588910
## Psychological.Counseling
                                                  0.0296936307 0.035835998
## Psychology
                                                  0.0130661729 0.006721142
## Reading
                                                  0.0352497427 0.021851173
## School.Psychology
                                                  0.0998939545 0.016408796
## Science.Education
                                                  0.0859987959 0.031663269
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0795405980 0.012434584
## Social.Organizational.Psychology
                                                  0.0604630014 0.056362609
## Sociology
                                                  0.0324036820 0.027012820
## Spirituality.Mind.Body
                                                  0.0159322818 0.039079128
                                                  0.0868048608 0.022223316
## School.Principals
## Urban.Education
                                                  0.0177822465 0.017172064
## Counseling.Psychology
                                                  0.1243381417 0.040620467
## Communication.Media.and.Learning.Technologies 0.0786790113 0.050213518
## cluster
                                                  0.0285774230 0.015935462
                                                          PC17
## Adult.Education
                                                  0.0341029881 3.363260e-04
## Anthropology
                                                  0.0372252502 7.109356e-02
## Social.Studies
                                                  0.0809196521 6.714331e-03
## Physiology
                                                  0.0301706192 4.624540e-02
## Behavior.Analysis
                                                  0.0749176209 3.423274e-02
## Linguistics
                                                  0.0140587560 1.006371e-02
## Art.Education
                                                  0.0331171508 3.214838e-02
```

```
0.0788689176 1.347943e-01
## Teaching.English
## Arts.Administration
                                                  0.0141230818 5.990223e-02
## Bilingual.Bicultural.Education
                                                  0.0143491393 4.819501e-03
## Clinical.Psychology
                                                  0.1265191707 1.635564e-02
## Cognitive.Science
                                                  0.0924791889 3.167206e-02
## College.Advising
                                                  0.1187070488 4.561565e-02
## Communication.Sciences.and.Disorders
                                                  0.0019885850 2.378787e-03
                                                  0.0014857788 9.709696e-03
## Cooperation.and.Conflict.Resolution
## Creative.Technologies
                                                  0.0526442106 2.418134e-02
## Curriculum.and.Teaching
                                                  0.0581714112 2.114472e-02
## Dance.Education
                                                  0.1347134951 4.928238e-02
## Deaf.and.Hard.of.Hearing
                                                  0.0483529657 6.644444e-02
## Design.and.Development.of.Digital.Games
                                                  0.0175917598 7.537723e-02
## Developmental.Psychology
                                                  0.1654983399 4.900009e-02
## Diabetes.Education
                                                  0.0166729728 1.412057e-01
## Early.Childhood.Education
                                                  0.0777164100 3.512751e-02
## Early.Childhood.Special.Education
                                                  0.0002446961 3.986664e-03
## Economics.and.Education
                                                  0.0931362024 4.113880e-02
## Education.Technology
                                                  0.0782084239 3.404433e-05
## Education.Leadership
                                                  0.1306797255 2.758925e-02
## Education.Policy
                                                  0.0343843002 4.345978e-02
## Inclusive.Education
                                                  0.0894835192 1.588229e-01
## English.Education
                                                  0.0319614189 1.102619e-01
## Change.Leadership
                                                  0.0355221290 2.294517e-02
                                                  0.0724429582 1.388949e-01
## Nursing
## Gifted.Education
                                                  0.0906079543 4.135514e-02
## Health.Education
                                                  0.0706031810 3.890383e-02
## Higher.and.Postsecondary.Education
                                                  0.0245234774 3.320592e-02
## History
                                                  0.0310015298 4.507422e-02
## Instructional.Technology.and.Media
                                                  0.0038483159 5.617070e-02
## Intellectual.Disability.Autism
                                                  0.0240975758 4.528530e-02
## International.and.Comparative.Education
                                                  0.0217261120 2.994937e-02
## Kinesiology
                                                  0.0207457996 1.262928e-02
## Learning.Analytics
                                                  0.0189794100 3.813643e-02
## Literacy
                                                  0.0457139050 4.060277e-02
## Mathematics
                                                  0.0156272852 5.110404e-04
## Measurement.. Evaluation.and. Statistics
                                                  0.0235695669 1.098902e-01
## Motor.Learning.and.Control
                                                  0.0311507941 4.136716e-03
## Movement.Science
                                                  0.0415656061 6.897152e-02
## Music
                                                  0.0470634975 3.602115e-02
## Neuroscience
                                                  0.0165840454 6.560292e-02
## Nutrition
                                                  0.0664351881 1.461991e-02
                                                  0.0010299771 4.392531e-02
## Leadership
                                                  0.0372240987 7.323630e-02
## Philosophy
## Physical.Education
                                                  0.1212543555 4.846063e-02
## Politics
                                                  0.0516057392 3.069421e-03
## Private.School.Leadership
                                                  0.0189539820 9.072816e-02
## Psychological.Counseling
                                                  0.0592009813 9.033674e-02
## Psychology
                                                  0.0565449723 9.753204e-03
## Reading
                                                  0.1296100756 5.728102e-02
## School.Psychology
                                                  0.1170906397 1.267225e-01
## Science.Education
                                                  0.0340113651 1.518214e-02
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0149345113 3.850808e-02
## Social.Organizational.Psychology
                                                  0.0052072226 4.135187e-02
```

```
0.0240344301 1.176192e-01
## Sociology
## Spirituality.Mind.Body
                                                  0.0202087639 7.485663e-02
                                                  0.0039430552 8.224606e-02
## School.Principals
## Urban.Education
                                                  0.0595979255 3.885497e-02
## Counseling.Psychology
                                                  0.0371318589 3.543372e-02
## Communication.Media.and.Learning.Technologies 0.0471176331 2.672983e-03
## cluster
                                                  0.0176576455 7.478629e-03
##
                                                                     PC20
                                                         PC19
## Adult.Education
                                                  0.067640322 0.067200283
                                                  0.009288519 0.022672383
## Anthropology
## Social.Studies
                                                  0.059066102 0.017226535
## Physiology
                                                  0.039393135 0.078619187
## Behavior.Analysis
                                                  0.180517410 0.039477438
                                                  0.062675859 0.049791680
## Linguistics
## Art.Education
                                                  0.025853266 0.030736316
## Teaching.English
                                                  0.075486201 0.038158189
## Arts.Administration
                                                  0.036752004 0.101670289
## Bilingual.Bicultural.Education
                                                  0.004303331 0.055764190
## Clinical.Psychology
                                                  0.036545637 0.025067061
## Cognitive.Science
                                                  0.100447351 0.020095597
## College.Advising
                                                  0.045671068 0.121404595
## Communication.Sciences.and.Disorders
                                                  0.078154926 0.003246438
## Cooperation.and.Conflict.Resolution
                                                  0.124455703 0.070657917
## Creative.Technologies
                                                  0.088551764 0.091528079
## Curriculum.and.Teaching
                                                  0.110055326 0.050656204
## Dance.Education
                                                  0.066542338 0.078469445
## Deaf.and.Hard.of.Hearing
                                                  0.041613534 0.034868717
## Design.and.Development.of.Digital.Games
                                                  0.037937897 0.004900545
## Developmental.Psychology
                                                  0.009577122 0.013768635
## Diabetes.Education
                                                  0.040170191 0.020043639
## Early.Childhood.Education
                                                  0.003764085 0.084393066
## Early.Childhood.Special.Education
                                                  0.010779046 0.181315687
## Economics.and.Education
                                                  0.016562954 0.048555621
## Education.Technology
                                                  0.038469989 0.020131909
## Education.Leadership
                                                  0.026100619 0.035936948
## Education.Policy
                                                  0.098908187 0.112405001
## Inclusive.Education
                                                  0.040440764 0.039171831
## English.Education
                                                  0.102136924 0.070611960
## Change.Leadership
                                                  0.026991248 0.019065464
## Nursing
                                                  0.088664558 0.055640185
## Gifted.Education
                                                  0.045490815 0.006115313
## Health.Education
                                                  0.036158486 0.032375866
## Higher.and.Postsecondary.Education
                                                  0.109791784 0.067519709
                                                  0.040994068 0.014046496
## History
## Instructional.Technology.and.Media
                                                  0.011554690 0.018024022
## Intellectual.Disability.Autism
                                                  0.097867670 0.112915830
## International.and.Comparative.Education
                                                  0.078007394 0.051726479
## Kinesiology
                                                  0.044697123 0.010036503
## Learning.Analytics
                                                  0.001779024 0.057280340
                                                  0.044550851 0.010906102
## Literacy
## Mathematics
                                                  0.005476772 0.135728134
## Measurement.. Evaluation.and. Statistics
                                                  0.035602584 0.050332105
## Motor.Learning.and.Control
                                                  0.055682578 0.015453553
## Movement.Science
                                                  0.030688297 0.082838451
```

```
0.061421773 0.065858962
## Music
                                                  0.039297352 0.004419240
## Neuroscience
## Nutrition
                                                  0.014672246 0.022190059
                                                  0.060227673 0.012666467
## Leadership
## Philosophy
                                                  0.043491654 0.031474390
## Physical.Education
                                                  0.047254859 0.131392329
## Politics
                                                  0.044586190 0.029389868
## Private.School.Leadership
                                                  0.019854201 0.042784198
## Psychological.Counseling
                                                  0.063576422 0.047015432
                                                  0.001176061 0.048631202
## Psychology
## Reading
                                                  0.136477432 0.109704526
                                                  0.006032892 0.070174133
## School.Psychology
## Science.Education
                                                  0.042557129 0.031901912
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.048205806 0.056546790
## Social.Organizational.Psychology
                                                  0.039094862 0.009270715
## Sociology
                                                  0.143532928 0.010458706
## Spirituality.Mind.Body
                                                  0.097810615 0.005991424
## School.Principals
                                                  0.025455698 0.044658652
## Urban.Education
                                                  0.063768389 0.018901948
## Counseling.Psychology
                                                  0.030582738 0.052773781
## Communication.Media.and.Learning.Technologies 0.011449036 0.045613977
## cluster
                                                  0.009645262 0.006517964
##
                                                          PC21
                                                                       PC22
## Adult.Education
                                                  0.0726310915 0.0647041231
## Anthropology
                                                  0.1101619311 0.0406463287
## Social.Studies
                                                  0.0180785727 0.0389819071
## Physiology
                                                  0.0049800140 0.0270438052
## Behavior.Analysis
                                                  0.0533415563 0.0373492031
## Linguistics
                                                  0.0168173030 0.0083210604
## Art.Education
                                                  0.0115224870 0.0620241077
## Teaching.English
                                                  0.0295068756 0.0730717325
## Arts.Administration
                                                  0.0633339973 0.0051547368
## Bilingual.Bicultural.Education
                                                  0.0700555926 0.0580609463
## Clinical.Psychology
                                                  0.0216588462 0.0365498792
## Cognitive.Science
                                                  0.0918725208 0.0468922810
## College.Advising
                                                  0.0146408989 0.0194724717
## Communication.Sciences.and.Disorders
                                                  0.0268707183 0.0382430206
## Cooperation.and.Conflict.Resolution
                                                  0.0581748135 0.0440891637
## Creative.Technologies
                                                  0.0846591646 0.0358937937
                                                  0.0094725304 0.0676500940
## Curriculum.and.Teaching
## Dance.Education
                                                  0.0126040894 0.0964475406
## Deaf.and.Hard.of.Hearing
                                                  0.0102070622 0.0806056279
## Design.and.Development.of.Digital.Games
                                                  0.0057164403 0.0447407999
## Developmental.Psychology
                                                  0.1065043717 0.0814729424
## Diabetes.Education
                                                  0.0053118151 0.0462731958
                                                  0.0567546001 0.0523433987
## Early.Childhood.Education
## Early.Childhood.Special.Education
                                                  0.0139678528 0.0017161445
## Economics.and.Education
                                                  0.0507847193 0.1264974159
## Education.Technology
                                                  0.0330334150 0.0535584172
## Education.Leadership
                                                  0.0370109596 0.0242167470
## Education.Policy
                                                  0.0186075512 0.0539877963
## Inclusive.Education
                                                  0.0009150545 0.0396284522
## English.Education
                                                  0.0367452814 0.0523461448
## Change.Leadership
                                                  0.0305823193 0.0052987123
```

```
0.0369347547 0.0573428741
## Nursing
## Gifted.Education
                                                  0.0335816991 0.0172315895
                                                  0.0747064973 0.0297048578
## Health.Education
## Higher.and.Postsecondary.Education
                                                  0.1009744974 0.0463238218
## History
                                                  0.0374390496 0.0915835800
## Instructional.Technology.and.Media
                                                  0.1454429892 0.0436516744
## Intellectual.Disability.Autism
                                                  0.0734534890 0.0934216586
## International.and.Comparative.Education
                                                  0.0606578928 0.0622940562
## Kinesiology
                                                  0.0846691557 0.0019797777
## Learning.Analytics
                                                  0.0141195330 0.0060607502
## Literacy
                                                  0.0239774794 0.0729573146
## Mathematics
                                                  0.0167395235 0.0835660633
## Measurement.. Evaluation.and. Statistics
                                                  0.0092849488 0.0205145625
## Motor.Learning.and.Control
                                                  0.0417552417 0.1420219877
## Movement.Science
                                                  0.0796289514 0.0828149837
## Music
                                                  0.1306200224 0.0645931004
## Neuroscience
                                                  0.0616073841 0.0630563243
## Nutrition
                                                  0.0199996442 0.0871359772
## Leadership
                                                  0.0113065582 0.0020881153
## Philosophy
                                                  0.0004137153 0.0305365329
## Physical.Education
                                                  0.1218355642 0.0247347063
## Politics
                                                  0.0453124659 0.1207565047
                                                  0.0074422686 0.1253341613
## Private.School.Leadership
## Psychological.Counseling
                                                  0.1543186253 0.0070780760
## Psychology
                                                  0.0822148714 0.0005723055
## Reading
                                                  0.0421167364 0.0046818925
## School.Psychology
                                                  0.0828615703 0.0776946174
## Science.Education
                                                  0.1382635885 0.0215929989
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0291921871 0.0159934243
## Social.Organizational.Psychology
                                                  0.0029505553 0.0839736891
## Sociology
                                                  0.0795757558 0.0761607321
## Spirituality.Mind.Body
                                                  0.0424185713 0.0077547557
## School.Principals
                                                  0.0962595355 0.0485799841
## Urban.Education
                                                  0.0333949857 0.0048250807
## Counseling.Psychology
                                                  0.1138642830 0.0936163393
## Communication.Media.and.Learning.Technologies 0.0103322613 0.0112382570
## cluster
                                                  0.0059772497 0.0606884228
##
                                                          PC23
## Adult.Education
                                                  0.0889448913 0.0026231101
                                                  0.0624370893 0.0562152430
## Anthropology
## Social.Studies
                                                  0.0600549385 0.0509870231
## Physiology
                                                  0.0218947863 0.0298448445
## Behavior.Analysis
                                                  0.0173047893 0.0379999294
## Linguistics
                                                  0.0085797551 0.1337105011
## Art.Education
                                                  0.0224378432 0.0495889802
                                                  0.0730131306 0.0413962822
## Teaching.English
                                                  0.0615399564 0.0741127090
## Arts.Administration
## Bilingual.Bicultural.Education
                                                  0.1181537642 0.0135405934
## Clinical.Psychology
                                                  0.0215946828 0.0571897037
## Cognitive.Science
                                                  0.0625293347 0.0702276874
## College.Advising
                                                  0.0917439533 0.1137405310
## Communication.Sciences.and.Disorders
                                                  0.0524328479 0.0390937337
## Cooperation.and.Conflict.Resolution
                                                  0.0187507280 0.0592346431
## Creative.Technologies
                                                  0.0021814157 0.0032006157
```

```
## Curriculum.and.Teaching
                                                  0.0381137038 0.0923166924
## Dance.Education
                                                  0.0691104377 0.0211418558
## Deaf.and.Hard.of.Hearing
                                                  0.0001103705 0.0923550740
## Design.and.Development.of.Digital.Games
                                                  0.0808298422 0.0506074335
## Developmental.Psychology
                                                  0.0116964136 0.0009854866
## Diabetes.Education
                                                  0.0895876976 0.0113216785
## Early.Childhood.Education
                                                  0.0879178680 0.1429799573
## Early.Childhood.Special.Education
                                                  0.0409533514 0.0124245536
## Economics.and.Education
                                                  0.0251782057 0.0603842321
## Education.Technology
                                                  0.0368376388 0.0147171278
## Education.Leadership
                                                  0.0958269511 0.0236095737
## Education.Policy
                                                  0.0351391100 0.0268097491
## Inclusive.Education
                                                  0.0753370149 0.0907599156
## English.Education
                                                  0.0280335356 0.0835461199
## Change.Leadership
                                                  0.0193429078 0.0936823099
## Nursing
                                                  0.0575546936 0.0234775312
## Gifted.Education
                                                  0.0285827977 0.0159085866
## Health.Education
                                                  0.0307107019 0.0268396445
## Higher.and.Postsecondary.Education
                                                  0.0207391354 0.0236373196
## History
                                                  0.0462682878 0.0292765234
## Instructional.Technology.and.Media
                                                  0.0861331565 0.0461359382
## Intellectual.Disability.Autism
                                                  0.0200246336 0.0115517100
## International.and.Comparative.Education
                                                  0.0370612886 0.0098166348
## Kinesiology
                                                  0.0031452182 0.0168373704
## Learning.Analytics
                                                  0.0922579926 0.0529617890
## Literacv
                                                  0.1392879315 0.0798709771
## Mathematics
                                                  0.0348876146 0.0194000438
## Measurement.. Evaluation.and. Statistics
                                                  0.0373120312 0.0566762545
## Motor.Learning.and.Control
                                                  0.0864649666 0.0237437153
## Movement.Science
                                                  0.0078757986 0.0799820433
## Music
                                                  0.1007465942 0.0347478937
## Neuroscience
                                                  0.0655213577 0.0588767831
## Nutrition
                                                  0.0295627372 0.0374524614
                                                  0.0857710187 0.0649988769
## Leadership
## Philosophy
                                                  0.0965416350 0.0771832443
## Physical.Education
                                                  0.0199967698 0.0316241276
## Politics
                                                  0.1098486492 0.0342324477
## Private.School.Leadership
                                                  0.0051311836 0.1165598059
## Psychological.Counseling
                                                  0.0292578239 0.0143289465
## Psychology
                                                  0.0974448363 0.0886818582
## Reading
                                                  0.0057206322 0.0497768638
## School.Psychology
                                                  0.0560912634 0.0457626621
## Science.Education
                                                  0.0453866969 0.0591304004
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0713916008 0.0527751259
## Social.Organizational.Psychology
                                                  0.0568065173 0.0665828967
                                                  0.0484218807 0.1378548081
## Sociology
## Spirituality.Mind.Body
                                                  0.0668900125 0.0441538390
## School.Principals
                                                  0.0164509331 0.0027732437
## Urban.Education
                                                  0.0724281483 0.0824110906
## Counseling.Psychology
                                                  0.0345105806 0.0642870113
## Communication.Media.and.Learning.Technologies 0.1179573290 0.0146495386
                                                  0.0514127659 0.0118705275
## cluster
##
                                                         PC25
                                                                     PC26
## Adult.Education
                                                  0.091073103 0.010027162
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## Anthropology ## Social Studies Social Studies O.03329240 0.027216358 Physiology 0.040553397 0.086084726 Behavior Analysis	шш	A., + 1	0 000010405	0 000500000
## Physiology				
## Behavior.Analysis				
## Linguistics 0.022877776 0.089067613 ## Art. Education 0.010399657 0.114717856 ## Teaching. English 0.060106855 0.041087834 ## Arts. Administration 0.076268948 0.091270633 ## Bilingual. Bicultural. Education 0.076268948 0.091270633 ## Clinical. Psychology 0.050603901 0.040975405 ## Cognitive. Science 0.021467881 0.028999921 ## Communication. Sciences and. Disorders 0.18103304 0.02529345 ## Cooperation. and. Conflict. Resolution 0.070455965 0.045148277 ## Creative. Technologies 0.16219031 0.036887235 ## Curriculum. and. Teaching 0.059355558 0.020484703 ## Dance. Education 0.011286213 0.054040891 ## Deaf, and. Hard. of. Hearing 0.015700380 0.032852975 ## Development. Psychology 0.038830121 0.032852975 ## Development. Psychology 0.038830121 0.032852975 ## Early. Childhood. Education 0.0041921978 0.031405282 ## Early. Childhood. Special. Education 0.02644812 0.055835151 ## Education. Technology 0.067816002 0.04722855 ## Education. Policy 0.027315725 0.007624297 ## Education. Policy 0.027315725 0.007624297 ## Education. Policy 0.027315725 0.007624297 ## Elish. Education 0.031408272 0.055065795 ## Health. Education 0.037687540 0.01667743 ## Nursing 0.147318947 0.034362002 ## Histructional. Technology. and. Media 0.026285798 0.025756319 ## Higher. and. Postsecondary. Education 0.037687540 0.136917838 ## Higher. and. Postsecondary. Education 0.037687540 0.06643713 ## Instructional. Technology. and. Media 0.026285798 0.025756319 ## Higher. and. Postsecondary. Education 0.037687540 0.03667740 ## Health. Education 0.0037687540 0.05687104 0.09457847 ## Kinesiology 0.05685106 0.016677349 ## Learning. Analytics 0.05685106 0.016677349 ## Deaf Adaptive o.005685106 0.016677349 #		•		
## Art.Education				
## Teaching.English ## Arts.Administration 0.076268948 0.091270633 ## Bilingual.Bicultural.Education 0.013482045 0.121979368 ## Clinical.Psychology 0.050603901 0.040975405 ## Cognitive.Science 0.021467881 0.028999921 ## College.Advising 0.057652431 0.0728999921 ## Communication.Sciences.and.Disorders 0.118103304 0.025239345 ## Cooperation.and.Conflict.Resolution 0.070455965 0.045148277 ## Creative.Technologies 0.059355558 0.020484703 ## Dance.Education 0.01286213 0.058955558 0.020484703 ## Dance.Education 0.011286213 0.056040891 ## Deaf, and.Hard.of.Hearing 0.05935558 0.032852975 ## Developmental.Psychology 0.038830121 0.036283567 ## Diabetes.Education 0.01286213 0.056404881 ## Early.Childhood.Education 0.020644812 0.055351515 ## Early.Childhood.Education 0.041921978 0.031405282 ## Early.Childhood.Special.Education 0.025204973 0.046818572 ## Education.Technology 0.067816002 0.047226850 ## Education.Leadership 0.056511764 0.022441937 ## Education.Deadership 0.056511764 0.022441937 ## Education.Policy 0.027315725 0.007624297 ## Inclusive.Education 0.03129394 0.01975027 ## English.Education 0.031293720 0.055065795 ## Change.Leadership 0.05685106 0.016677434 ## Higher.and.Postsecondary.Education 0.037687540 0.138917838 ## History 0.07639726 0.00643748 ## Instructional.Technology.and.Media 0.026285798 0.0325765319 ## Higher.and.Postsecondary.Education 0.037687540 0.138917838 ## History 0.017390620 0.006443748 ## Instructional.Technology.and.Media 0.02658951 0.003596279 ## Mathematics 0.060857104 0.094567271 ## Health.Education 0.007737676 0.02766506 ## Motor.Learning.and.Control 0.009727666 0.058556328 0.016645231 ## Nurrational.and.Comparative.Education 0.009736760 0.006443748 ## Literacy 0.06089251 0.0035966776 0.029769503 ## Mathematics 0.060857104 0.094567271 ## Mathematics 0.060857104 0.094567271 ## Mathematics 0.060857104 0.095765033 ## Murrition 0.017206310 0.095705903 ## Murrition 0.017206310 0.095705903 ## Pillosophy 0.044324838 0.088189563 ## Pillosophy 0.044324838 0.088189563 ## Pilvate.School.Leadership		•		
## Arts.Administration				
## Bilingual.Bicultural.Education				
## Clinical.Psychology ## Cognitive.Science ## College.Advising ## Communication.Sciences.and.Disorders ## Communication.Sciences.and.Disorders ## Communication.and.Conflict.Resolution ## Comperation.and.Conflict.Resolution ## Coreative.Technologies ## Curriculum.and.Teaching ## Coreative.Technologies ## Curriculum.and.Teaching ## Dance.Education ## Dance.Education ## Deaf.and.Hard.of.Hearing ## Design.and.Development.of.Digital.Games ## Developmental.Psychology ## Design.and.Development.of.Digital.Games ## Developmental.Psychology ## Daiabetes.Education ## Early.Childhood.Education ## Early.Childhood.Education ## Early.Childhood.Special.Education ## Education.Technology ## Education.Technology ## Education.Technology ## Education.Technology ## Education.Technology ## Education.Design.Poistal.Education ## Doughtister. ## Education.Design.Poistal.Education ## Doughtister. ## Education.Technology ## Commics.and.Education ## Doughtister. ## Education.Design.Poistal.Education ## Doughtister. ## Commics.and.Education ## Doughtister. ## History ## Change.Leadership ## Oo.050858106 0.016677434 ## Mursing ## History ## Health.Education ## History ## Health.Education ## Doughtister. ## History ## International.and.Comparative.Education ## Doughtister. ## History ## Oo.050858106 0.05655631 ## International.and.Comparative.Education ## Doughtister. ## Health.Education ## Doughtister.				
## Cognitive.Science ## College.Advising		<u> </u>		
## Colege.Advising ## Communication.Sciences.and.Disorders ## Cooperation.and.Conflict.Resolution ## Creative.Technologies ## Curriculum.and.Teaching ## Dance.Education ## Dance.Education ## Dance.Education ## Design.and.Development.of.Digital.Games ## Developmental.Psychology ## Dabetes.Education ## Early.Childhood.Education ## Early.Childhood.Special.Education ## Economics.and.Education ## Education.Technology ## Education.Technology ## Education ## Early.Childhood.Special.Education ## Education.Technology ## English.Education ## Nursing ## Instructional.Technology.Education ## Nursing ## Gifted.Education ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## Instructional.Technology.and.Media ## History ## Instructional.Technology.and.Media ## History ## International.and.Comparative.Education ## Cooperative.Education ## International.and.Comparative.Education ## Cooperative.Education ## International.and.Comparative.Education ## International.and.Comparative.Education ## Cooperative.Education ## International.and.Comparative.Education ## International.and.Comparative.Education ## Cooperative.Education ## Cooperative.Education ## International.and.Comparative.Education ## Cooperative.Education ## C		, ,,		
## Communication.Sciences.and.Disorders ## Cooperation.and.Conflict.Resolution ## Creative.Technologies ## Curriculum.and.Teaching ## Dance.Education ## Dance.Education ## Dance.Education ## Deaf.and.Hard.of.Hearing ## Deef.and.Hard.of.Hearing ## Deef.and.Hard.of.Hearing ## Deelopmental.Psychology ## Developmental.Psychology ## Developmental.Psychology ## Early.Childhood.Education ## Early.Childhood.Special.Education ## Early.Childhood.Special.Education ## Education.Policy ## Inclusive.Education ## English.Education ## English.Education ## Nursing ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## International.Technology.and.Media ## International.and.Comparative.Education ## Kinesiology ## International.and.Comparative.Education ## Kinesiology ## Kinesiology ## Kinesiology ## Kinesiology ## Mathematics ## Music ## Music ## Music ## MeasurementEvaluation.and.Statistics ## Movement.Science ## Music ## Nurricological.Education ## Doublessecondery.Education ## Soossessed to		-		
## Cooperation.and.Conflict.Resolution				
## Creative.Technologies ## Curriculum.and.Teaching				
## Curriculum.and.Teaching ## Dance.Education ## Dance.Education ## Deaf.and.Hard.of.Hearing ## Design.and.Development.of.Digital.Games ## Design.and.Development.of.Digital.Games ## Developmental.Psychology ## Design.and.Development.of.Digital.Games ## Developmental.Psychology ## Developmental.Psychology ## Diabetes.Education ## Early.Childhood.Education ## Early.Childhood.Special.Education ## Early.Childhood.Special.Education ## Early.Childhood.Special.Education ## Economics.and.Education ## Education.Technology ## Education.Technology ## Education.Technology ## Education.Pechnology ## Education.Pelolicy ## Education.Policy ## Education.Policy ## Inclusive.Education ## English.Education ## English.Education ## Change.Leadership ## O.009722572 ## Change.Leadership ## O.009722572 ## Gifted.Education ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## Instructional.Technology.and.Media ## History ## International.and.Comparative.Education ## International.and.Comparative.Education ## Kinesiology ## Learning.Analytics ## Authematics ## O.05685710 0.03592279 ## Mathematics ## Mathematics ## Movement.Science ## Movement.Science ## Movement.Science ## Nurition ## Nurition ## Nurition ## Nurition ## Nurition ## Nurition ## Physical.Education ## Private.School.Leadership ## O.003126671 0.0055624300 ## Politics ## Private.School.Leadership ## O.003126671 0.0055624300				
## Dance.Education				
## Deaf.and.Hard.of.Hearing ## Design.and.Development.of.Digital.Games ## Developmental.Psychology ## Diabetes.Education ## Early.Childhood.Education ## Early.Childhood.Special.Education ## Early.Childhood.Special.Education ## Early.Childhood.Special.Education ## Early.Childhood.Special.Education ## Economics.and.Education ## Education.Technology ## Education.Technology ## Education.Leadership ## Education.Policy ## Education.Policy ## Education.Policy ## English.Education ## English.Education ## English.Education ## Change.Leadership ## O.0508581106 0.016677434 ## Nursing ## Health.Education ## Gifted.Education ## Higher.and.Postsecondary.Education ## Higher.and.Postsecondary.Education ## Instructional.Technology.and.Media ## Intellectual.Disability.Autism ## Learning.Analytics ## Learning.Analytics ## Learning.Analytics ## Learning.Analytics ## MasurementEvaluation.and.Statistics ## Movement.Science ## Movement.Science ## Nursition ## Nursition ## Nursition ## Nouroscience ## Music ## Nursition ## Nouroscience ## Music ## Nursition ## D.050858506 0.00667271 ## Learning.Analytics ## Learning.Analytics ## Higher.and.Comparative.Education ## Literacy ## O.050858506 0.005497867 ## O.050858506 0.00549787 ## Learning.Analytics ## MeasurementEvaluation.and.Statistics ## O.050858506 0.005497867 ## O.0508507667 0.0208476264 ## Movement.Science ## Nutrition ## Nursition ## Nursition ## Nursition ## Nursition ## Politics ## Politics ## Politics ## Politics ## Politics ## Politics ## Private.School.Leadership ## O.003126671 0.05552430		-		
## Design.and.Development.of.Digital.Games ## Developmental.Psychology		2 422 6 6 7 2 44 6 46 7 5 2 5		
## Developmental.Psychology ## Diabetes.Education 0.020644812 0.055351515 ## Early.Childhood.Education 0.041921978 0.031405282 ## Early.Childhood.Special.Education 0.033129394 0.019955027 ## Education.Technology 0.067816002 0.047226850 ## Education.Leadership 0.035611764 0.022441937 ## Education.Leadership 0.035611764 0.022441937 ## Education.Policy 0.027315725 0.007624297 ## Inclusive.Education 0.081448272 0.096739106 ## English.Education 0.081448272 0.096739106 ## Sifted.Education 0.009722572 0.055065795 ## Change.Leadership 0.050858106 0.016677434 ## Nursing 0.147318947 0.034362002 ## Gifted.Education 0.024093048 0.075741752 ## Health.Education 0.037687540 0.136917838 ## History 0.017390620 0.006443748 ## Instructional.Technology.and.Media ## Instructional.Technology.and.Media ## International.and.Comparative.Education 0.092548154 0.092569470 ## Kinesiology 0.012045981 0.197471053 ## Learning.Analytics 0.049991878 0.036392813 ## Literacy 0.060589251 0.003596279 ## Mathematics 0.056857104 0.09457271 ## MeasurementEvaluation.and.Statistics 0.058553628 0.016645271 ## Movement.Science 0.120772766 0.027633010 ## Music 0.058553628 0.016645211 ## Nurition 0.017206310 0.095705903 ## Leadership 0.03432438 0.08189863 ## Philosophy 0.04432438 0.08189563 ## Physical.Education 0.0555624300		<u> </u>		
## Diabetes.Education				
## Early.Childhood.Education		1 0		
## Early.Childhood.Special.Education 0.025204973 0.046818572 ## Economics.and.Education 0.033129394 0.019955027 ## Education.Technology 0.067816002 0.047226850 ## Education.Leadership 0.035611764 0.02241937 ## Education.Policy 0.027315725 0.007624297 ## Inclusive.Education 0.081448272 0.096739106 ## English.Education 0.009722572 0.055065795 ## Change.Leadership 0.050858106 0.016677434 ## Nursing 0.147318947 0.034362002 ## Gifted.Education 0.027639726 0.066115891 ## Health.Education 0.007639726 0.066115891 ## Higher.and.Postsecondary.Education 0.037687540 0.136917838 ## History 0.017390620 0.006443748 ## Instructional.Technology.and.Media 0.026285798 0.025756319 ## International.and.Comparative.Education 0.092548154 0.092549570 ## Kinesiology 0.012045981 0.197471053 ## Learning.Analytics 0.0490991878 0.036392813 ## Literacy 0.060589251 0.003596279 ## Mathematics 0.056857104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.053657104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749516 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.0555624300				
## Economics.and.Education 0.033129394 0.019955027 ## Education.Technology 0.067816002 0.047226850 ## Education.Leadership 0.035611764 0.022441937 ## Education.Policy 0.027315725 0.007624297 ## Inclusive.Education 0.081448272 0.096739106 ## English.Education 0.009722572 0.055065795 ## Change.Leadership 0.050858106 0.016677434 ## Nursing 0.147318947 0.034362002 ## Gifted.Education 0.124093048 0.075741752 ## Health.Education 0.007639726 0.066115891 ## Higher.and.Postsecondary.Education 0.037687540 0.136917838 ## History 0.017390620 0.006443748 ## Instructional.Technology.and.Media 0.026285798 0.025756319 ## International.and.Comparative.Education 0.092548154 0.049478447 ## Kinesiology 0.01245981 0.197471053 ## Learning.Analytics 0.049991878 0.036392813 ## Literacy 0.060589251 0.003596279 ## Mathematics 0.056857104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.056857104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.03643243 0.019031811 ## Philosophy 0.046484371 0.009742516 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.0555624300		· ·		
## Education.Technology		· · · · · · · · · · · · · · · · · · ·		
## Education.Leadership ## Education.Policy ## Inclusive.Education ## English.Education ## English.Education ## English.Education ## Change.Leadership ## O.050858106 O.016677434 ## Nursing ## Wirsing ## Gifted.Education ## Health.Education ## Health.Education ## History ## Instructional.Technology.and.Media ## Instructional.Technology.and.Media ## Intellectual.Disability.Autism ## International.and.Comparative.Education ## Kinesiology ## Learning.Analytics ## Learning.Analytics ## MeasurementEvaluation.and.Statistics ## MeasurementEvaluation.and.Statistics ## Movement.Science ## Movement.Science ## Nurrition ## Nouroscience ## Nurrition ## Physical.Education ## Physical.Education ## Physical.Education ## Politics ## Private.School.Leadership ## O.003572572 ## O.005731576 ## O.005731576 ## O.003512677 ## O.0055624300				
## Education.Policy		<u> </u>		
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## English.Education		· ·		
## Change.Leadership				
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## Higher.and.Postsecondary.Education				
## History ## Instructional.Technology.and.Media ## Instructional.Technology.and.Media ## Intellectual.Disability.Autism ## International.and.Comparative.Education ## Kinesiology ## Learning.Analytics ## Literacy ## Mathematics ## MeasurementEvaluation.and.Statistics ## Motor.Learning.and.Control ## Movement.Science ## Music ## Neuroscience ## Nutrition ## Neuroscience ## Nutrition ## Leadership ## Physical.Education ## Politics ## Private.School.Leadership ## Private.School.Leadership ## Private.School.Leadership ## Private.School.Leadership ## Coupside School				
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## Kinesiology 0.012045981 0.197471053 ## Learning.Analytics 0.049991878 0.036392813 ## Literacy 0.060589251 0.003596279 ## Mathematics 0.056857104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.005307767 0.020847626 ## Motor.Learning.and.Control 0.133669684 0.039799685 ## Movement.Science 0.120772766 0.027633010 ## Music 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300		· · · · · · · · · · · · · · · · · · ·		
## Learning.Analytics		<u>-</u>		
## Literacy 0.060589251 0.003596279 ## Mathematics 0.056857104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.005307767 0.020847626 ## Motor.Learning.and.Control 0.133669684 0.039799685 ## Movement.Science 0.120772766 0.027633010 ## Music 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300		61		
## Mathematics 0.056857104 0.094567271 ## MeasurementEvaluation.and.Statistics 0.005307767 0.020847626 ## Motor.Learning.and.Control 0.133669684 0.039799685 ## Movement.Science 0.120772766 0.027633010 ## Music 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300				
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## Movement.Science 0.120772766 0.027633010 ## Music 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300				
## Music 0.058553628 0.015645231 ## Neuroscience 0.119859116 0.023180628 ## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300		<u> </u>		
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## Nutrition 0.017206310 0.095705903 ## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300				
## Leadership 0.036143263 0.019031811 ## Philosophy 0.046843713 0.009749519 ## Physical.Education 0.044324838 0.088189563 ## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300				
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## Politics 0.103463819 0.006742161 ## Private.School.Leadership 0.003126671 0.055624300		- ·		
## Private.School.Leadership 0.003126671 0.055624300		· ·		
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	##	rsychological.counseling	0.008514730	0.024401691

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## Psychology
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## Reading
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## School.Psychology
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## Science.Education
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## Sexuality..Women.and.Gender.in.Psychology
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## Social.Organizational.Psychology
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## Sociology
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## Spirituality.Mind.Body
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## School.Principals
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## Urban.Education
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## Counseling.Psychology
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## Communication.Media.and.Learning.Technologies 0.001548638 0.001156846
                                                  0.039259427 0.004538641
##
                                                         PC27
                                                                     PC28
## Adult.Education
                                                  0.040707783 0.104153550
## Anthropology
                                                  0.114223490 0.041992766
## Social.Studies
                                                  0.007596211 0.006080515
## Physiology
                                                  0.112823505 0.069261650
## Behavior.Analysis
                                                  0.037654415 0.007919367
## Linguistics
                                                  0.076186075 0.014504481
## Art.Education
                                                  0.012370226 0.032763530
## Teaching.English
                                                  0.098167694 0.070586030
                                                  0.014615522 0.064190832
## Arts.Administration
## Bilingual.Bicultural.Education
                                                  0.034318865 0.053463521
## Clinical.Psychology
                                                  0.058062016 0.025186395
## Cognitive.Science
                                                  0.108514277 0.042193590
## College.Advising
                                                  0.046196443 0.032042853
## Communication.Sciences.and.Disorders
                                                  0.048125412 0.074526137
## Cooperation.and.Conflict.Resolution
                                                  0.135988053 0.139506560
## Creative.Technologies
                                                  0.100730816 0.100503872
## Curriculum.and.Teaching
                                                  0.011055829 0.071394841
## Dance.Education
                                                  0.024259341 0.023450300
## Deaf.and.Hard.of.Hearing
                                                  0.020592854 0.036147372
## Design.and.Development.of.Digital.Games
                                                  0.050551650 0.049235307
## Developmental.Psychology
                                                  0.038851684 0.038915949
## Diabetes.Education
                                                  0.025870144 0.122291148
## Early.Childhood.Education
                                                  0.046404623 0.035922612
## Early.Childhood.Special.Education
                                                  0.012907896 0.040720266
## Economics.and.Education
                                                  0.069548925 0.023124539
## Education.Technology
                                                  0.004242617 0.016251001
## Education.Leadership
                                                  0.089070976 0.030470216
## Education.Policy
                                                  0.047326791 0.013151552
## Inclusive.Education
                                                  0.017113723 0.096896955
## English.Education
                                                  0.086886937 0.045763185
## Change.Leadership
                                                  0.010424958 0.007123872
                                                  0.091119070 0.129820632
## Nursing
## Gifted.Education
                                                  0.075338047 0.046208818
## Health.Education
                                                  0.043624988 0.035123637
## Higher.and.Postsecondary.Education
                                                  0.008705587 0.016293677
## History
                                                  0.043852508 0.092169358
## Instructional.Technology.and.Media
                                                  0.024260167 0.060567838
## Intellectual.Disability.Autism
                                                  0.025058567 0.037304064
## International.and.Comparative.Education
                                                  0.013524191 0.059872545
## Kinesiology
                                                  0.109339099 0.033218213
```

```
## Learning.Analytics
                                                  0.002369362 0.004007498
## Literacy
                                                  0.045883133 0.024825338
## Mathematics
                                                  0.015264239 0.001076357
## Measurement.. Evaluation.and. Statistics
                                                  0.038632826 0.048682709
## Motor.Learning.and.Control
                                                  0.036682191 0.131429218
## Movement.Science
                                                  0.022773185 0.001955324
## Music
                                                  0.021787150 0.027157168
## Neuroscience
                                                  0.037330239 0.005508768
## Nutrition
                                                  0.091801403 0.019771688
## Leadership
                                                  0.081591834 0.035319409
## Philosophy
                                                  0.009367548 0.064991370
## Physical.Education
                                                  0.105506691 0.005138972
## Politics
                                                  0.057617972 0.011772713
## Private.School.Leadership
                                                  0.070571237 0.003280635
## Psychological.Counseling
                                                  0.054290294 0.092860840
## Psychology
                                                  0.033178571 0.093880589
## Reading
                                                  0.085562225 0.049992333
## School.Psychology
                                                  0.023365020 0.043277006
## Science.Education
                                                  0.031974185 0.018219319
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.023645441 0.072849015
## Social.Organizational.Psychology
                                                  0.057946743 0.044324146
## Sociology
                                                  0.040433631 0.043863741
                                                  0.144154506 0.017091696
## Spirituality.Mind.Body
## School.Principals
                                                  0.126450256 0.022187266
## Urban.Education
                                                  0.048070991 0.137564581
## Counseling.Psychology
                                                  0.025876667 0.041107769
## Communication.Media.and.Learning.Technologies 0.059441997 0.093378124
                                                  0.003093416 0.036691921
##
                                                         PC29
## Adult.Education
                                                  0.032115070 0.1192345649
## Anthropology
                                                  0.100274104 0.0154087477
## Social.Studies
                                                  0.039394188 0.0065204601
## Physiology
                                                  0.109127031 0.0454033860
## Behavior.Analysis
                                                  0.034986878 0.0305063416
## Linguistics
                                                  0.005569002 0.0286356623
## Art.Education
                                                  0.036667921 0.1280711118
## Teaching.English
                                                  0.049403042 0.1356768694
## Arts.Administration
                                                  0.128819775 0.0462826589
## Bilingual.Bicultural.Education
                                                  0.044052144 0.0422772122
## Clinical.Psychology
                                                  0.034955554 0.0417436573
## Cognitive.Science
                                                  0.087396921 0.0301029231
## College.Advising
                                                  0.047279083 0.0174077167
## Communication.Sciences.and.Disorders
                                                  0.069742463 0.0737530422
## Cooperation.and.Conflict.Resolution
                                                  0.074680394 0.0742977539
## Creative.Technologies
                                                  0.018616058 0.0578364330
                                                  0.043959987 0.0149794972
## Curriculum.and.Teaching
## Dance.Education
                                                  0.011544357 0.0310598916
## Deaf.and.Hard.of.Hearing
                                                  0.066639634 0.0819628921
## Design.and.Development.of.Digital.Games
                                                  0.028644138 0.0433208040
## Developmental.Psychology
                                                  0.088399547 0.0059706891
## Diabetes.Education
                                                  0.038580684 0.1011532995
## Early.Childhood.Education
                                                  0.071874496 0.1098918808
## Early.Childhood.Special.Education
                                                  0.041788976 0.0077544706
## Economics.and.Education
                                                  0.050027913 0.0167588094
```

```
## Education.Technology
                                                  0.001915640 0.0473065237
## Education.Leadership
                                                  0.016070589 0.0413204501
## Education.Policy
                                                  0.010347698 0.0543918115
## Inclusive.Education
                                                  0.045382299 0.1446420708
## English.Education
                                                  0.061880655 0.0841321980
## Change.Leadership
                                                  0.053845820 0.0941196210
## Nursing
                                                  0.069578669 0.0380805791
## Gifted.Education
                                                  0.025714510 0.0103200764
## Health.Education
                                                  0.065214666 0.0232924889
## Higher.and.Postsecondary.Education
                                                  0.072358611 0.0522166134
## History
                                                  0.041538055 0.1388871169
## Instructional.Technology.and.Media
                                                  0.102279140 0.0606452094
## Intellectual.Disability.Autism
                                                  0.030579458 0.0311570656
## International.and.Comparative.Education
                                                  0.016747302 0.0036344038
## Kinesiology
                                                  0.024103003 0.0180645256
## Learning.Analytics
                                                  0.008466296 0.0176569554
                                                  0.053711805 0.0244580101
## Literacy
## Mathematics
                                                  0.113346223 0.0058005000
## Measurement.. Evaluation.and. Statistics
                                                  0.020187865 0.1622711279
## Motor.Learning.and.Control
                                                  0.040386476 0.0171116818
## Movement.Science
                                                  0.027795226 0.0144189325
## Music
                                                  0.022200403 0.0308684711
## Neuroscience
                                                  0.069007004 0.0632858353
## Nutrition
                                                  0.202505362 0.0167627384
## Leadership
                                                  0.048385331 0.0060997536
## Philosophy
                                                  0.013086471 0.0209324978
## Physical.Education
                                                  0.135424635 0.0075795651
## Politics
                                                  0.060514548 0.0041926807
## Private.School.Leadership
                                                  0.023790650 0.0754393486
## Psychological.Counseling
                                                  0.036301052 0.0003901894
## Psychology
                                                  0.053031203 0.0495138801
## Reading
                                                  0.001576058 0.0541168406
## School.Psychology
                                                  0.027984813 0.0653744928
## Science.Education
                                                  0.019952297 0.0169341977
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.081289846 0.0122157051
## Social.Organizational.Psychology
                                                  0.050540625 0.0158908825
## Sociology
                                                  0.046901254 0.1206184932
## Spirituality.Mind.Body
                                                  0.049379871 0.0238115740
## School.Principals
                                                  0.040451929 0.0490026119
## Urban.Education
                                                  0.075655180 0.0676055739
## Counseling.Psychology
                                                  0.023061636 0.0071457391
## Communication.Media.and.Learning.Technologies 0.075967671 0.0073416550
                                                  0.072849790 0.0225556240
##
                                                         PC31
                                                                      PC32
## Adult.Education
                                                  0.026141295 0.0367921845
                                                  0.136469173 0.0678394883
## Anthropology
## Social.Studies
                                                  0.047618586 0.0087393157
## Physiology
                                                  0.118062572 0.0787882540
## Behavior.Analysis
                                                  0.025144171 0.0608569801
## Linguistics
                                                  0.051477010 0.0538014046
## Art.Education
                                                  0.108057005 0.0942304548
## Teaching.English
                                                  0.067186893 0.0845632114
## Arts.Administration
                                                  0.052542747 0.0047809098
## Bilingual.Bicultural.Education
                                                  0.054489990 0.0136125631
```

		^	004440450	0.040004000
	Clinical.Psychology			0.0136901829
	Cognitive.Science			0.0114929212
	College.Advising	-		0.0897893536
	Communication.Sciences.and.Disorders			0.0302470340 0.0652280675
	Cooperation.and.Conflict.Resolution			0.0568586247
	Creative.Technologies			0.0313875024
	Curriculum.and.Teaching Dance.Education			0.0313875024
				0.0494340248
	Deaf.and.Hard.of.Hearing Design.and.Development.of.Digital.Games			0.0092719883
	Developmental.Psychology			0.0094275574
	Diabetes Education			0.0239033030
	Early.Childhood.Education			0.0123717214
	Early.Childhood.Special.Education			0.0608179145
	Economics.and.Education			0.1456159516
	Education. Technology			0.0477833766
	Education.Leadership			0.0344722810
	Education.Policy			0.0344722810
	Inclusive.Education			0.0342000317
	English.Education			0.0664006687
	Change.Leadership			0.1036774769
	Nursing			0.0508488271
	Gifted.Education	-		0.0107205360
	Health.Education	-		0.0245296323
##	Higher.and.Postsecondary.Education	0	.094216537	0.0008960387
	History			0.0480056094
	Instructional.Technology.and.Media	0	.035931851	0.0108498959
	Intellectual.Disability.Autism	0	.099797695	0.0148907440
##	International.and.Comparative.Education	0	.106350689	0.0493425446
##	Kinesiology	0	.033680743	0.0947512782
##	Learning.Analytics	0	.060685790	0.0642048607
##	Literacy	0	.070278486	0.0521962824
##	Mathematics	0	.032593342	0.0715825934
	MeasurementEvaluation.and.Statistics	0	.006134332	0.0267142126
	Motor.Learning.and.Control			0.1376348313
##	Movement.Science	-		0.0065153731
	Music			0.0407670617
	Neuroscience			0.0655230361
	Nutrition			0.0010190712
	Leadership			0.0665052597
	Philosophy			0.0721639587
	Physical.Education			0.0456946910
	Politics			0.1328750662
	Private.School.Leadership			0.0819003158
	Psychological.Counseling			0.0698233968
	Psychology			0.0375610421
	Reading School.Psychology			0.0105442348 0.0651198063
	Science.Education			0.0581551906
	SexualityWomen.and.Gender.in.Psychology			0.0356986299
	Social.Organizational.Psychology			0.0330980299
	Sociology			0.0222370900
	Spirituality.Mind.Body			0.0783240056
	School.Principals			0.0842600662
		•		

```
## Urban.Education
                                                  0.036799549 0.0703629986
## Counseling.Psychology
                                                  0.182661378 0.0554155143
## Communication.Media.and.Learning.Technologies 0.117454023 0.0018974594
                                                  0.009439635 0.0278283179
                                                          PC33
                                                                       PC34
## Adult.Education
                                                  0.0150007105 0.0343514234
## Anthropology
                                                  0.0583943361 0.0270405046
                                                  0.0148659209 0.0916588852
## Social.Studies
## Physiology
                                                  0.0601255293 0.0623170008
## Behavior.Analysis
                                                  0.0466404202 0.0095716935
## Linguistics
                                                  0.0774850679 0.0265242326
## Art.Education
                                                  0.0261614249 0.0322370632
## Teaching.English
                                                  0.0006990847 0.1132376165
## Arts.Administration
                                                  0.0027240499 0.0327833088
## Bilingual.Bicultural.Education
                                                  0.0505212902 0.0121739877
## Clinical.Psychology
                                                  0.2289137014 0.0694556761
## Cognitive.Science
                                                  0.0057080330 0.0355237828
## College.Advising
                                                  0.0414023434 0.0187077130
## Communication.Sciences.and.Disorders
                                                  0.0459483966 0.0020279972
## Cooperation.and.Conflict.Resolution
                                                  0.0309381592 0.0912222058
## Creative.Technologies
                                                  0.0391631045 0.0080827515
## Curriculum.and.Teaching
                                                  0.0788717912 0.0247024749
## Dance.Education
                                                  0.0572585240 0.0290997256
## Deaf.and.Hard.of.Hearing
                                                  0.0273772521 0.0107815208
## Design.and.Development.of.Digital.Games
                                                  0.0621212879 0.0375880973
## Developmental.Psychology
                                                  0.0593911154 0.0621527784
## Diabetes.Education
                                                  0.0455375917 0.0716468201
## Early.Childhood.Education
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## Early.Childhood.Special.Education
                                                  0.0684685998 0.0133114399
## Economics.and.Education
                                                  0.1030864122 0.0344554918
## Education.Technology
                                                  0.0669382720 0.1055032063
## Education.Leadership
                                                  0.0352836048 0.0947896237
## Education.Policy
                                                  0.0317907526 0.0090343243
## Inclusive.Education
                                                  0.0106937417 0.0548115975
## English.Education
                                                  0.0096584652 0.0967072746
## Change.Leadership
                                                  0.0220691078 0.1344809741
## Nursing
                                                  0.0824378204 0.0188495670
## Gifted.Education
                                                  0.0256021829 0.0457525541
## Health.Education
                                                  0.1459241392 0.0853729461
## Higher.and.Postsecondary.Education
                                                  0.0646535566 0.0826918067
                                                  0.0128697653 0.0823525982
## History
## Instructional.Technology.and.Media
                                                  0.0274309632 0.0052114678
## Intellectual.Disability.Autism
                                                  0.0803244805 0.0973372006
## International.and.Comparative.Education
                                                  0.0563159148 0.0666214505
                                                  0.1110872894 0.0072218547
## Kinesiology
                                                  0.0510758242 0.0365507888
## Learning.Analytics
## Literacy
                                                  0.0422846220 0.0059394565
## Mathematics
                                                  0.0313974354 0.0260850896
## Measurement.. Evaluation.and. Statistics
                                                  0.0553204541 0.0028708868
## Motor.Learning.and.Control
                                                  0.0470317238 0.0137255223
## Movement.Science
                                                  0.0587990311 0.0393560938
## Music
                                                  0.0120491449 0.1039048676
## Neuroscience
                                                  0.0725016231 0.0053458527
## Nutrition
                                                  0.0092503958 0.0396278021
```

```
## Leadership
                                                  0.0126540506 0.0403838712
                                                  0.0263812895 0.0384411051
## Philosophy
## Physical.Education
                                                  0.1262289802 0.0380556995
## Politics
                                                  0.0093297490 0.0325083911
## Private.School.Leadership
                                                  0.0117893740 0.0966868062
## Psychological.Counseling
                                                  0.1032357627 0.0369024546
## Psychology
                                                  0.0289312879 0.0238210481
## Reading
                                                  0.0406880269 0.0829570146
## School.Psychology
                                                  0.0124457959 0.0351247583
## Science.Education
                                                  0.0331912482 0.0463743740
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0671033985 0.1657598037
## Social.Organizational.Psychology
                                                  0.0596507491 0.0771899570
## Sociology
                                                  0.0255966882 0.0453402270
## Spirituality.Mind.Body
                                                  0.1568376725 0.0008294728
## School.Principals
                                                  0.0366993760 0.1323380103
## Urban.Education
                                                  0.0072777564 0.0385934840
## Counseling.Psychology
                                                  0.0202654484 0.0355712674
## Communication.Media.and.Learning.Technologies 0.0008063857 0.0092206182
## cluster
                                                  0.0604554943 0.0220258420
                                                          PC35
##
                                                                      PC36
## Adult.Education
                                                  0.1305533880 0.064311848
## Anthropology
                                                  0.0478152807 0.093978374
## Social.Studies
                                                  0.0253230946 0.019515010
## Physiology
                                                  0.0617823600 0.075486966
## Behavior.Analysis
                                                  0.0429568030 0.094986664
## Linguistics
                                                  0.0520478132 0.020889613
## Art.Education
                                                  0.0086184964 0.081090970
## Teaching.English
                                                  0.0251437698 0.045362536
## Arts.Administration
                                                  0.0904159842 0.083359118
## Bilingual.Bicultural.Education
                                                  0.0384878674 0.034490903
## Clinical.Psychology
                                                  0.0967885121 0.022372654
## Cognitive.Science
                                                  0.0129594317 0.027462429
## College.Advising
                                                  0.0616584000 0.048021266
## Communication.Sciences.and.Disorders
                                                  0.0107300811 0.039591817
## Cooperation.and.Conflict.Resolution
                                                  0.0580436638 0.018885950
## Creative.Technologies
                                                  0.0815279277 0.043029560
## Curriculum.and.Teaching
                                                  0.0037065118 0.008160273
## Dance.Education
                                                  0.1064641784 0.014216461
## Deaf.and.Hard.of.Hearing
                                                  0.0317717115 0.031951431
## Design.and.Development.of.Digital.Games
                                                  0.0043366401 0.036518159
## Developmental.Psychology
                                                  0.0543368530 0.092243485
## Diabetes.Education
                                                  0.1285072382 0.007515315
## Early.Childhood.Education
                                                  0.0408863156 0.022349439
## Early.Childhood.Special.Education
                                                  0.0350961918 0.049015747
## Economics.and.Education
                                                  0.0280051627 0.028602013
## Education.Technology
                                                  0.0211177754 0.086455346
## Education.Leadership
                                                  0.0004808372 0.028061130
                                                  0.0513427931 0.076563903
## Education.Policy
## Inclusive.Education
                                                  0.0376945639 0.021920796
## English.Education
                                                  0.0275345267 0.001929294
## Change.Leadership
                                                  0.0440629786 0.044629869
## Nursing
                                                  0.0256658765 0.107582006
## Gifted.Education
                                                  0.0841012469 0.105741813
## Health.Education
                                                  0.0321315122 0.111680302
```

```
## Higher.and.Postsecondary.Education
                                                  0.1030336323 0.024649376
## History
                                                  0.0156348216 0.043341048
## Instructional.Technology.and.Media
                                                  0.0121232548 0.013761147
## Intellectual.Disability.Autism
                                                  0.0133917914 0.058453571
## International.and.Comparative.Education
                                                  0.0382682817 0.109184233
## Kinesiology
                                                  0.0416814148 0.046340325
## Learning.Analytics
                                                  0.1435716200 0.003603732
                                                  0.0331408721 0.019710906
## Literacy
## Mathematics
                                                  0.0368645188 0.008160957
## Measurement.. Evaluation.and. Statistics
                                                  0.1215828826 0.014463070
## Motor.Learning.and.Control
                                                  0.0499525109 0.022349463
## Movement.Science
                                                  0.0508500423 0.091612226
## Music
                                                  0.0050150702 0.105248208
## Neuroscience
                                                  0.0222658655 0.067140879
## Nutrition
                                                  0.0776800323 0.036794013
## Leadership
                                                  0.0275476665 0.044180654
                                                  0.0794354406 0.102655336
## Philosophy
## Physical.Education
                                                  0.1126202560 0.084574006
## Politics
                                                  0.0427153348 0.064860933
## Private.School.Leadership
                                                  0.0457354342 0.051675966
## Psychological.Counseling
                                                  0.0646778364 0.009312898
## Psychology
                                                  0.0193912660 0.008495434
## Reading
                                                  0.0746384800 0.032699345
## School.Psychology
                                                  0.0285931442 0.068082886
                                                  0.0290699043 0.137965719
## Science.Education
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0708638362 0.013662631
## Social.Organizational.Psychology
                                                  0.0485138122 0.046557125
                                                  0.0635188837 0.077165474
## Sociology
## Spirituality.Mind.Body
                                                  0.1107065804 0.038033837
                                                  0.0158620707 0.110709391
## School.Principals
## Urban.Education
                                                  0.0203957116 0.040836726
## Counseling.Psychology
                                                  0.0961892578 0.005957468
## Communication.Media.and.Learning.Technologies 0.1286545445 0.050108745
                                                  0.0051040832 0.023772435
## cluster
                                                          PC37
                                                                      PC38
## Adult.Education
                                                  1.489658e-01 0.035020070
## Anthropology
                                                  1.738386e-02 0.027410818
## Social.Studies
                                                  9.282908e-02 0.086291778
## Physiology
                                                  1.031029e-01 0.006861378
## Behavior.Analysis
                                                  7.222531e-02 0.122338062
## Linguistics
                                                  4.671391e-03 0.038141694
## Art.Education
                                                  2.399202e-02 0.056126555
## Teaching.English
                                                  2.505839e-02 0.016141895
## Arts.Administration
                                                  3.331174e-02 0.133330298
## Bilingual.Bicultural.Education
                                                  5.772520e-02 0.021721950
                                                  1.479867e-02 0.010795132
## Clinical.Psychology
## Cognitive.Science
                                                  2.205938e-02 0.077353157
## College.Advising
                                                  5.730265e-02 0.157212478
## Communication.Sciences.and.Disorders
                                                  4.096383e-03 0.062467777
## Cooperation.and.Conflict.Resolution
                                                  5.122630e-02 0.028437812
                                                  3.829021e-02 0.090010638
## Creative.Technologies
## Curriculum.and.Teaching
                                                  7.423028e-03 0.052147331
## Dance.Education
                                                  2.401248e-02 0.007654943
## Deaf.and.Hard.of.Hearing
                                                  2.986181e-03 0.020904041
```

```
## Design.and.Development.of.Digital.Games
                                                  7.789962e-02 0.010977854
## Developmental.Psychology
                                                  6.692117e-02 0.046114045
## Diabetes.Education
                                                  6.444146e-02 0.007369922
## Early.Childhood.Education
                                                  2.318790e-02 0.033249617
## Early.Childhood.Special.Education
                                                  7.566541e-02 0.036612663
## Economics.and.Education
                                                  1.091463e-01 0.026450566
## Education.Technology
                                                  1.673351e-01 0.058810388
## Education.Leadership
                                                  2.764823e-02 0.019065468
## Education.Policy
                                                  2.231984e-02 0.041895046
                                                  6.111328e-02 0.025091340
## Inclusive.Education
## English.Education
                                                  4.708211e-02 0.022768163
                                                  8.009148e-02 0.063475365
## Change.Leadership
## Nursing
                                                  6.554549e-02 0.004444772
## Gifted.Education
                                                  6.187197e-02 0.067146864
## Health.Education
                                                  3.025774e-02 0.009155844
## Higher.and.Postsecondary.Education
                                                  2.022660e-03 0.008025180
## History
                                                  1.962984e-02 0.065059070
## Instructional.Technology.and.Media
                                                  6.029890e-02 0.012909227
## Intellectual.Disability.Autism
                                                  1.140229e-01 0.074850353
## International.and.Comparative.Education
                                                  9.747484e-02 0.060368744
## Kinesiology
                                                  1.308732e-02 0.070383152
## Learning.Analytics
                                                  7.671125e-03 0.032397626
                                                  4.754852e-02 0.062384063
## Literacy
## Mathematics
                                                  1.285197e-02 0.082223594
## Measurement.. Evaluation.and. Statistics
                                                  1.319771e-01 0.032298501
## Motor.Learning.and.Control
                                                  2.576934e-02 0.018850402
## Movement.Science
                                                  1.792416e-02 0.037377751
                                                  8.939201e-02 0.044434265
## Music
## Neuroscience
                                                  4.617391e-02 0.019907790
## Nutrition
                                                  4.432098e-04 0.020771433
## Leadership
                                                  4.374112e-02 0.034527759
## Philosophy
                                                  3.260201e-02 0.033292110
## Physical.Education
                                                  9.482786e-05 0.026203852
## Politics
                                                  5.470775e-03 0.044021753
## Private.School.Leadership
                                                  2.952882e-02 0.022565505
## Psychological.Counseling
                                                  8.639526e-02 0.068761959
## Psychology
                                                  3.969044e-02 0.064912334
## Reading
                                                  1.238146e-02 0.021331582
## School.Psychology
                                                  7.963669e-02 0.149490411
## Science.Education
                                                  6.361473e-02 0.020547784
## Sexuality..Women.and.Gender.in.Psychology
                                                  2.309037e-02 0.024649849
## Social.Organizational.Psychology
                                                  2.189082e-02 0.050696712
                                                  1.513770e-01 0.022000875
## Sociology
## Spirituality.Mind.Body
                                                  4.590300e-03 0.053849280
## School.Principals
                                                  2.398952e-02 0.217299414
## Urban.Education
                                                  1.288333e-01 0.091612064
## Counseling.Psychology
                                                  2.952843e-03 0.056863476
## Communication.Media.and.Learning.Technologies 3.278452e-03 0.009111743
## cluster
                                                  3.117897e-02 0.037607692
                                                          PC39
                                                                       PC40
## Adult.Education
                                                  5.826885e-02 0.0375311045
## Anthropology
                                                  2.611994e-02 0.0448867509
## Social.Studies
                                                  4.242972e-02 0.0247667786
## Physiology
                                                  7.950209e-02 0.0411818195
```

```
## Behavior.Analysis
                                                  9.812347e-02 0.0030017189
## Linguistics
                                                  7.249353e-02 0.0784964129
## Art.Education
                                                  1.905223e-02 0.1430812664
                                                  4.957957e-02 0.0057292792
## Teaching.English
## Arts.Administration
                                                  3.634599e-02 0.0238265541
## Bilingual.Bicultural.Education
                                                  3.927294e-02 0.0304273849
## Clinical.Psychology
                                                  2.887789e-03 0.0520616960
## Cognitive.Science
                                                  3.361605e-02 0.0264644189
## College.Advising
                                                  4.665049e-03 0.0561582716
## Communication.Sciences.and.Disorders
                                                  3.832010e-02 0.1450780647
## Cooperation.and.Conflict.Resolution
                                                  2.906494e-02 0.0200978508
## Creative.Technologies
                                                  9.739165e-02 0.0446183498
## Curriculum.and.Teaching
                                                  1.124745e-01 0.0396483341
## Dance.Education
                                                  4.656721e-02 0.0601612902
## Deaf.and.Hard.of.Hearing
                                                  3.363429e-02 0.0741532344
## Design.and.Development.of.Digital.Games
                                                  4.576665e-02 0.1334109151
## Developmental.Psychology
                                                  6.161766e-02 0.0701824108
## Diabetes.Education
                                                  1.406839e-01 0.0152860162
## Early.Childhood.Education
                                                  7.879776e-02 0.0839257666
## Early.Childhood.Special.Education
                                                  7.272422e-03 0.0149425524
## Economics.and.Education
                                                  8.284632e-03 0.0325721310
## Education.Technology
                                                  1.367852e-02 0.0504630598
                                                  6.904107e-02 0.0116596046
## Education.Leadership
## Education.Policy
                                                  2.017020e-01 0.0295021693
## Inclusive.Education
                                                  6.382287e-02 0.0153912242
## English.Education
                                                  1.219356e-01 0.0069119959
## Change.Leadership
                                                  8.237055e-02 0.0306983947
                                                  5.746575e-04 0.0011211682
## Nursing
## Gifted.Education
                                                  9.701744e-02 0.0797092062
## Health.Education
                                                  3.875892e-02 0.0290027897
## Higher.and.Postsecondary.Education
                                                  7.800000e-02 0.0213333124
## History
                                                  1.988314e-05 0.0200525708
## Instructional.Technology.and.Media
                                                  5.037290e-03 0.0544601922
## Intellectual.Disability.Autism
                                                  3.391157e-02 0.0765026521
## International.and.Comparative.Education
                                                  2.303564e-02 0.0002831222
## Kinesiology
                                                  5.883213e-02 0.0518877108
## Learning.Analytics
                                                  1.605490e-02 0.1077431911
## Literacy
                                                  3.285045e-02 0.0600206021
## Mathematics
                                                  2.286457e-03 0.0349431599
## Measurement..Evaluation.and.Statistics
                                                  5.541401e-02 0.0249285576
## Motor.Learning.and.Control
                                                  4.623029e-02 0.0875521354
## Movement.Science
                                                  7.492041e-02 0.1105938769
                                                  3.788061e-02 0.0589533794
## Music
## Neuroscience
                                                  5.328944e-02 0.0755423229
                                                  6.160651e-02 0.0682121142
## Nutrition
                                                  2.808495e-04 0.0268356121
## Leadership
## Philosophy
                                                  1.477521e-01 0.0270851010
                                                  5.426891e-03 0.0725036309
## Physical.Education
## Politics
                                                  9.260007e-02 0.0798711051
## Private.School.Leadership
                                                  3.151863e-02 0.0763724636
## Psychological.Counseling
                                                  1.664034e-02 0.0002646796
## Psychology
                                                  7.290140e-02 0.0455355046
## Reading
                                                  4.268516e-02 0.1120116641
## School.Psychology
                                                  9.502800e-02 0.1003801215
```

```
## Science.Education
                                                  7.367177e-03 0.0166951105
## Sexuality..Women.and.Gender.in.Psychology
                                                  7.944008e-03 0.0062532763
                                                  1.089328e-02 0.0017388007
## Social.Organizational.Psychology
## Sociology
                                                  6.420092e-02 0.0701881798
## Spirituality.Mind.Body
                                                  3.451257e-02 0.0417288521
## School.Principals
                                                  6.782037e-02 0.0031289107
## Urban.Education
                                                  1.900645e-02 0.0251834341
                                                  3.421131e-03 0.0632308340
## Counseling.Psychology
## Communication.Media.and.Learning.Technologies 6.146256e-03 0.0025782405
## cluster
                                                  3.150127e-02 0.0267247646
##
                                                          PC41
                                                                       PC42
                                                  0.0174345697 0.0409642056
## Adult.Education
## Anthropology
                                                  0.0468800970 0.0181593538
                                                  0.1940547164 0.0275192928
## Social.Studies
## Physiology
                                                  0.0614090261 0.0763962527
## Behavior.Analysis
                                                  0.0477552806 0.1301583978
                                                  0.0001874618 0.0193112733
## Linguistics
## Art.Education
                                                  0.0969834158 0.0840749757
## Teaching.English
                                                  0.0338436363 0.0037366814
## Arts.Administration
                                                  0.0378437932 0.0099875477
## Bilingual.Bicultural.Education
                                                  0.1055761538 0.0620898485
## Clinical.Psychology
                                                  0.0423495837 0.0796498673
## Cognitive.Science
                                                  0.0274908646 0.0485638866
## College.Advising
                                                  0.0328392156 0.0162211698
## Communication.Sciences.and.Disorders
                                                  0.0189649932 0.0766440576
## Cooperation.and.Conflict.Resolution
                                                  0.0008406229 0.0136376184
## Creative.Technologies
                                                  0.0220645797 0.0893723352
## Curriculum.and.Teaching
                                                  0.0266667005 0.0471321971
## Dance.Education
                                                  0.0111456607 0.0943213025
## Deaf.and.Hard.of.Hearing
                                                  0.0252796243 0.0204336756
## Design.and.Development.of.Digital.Games
                                                  0.0100995062 0.1181931356
## Developmental.Psychology
                                                  0.0291083642 0.0004817392
## Diabetes.Education
                                                  0.0657685883 0.1189738130
## Early.Childhood.Education
                                                  0.0688864207 0.0982336112
## Early.Childhood.Special.Education
                                                  0.0746920412 0.0520407157
## Economics.and.Education
                                                  0.0474163503 0.0790980346
## Education.Technology
                                                  0.0844075491 0.1373488536
## Education.Leadership
                                                  0.0418721194 0.1060936733
## Education.Policy
                                                  0.0478180220 0.0355025118
## Inclusive.Education
                                                  0.0518261154 0.0248288618
## English.Education
                                                  0.0177991798 0.0052163793
## Change.Leadership
                                                  0.0327090806 0.0915857512
## Nursing
                                                  0.0526377193 0.0514148597
## Gifted.Education
                                                  0.1005738001 0.0629165666
## Health.Education
                                                  0.0056046720 0.0170495287
## Higher.and.Postsecondary.Education
                                                  0.0928721400 0.0366112068
## History
                                                  0.0451548188 0.0276999336
## Instructional.Technology.and.Media
                                                  0.1639100639 0.0488420490
## Intellectual.Disability.Autism
                                                  0.0343960246 0.0250001408
## International.and.Comparative.Education
                                                  0.0311526073 0.0149164405
                                                  0.0992242521 0.0628672920
## Kinesiology
## Learning.Analytics
                                                  0.0483277581 0.0027655218
## Literacy
                                                  0.0793712297 0.0281284784
## Mathematics
                                                  0.0921434643 0.0217276705
```

```
## Measurement.. Evaluation.and. Statistics
                                                  0.0309838419 0.0732223371
## Motor.Learning.and.Control
                                                  0.0681914385 0.0460188191
## Movement.Science
                                                  0.0077910926 0.0405283123
## Music
                                                  0.0002556823 0.0125038740
## Neuroscience
                                                  0.0243183772 0.0002865500
## Nutrition
                                                  0.0989143434 0.0257643330
## Leadership
                                                  0.0317868628 0.0128542457
                                                  0.0350191923 0.0466775878
## Philosophy
## Physical.Education
                                                  0.0010517524 0.0148282267
## Politics
                                                  0.0252462412 0.0743072131
## Private.School.Leadership
                                                  0.0062384351 0.1227682195
## Psychological.Counseling
                                                  0.1164041419 0.0585825738
## Psychology
                                                  0.0519796769 0.0194378594
## Reading
                                                  0.0696465458 0.0211676748
## School.Psychology
                                                  0.0494737784 0.0178709558
## Science.Education
                                                  0.0361770260 0.0031575459
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0276915082 0.0923121506
## Social.Organizational.Psychology
                                                  0.0495940117 0.0142023727
                                                  0.0265242407 0.1200589948
## Sociology
## Spirituality.Mind.Body
                                                  0.0219221660 0.0397802776
## School.Principals
                                                  0.1262818125 0.0329375990
## Urban.Education
                                                  0.0781597209 0.0462978971
## Counseling.Psychology
                                                  0.0196453362 0.0379422551
## Communication.Media.and.Learning.Technologies 0.0856290252 0.0543604948
## cluster
                                                  0.0071324457 0.0517370184
##
                                                          PC43
## Adult.Education
                                                  0.0874206579 0.0173395599
                                                  0.0097193736 0.0305192852
## Anthropology
## Social.Studies
                                                  0.0519828398 0.0859513258
## Physiology
                                                  0.0282319093 0.0628149690
## Behavior.Analysis
                                                  0.0208361268 0.1153112521
## Linguistics
                                                  0.0246878508 0.1013436745
## Art.Education
                                                  0.0166611090 0.0367256677
                                                  0.0334426812 0.0369915528
## Teaching.English
## Arts.Administration
                                                  0.0429745939 0.0393945154
## Bilingual.Bicultural.Education
                                                  0.1330782166 0.0902896804
## Clinical.Psychology
                                                  0.0187038540 0.0253507190
## Cognitive.Science
                                                  0.0598016395 0.0254938270
## College.Advising
                                                  0.0919230066 0.0069397457
## Communication.Sciences.and.Disorders
                                                  0.0908861900 0.1184115733
## Cooperation.and.Conflict.Resolution
                                                  0.0889718470 0.0340810236
## Creative.Technologies
                                                  0.0296771550 0.0852228142
## Curriculum.and.Teaching
                                                  0.0398248174 0.0120755139
## Dance.Education
                                                  0.0546496844 0.0517756182
## Deaf.and.Hard.of.Hearing
                                                  0.0473961163 0.0138638693
## Design.and.Development.of.Digital.Games
                                                  0.0286720068 0.0412346798
## Developmental.Psychology
                                                  0.0014220059 0.0296632552
## Diabetes.Education
                                                  0.0079265806 0.0807680219
## Early.Childhood.Education
                                                  0.0706209508 0.0095809460
## Early.Childhood.Special.Education
                                                  0.0730963914 0.0268022010
## Economics.and.Education
                                                  0.0394408370 0.1188417080
## Education.Technology
                                                  0.0874800684 0.0504960040
## Education.Leadership
                                                  0.0613246304 0.0477170960
## Education.Policy
                                                  0.0644453186 0.0182419919
```

```
## Inclusive.Education
                                                  0.0954030314 0.0637772724
## English.Education
                                                  0.0083096839 0.0892777910
## Change.Leadership
                                                  0.0198608935 0.0228340570
## Nursing
                                                  0.1707620864 0.0689206398
## Gifted.Education
                                                  0.0697506530 0.0007676119
## Health.Education
                                                  0.0163279799 0.0170582533
## Higher.and.Postsecondary.Education
                                                  0.0572579472 0.0361385848
## History
                                                  0.0132459816 0.0711653238
## Instructional.Technology.and.Media
                                                  0.0051236603 0.0270228069
## Intellectual.Disability.Autism
                                                  0.0285072719 0.0504802050
## International.and.Comparative.Education
                                                  0.1097920063 0.0014906469
                                                  0.0183875013 0.1280230104
## Kinesiology
## Learning.Analytics
                                                  0.1172349291 0.0387081593
## Literacy
                                                  0.0567569927 0.0663806903
## Mathematics
                                                  0.0025404652 0.0017780526
## Measurement.. Evaluation.and. Statistics
                                                  0.0496304274 0.0565813574
                                                  0.0637952333 0.0861457509
## Motor.Learning.and.Control
## Movement.Science
                                                  0.0931721409 0.0627931150
## Music
                                                  0.0334080116 0.0119847785
## Neuroscience
                                                  0.0873107121 0.0109318904
## Nutrition
                                                  0.0269296449 0.0050581673
## Leadership
                                                  0.0127738664 0.0171896226
## Philosophy
                                                  0.0586835712 0.0451506493
## Physical.Education
                                                  0.0429067511 0.0447481832
                                                  0.0235101715 0.0036363313
## Politics
## Private.School.Leadership
                                                  0.1254963584 0.0311432181
## Psychological.Counseling
                                                  0.0239132034 0.1997861078
## Psychology
                                                  0.0367562138 0.0611122111
## Reading
                                                  0.1287346103 0.0173341751
## School.Psychology
                                                  0.0421759206 0.0626736997
## Science.Education
                                                  0.0009846422 0.0602596080
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0879853610 0.0197005142
## Social.Organizational.Psychology
                                                  0.0730736990 0.0947488092
                                                  0.0500584294 0.0196214571
## Sociology
## Spirituality.Mind.Body
                                                  0.0436734008 0.0042219186
## School.Principals
                                                  0.0033655191 0.0461348751
## Urban.Education
                                                  0.0454599525 0.0464039410
## Counseling.Psychology
                                                  0.0057010990 0.0587797666
## Communication.Media.and.Learning.Technologies 0.0473737067 0.0367344055
## cluster
                                                  0.0386994598 0.0808320215
##
                                                          PC45
## Adult.Education
                                                  4.984136e-02 0.0345843931
## Anthropology
                                                  6.253120e-03 0.0723442871
## Social.Studies
                                                  5.457134e-02 0.0068925399
## Physiology
                                                  1.649911e-02 0.0232565220
                                                  6.528415e-02 0.1200828786
## Behavior.Analysis
## Linguistics
                                                  4.032753e-03 0.0135039717
## Art.Education
                                                  9.847271e-02 0.0728554117
## Teaching.English
                                                  6.168919e-02 0.0857687223
## Arts.Administration
                                                  1.138085e-01 0.0331087240
## Bilingual.Bicultural.Education
                                                  5.378495e-02 0.0494056320
## Clinical.Psychology
                                                  1.383035e-02 0.0234196550
## Cognitive.Science
                                                  1.949009e-02 0.0881041616
## College.Advising
                                                  6.639693e-02 0.0200506675
```

```
## Communication.Sciences.and.Disorders
                                                  6.068489e-02 0.0489977190
## Cooperation.and.Conflict.Resolution
                                                  1.404234e-02 0.1140795848
                                                  7.328203e-02 0.0698901603
## Creative.Technologies
## Curriculum.and.Teaching
                                                  2.482561e-02 0.0069277802
## Dance.Education
                                                  1.301111e-01 0.0380476492
## Deaf.and.Hard.of.Hearing
                                                  9.305294e-02 0.0484169032
## Design.and.Development.of.Digital.Games
                                                  2.336598e-02 0.0507019370
## Developmental.Psychology
                                                  1.537437e-01 0.0589684375
## Diabetes.Education
                                                  5.889919e-02 0.0048623749
## Early.Childhood.Education
                                                  8.720773e-02 0.0243991519
## Early.Childhood.Special.Education
                                                  9.247861e-02 0.0160994858
## Economics.and.Education
                                                  3.382013e-02 0.0639599070
## Education.Technology
                                                  6.716055e-02 0.0347510754
## Education.Leadership
                                                  1.006190e-01 0.0244853144
## Education.Policy
                                                  1.085574e-01 0.0503274574
## Inclusive.Education
                                                  7.688745e-02 0.0645364590
## English.Education
                                                  3.299974e-02 0.0569601269
## Change.Leadership
                                                  3.675192e-03 0.0041861920
## Nursing
                                                  1.450139e-02 0.0389052463
## Gifted.Education
                                                  3.318590e-02 0.0976288149
## Health.Education
                                                  9.023684e-02 0.0799831952
## Higher.and.Postsecondary.Education
                                                  2.186934e-02 0.0567739371
                                                  9.575063e-02 0.0542954663
## History
## Instructional.Technology.and.Media
                                                  4.776895e-03 0.0052565200
## Intellectual.Disability.Autism
                                                  8.797101e-02 0.0474741042
## International.and.Comparative.Education
                                                  5.193818e-02 0.0422052434
## Kinesiology
                                                  4.500130e-02 0.0169351424
## Learning.Analytics
                                                  6.404440e-02 0.0798989628
## Literacy
                                                  9.072972e-02 0.0938307071
## Mathematics
                                                  1.723448e-03 0.0056034792
## Measurement.. Evaluation.and. Statistics
                                                  2.245280e-02 0.0345464289
## Motor.Learning.and.Control
                                                  1.393511e-02 0.0807668162
## Movement.Science
                                                  4.228208e-06 0.0686267356
## Music
                                                  3.482153e-02 0.0746222227
## Neuroscience
                                                  7.474724e-03 0.0043793130
## Nutrition
                                                  4.072024e-03 0.0002205671
## Leadership
                                                  7.569162e-02 0.1160755906
## Philosophy
                                                  2.376314e-02 0.0253040224
## Physical.Education
                                                  1.289007e-01 0.0075952966
## Politics
                                                  4.136906e-02 0.0500200621
## Private.School.Leadership
                                                  1.671332e-02 0.0719606520
## Psychological.Counseling
                                                  5.139436e-02 0.1357683869
## Psychology
                                                  6.535178e-03 0.0135246878
## Reading
                                                  8.107202e-03 0.0179029703
## School.Psychology
                                                  5.084062e-02 0.0725805497
## Science.Education
                                                  1.194110e-02 0.0266181476
## Sexuality..Women.and.Gender.in.Psychology
                                                  2.583497e-02 0.0779495560
## Social.Organizational.Psychology
                                                  8.424179e-02 0.0669609133
## Sociology
                                                  6.010131e-02 0.0282855968
## Spirituality.Mind.Body
                                                  5.919631e-02 0.0226254001
## School.Principals
                                                  3.818149e-02 0.0747622048
## Urban.Education
                                                  1.044478e-02 0.0127179424
## Counseling.Psychology
                                                  3.262443e-02 0.1219812785
## Communication.Media.and.Learning.Technologies 3.236438e-02 0.0649609863
```

##	cluster	7.850644e-02 0.0676983914
##	CIUSTEI	PC47 PC48
	Adult.Education	0.0506786840 0.0013316445
##	Anthropology	0.0061830380 0.0391993510
	Social.Studies	0.0841676159 0.0429005068
##	Physiology	0.0146158028 0.0595309785
	Behavior. Analysis	0.0715120934 0.0832124071
	Linguistics	0.0577827908 0.0238428640
##	Art.Education	0.0714214368 0.0508272697
##	Teaching.English	0.0336140022 0.0201944290
##	Arts.Administration	0.0597774669 0.0002619511
	Bilingual.Bicultural.Education	0.0952338666 0.0580853640
	Clinical.Psychology	0.0747496849 0.0469553358
	Cognitive.Science	0.0910918500 0.0366971957
	College.Advising	0.0068851733 0.0434361671
	Communication.Sciences.and.Disorders	0.0125241584 0.0714274649
	Cooperation.and.Conflict.Resolution	0.0498336346 0.0583499951
	Creative.Technologies	0.0305908995 0.0336919254
	Curriculum.and.Teaching	0.0204540950 0.0021169758
	Dance.Education	0.0602665569 0.0573050680
	Deaf.and.Hard.of.Hearing	0.0393124827 0.1008079557 0.0588687288 0.0344704625
	Design.and.Development.of.Digital.Games Developmental.Psychology	0.0612333852 0.0695459097
	Diabetes.Education	0.0612333832 0.0693439097
	Early.Childhood.Education	0.0153844573 0.1904593780
	Early.Childhood.Special.Education	0.0862231223 0.0669306470
	Economics.and.Education	0.1046025665 0.0204505883
	Education. Technology	0.0307632487 0.0440055273
	Education.Leadership	0.0514347530 0.0206028578
	Education.Policy	0.2175213871 0.0055273722
	Inclusive.Education	0.0698365661 0.0115931818
##	English. Education	0.0088280419 0.1418075537
##	Change.Leadership	0.0600291243 0.0542936894
##	Nursing	0.1098690827 0.0440391990
##	Gifted.Education	0.0404568863 0.0641979264
	Health.Education	0.0887282578 0.0075003008
##	Higher.and.Postsecondary.Education	0.0427743204 0.0614835133
	History	0.0856494541 0.0122044274
	Instructional.Technology.and.Media	0.0396429044 0.0176057079
	Intellectual.Disability.Autism	0.0773929800 0.0386217182
	International.and.Comparative.Education	0.0574392774 0.0229763121
	Kinesiology	0.0437364801 0.0128780786
	Learning. Analytics	0.0180988275 0.0075500761
	Literacy Mathematics	0.0350603575 0.0759331215
	MeasurementEvaluation.and.Statistics	0.0724289883 0.0528292058 0.0326237143 0.0315140407
	Motor.Learning.and.Control	0.0772096185 0.1161315384
	Movement.Science	0.0276649698 0.0277565373
	Music	0.0474150936 0.0089355916
	Neuroscience	0.0844585673 0.0322016926
	Nutrition	0.0186050800 0.0706932888
	Leadership	0.0508793271 0.1050534083
	Philosophy	0.1499474630 0.0363570117
	Physical.Education	0.0001024283 0.0186196907
	•	

```
0.0129149830 0.0762873607
## Politics
## Private.School.Leadership
                                                 0.0529548740 0.0676655119
## Psychological.Counseling
                                                 0.0235801656 0.0373266378
## Psychology
                                                 0.0233859318 0.0360361977
## Reading
                                                 0.0017198570 0.0188884366
## School.Psychology
                                                 0.0538477608 0.0078360512
## Science.Education
                                                  0.0979210818 0.0015250563
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0041185295 0.0109633940
## Social.Organizational.Psychology
                                                  0.0015341921 0.0395995407
## Sociology
                                                  0.0743488304 0.0526271988
## Spirituality.Mind.Body
                                                  0.0328412651 0.0220299629
## School.Principals
                                                  0.0329522352 0.0491757581
## Urban.Education
                                                  0.0280584855 0.1572064057
## Counseling.Psychology
                                                  0.0146703647 0.0179219913
## Communication.Media.and.Learning.Technologies 0.0188731365 0.1008359450
## cluster
                                                  0.0354477552 0.0626205907
##
                                                         PC49
                                                                     PC50
## Adult.Education
                                                  0.016053094 0.054730031
## Anthropology
                                                  0.014774423 0.002666139
## Social.Studies
                                                  0.065097676 0.109425766
## Physiology
                                                 0.018178939 0.060892539
## Behavior.Analysis
                                                 0.012055506 0.055753043
                                                 0.003498411 0.017536521
## Linguistics
## Art.Education
                                                 0.037168411 0.075112091
## Teaching.English
                                                 0.159845239 0.101402139
## Arts.Administration
                                                 0.135109290 0.145114516
## Bilingual.Bicultural.Education
                                                 0.016427007 0.095137334
## Clinical.Psychology
                                                  0.014471420 0.058216491
## Cognitive.Science
                                                 0.060282692 0.055824420
## College.Advising
                                                  0.002099390 0.067878932
## Communication.Sciences.and.Disorders
                                                 0.026468216 0.064048822
## Cooperation.and.Conflict.Resolution
                                                  0.032110235 0.052667894
## Creative.Technologies
                                                  0.071682404 0.009360247
## Curriculum.and.Teaching
                                                  0.108676856 0.047855057
## Dance.Education
                                                  0.049043098 0.004623831
## Deaf.and.Hard.of.Hearing
                                                 0.093699205 0.024147829
## Design.and.Development.of.Digital.Games
                                                  0.045707255 0.063036533
## Developmental.Psychology
                                                  0.102988433 0.033044009
## Diabetes.Education
                                                  0.036003462 0.041765857
## Early.Childhood.Education
                                                 0.025739167 0.009215289
## Early.Childhood.Special.Education
                                                  0.055748476 0.079578241
## Economics.and.Education
                                                 0.039370739 0.024963917
## Education.Technology
                                                  0.048853778 0.025354158
## Education.Leadership
                                                 0.038882865 0.055907934
## Education.Policy
                                                  0.108372892 0.093893415
## Inclusive.Education
                                                 0.021009243 0.018913437
## English.Education
                                                  0.049724322 0.025875400
## Change.Leadership
                                                  0.117066506 0.053613208
## Nursing
                                                  0.030285768 0.066362530
## Gifted.Education
                                                 0.072635379 0.068431909
## Health.Education
                                                 0.018156056 0.018523324
## Higher.and.Postsecondary.Education
                                                 0.004540079 0.068730918
## History
                                                 0.003998296 0.054888257
## Instructional.Technology.and.Media
                                                 0.151249353 0.101408230
```

```
## Intellectual.Disability.Autism
                                                  0.048987980 0.001045816
## International.and.Comparative.Education
                                                  0.059466271 0.047422165
## Kinesiology
                                                  0.079037627 0.007002419
## Learning.Analytics
                                                  0.028028700 0.079081290
## Literacy
                                                  0.062915454 0.074289299
## Mathematics
                                                  0.059149211 0.102656585
## Measurement.. Evaluation.and. Statistics
                                                  0.075384664 0.048786750
                                                  0.025161221 0.076239053
## Motor.Learning.and.Control
## Movement.Science
                                                  0.032809075 0.020391432
## Music
                                                  0.099100468 0.038047092
## Neuroscience
                                                  0.008723625 0.032899462
## Nutrition
                                                  0.019062740 0.091568258
                                                  0.096927171 0.023818141
## Leadership
                                                  0.029987308 0.004243453
## Philosophy
## Physical.Education
                                                  0.011282875 0.150229148
## Politics
                                                  0.031034331 0.002771319
## Private.School.Leadership
                                                  0.050385608 0.004167702
## Psychological.Counseling
                                                  0.024421472 0.028628290
## Psychology
                                                  0.068522814 0.021793926
## Reading
                                                  0.018493284 0.009056201
## School.Psychology
                                                  0.005507087 0.001860266
## Science.Education
                                                  0.030643215 0.024523401
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.005710538 0.020095088
## Social.Organizational.Psychology
                                                  0.061936386 0.106308413
                                                  0.020618462 0.067422135
## Sociology
## Spirituality.Mind.Body
                                                  0.035801704 0.020833869
## School.Principals
                                                  0.111612618 0.073186243
## Urban.Education
                                                  0.053887460 0.004341588
## Counseling.Psychology
                                                  0.006431102 0.060620936
## Communication.Media.and.Learning.Technologies 0.051365919 0.102233939
## cluster
                                                  0.114635895 0.003126876
##
                                                         PC51
                                                                     PC52
## Adult.Education
                                                  0.093482905 0.033567438
                                                  0.032089221 0.003746784
## Anthropology
## Social.Studies
                                                  0.024841157 0.037722816
## Physiology
                                                  0.137644005 0.027255591
## Behavior.Analysis
                                                  0.009347188 0.038610298
## Linguistics
                                                  0.000158653 0.038233751
## Art.Education
                                                  0.001306723 0.024443929
## Teaching.English
                                                  0.019947212 0.037601061
## Arts.Administration
                                                  0.005352326 0.010967719
## Bilingual.Bicultural.Education
                                                  0.126590904 0.047286693
## Clinical.Psychology
                                                  0.101462715 0.084989678
## Cognitive.Science
                                                  0.037157780 0.057941427
                                                  0.048847847 0.084500053
## College.Advising
## Communication.Sciences.and.Disorders
                                                  0.129927755 0.013667957
## Cooperation.and.Conflict.Resolution
                                                  0.012332692 0.019899728
## Creative.Technologies
                                                  0.024760438 0.084880775
## Curriculum.and.Teaching
                                                  0.063679112 0.037674223
## Dance.Education
                                                  0.089249322 0.108364307
## Deaf.and.Hard.of.Hearing
                                                  0.058684359 0.061154022
## Design.and.Development.of.Digital.Games
                                                  0.097593216 0.069531359
## Developmental.Psychology
                                                  0.075144765 0.020702200
## Diabetes.Education
                                                  0.039436016 0.011621762
```

```
## Early.Childhood.Education
                                                  0.045043208 0.014149457
## Early.Childhood.Special.Education
                                                  0.054771804 0.137256580
## Economics.and.Education
                                                  0.068661755 0.039334277
## Education.Technology
                                                  0.018828046 0.071675466
## Education.Leadership
                                                  0.018502207 0.035910893
## Education.Policy
                                                  0.029054775 0.012886850
## Inclusive.Education
                                                  0.132635750 0.106917405
## English.Education
                                                  0.002096511 0.082419035
## Change.Leadership
                                                  0.046394024 0.020241681
## Nursing
                                                  0.066414121 0.015715182
## Gifted.Education
                                                  0.036256010 0.069831657
## Health.Education
                                                  0.051182336 0.021940190
## Higher.and.Postsecondary.Education
                                                  0.025086922 0.048309982
## History
                                                  0.145996452 0.006774465
## Instructional.Technology.and.Media
                                                  0.081816046 0.081342541
## Intellectual.Disability.Autism
                                                  0.009772556 0.019976583
## International.and.Comparative.Education
                                                  0.025207675 0.075388323
## Kinesiology
                                                  0.022568424 0.053400230
## Learning.Analytics
                                                  0.039863406 0.155642960
## Literacy
                                                  0.051349094 0.012290353
## Mathematics
                                                  0.103411572 0.058153364
## Measurement.. Evaluation.and. Statistics
                                                  0.026410129 0.071588943
## Motor.Learning.and.Control
                                                  0.048453311 0.091503525
## Movement.Science
                                                  0.072259881 0.027773046
## Music
                                                  0.016858256 0.067581217
## Neuroscience
                                                  0.098428257 0.096098721
                                                  0.063167788 0.010076098
## Nutrition
## Leadership
                                                  0.058345135 0.125132011
## Philosophy
                                                  0.101438574 0.021336067
## Physical.Education
                                                  0.055711968 0.059558479
## Politics
                                                  0.071934440 0.084524406
## Private.School.Leadership
                                                  0.044917163 0.015871623
## Psychological.Counseling
                                                  0.002583496 0.065224883
## Psychology
                                                  0.009138226 0.012153308
## Reading
                                                  0.028877703 0.121047526
## School.Psychology
                                                  0.008660790 0.001793882
## Science.Education
                                                  0.054200507 0.048445659
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.091288616 0.010776228
## Social.Organizational.Psychology
                                                  0.042470043 0.071877636
## Sociology
                                                  0.048052294 0.021556401
## Spirituality.Mind.Body
                                                  0.014420879 0.034354086
## School.Principals
                                                  0.003824085 0.011055730
## Urban.Education
                                                  0.076698632 0.017470910
## Counseling.Psychology
                                                  0.025686886 0.050644764
## Communication.Media.and.Learning.Technologies 0.011699834 0.030104056
## cluster
                                                  0.001393354 0.053516351
                                                         PC53
                                                                      PC54
## Adult.Education
                                                  0.003596861 0.0482130473
## Anthropology
                                                  0.065064332 0.0831510100
## Social.Studies
                                                  0.080285205 0.0027753629
                                                  0.011648826 0.0522408695
## Physiology
## Behavior.Analysis
                                                  0.068031778 0.0398351501
## Linguistics
                                                  0.017984069 0.0467076171
## Art.Education
                                                  0.001129756 0.0238810747
```

	Teaching.English	0.004524243 0.0535582691
	Arts. Administration	0.011959262 0.0460343395
	Bilingual.Bicultural.Education	0.079968153 0.0155508045
	Clinical.Psychology	0.016296681 0.0650909629
	Cognitive.Science	0.075912618 0.0695523827
	College.Advising	0.026466330 0.0086623799
	Communication.Sciences.and.Disorders	0.081818555 0.0554221322
	Cooperation.and.Conflict.Resolution	0.043452418 0.0557693928
	Creative.Technologies	0.008751346 0.0082893139
	Curriculum.and.Teaching	0.025995903 0.1077098939
	Dance.Education	0.088409301 0.1508735041
	Deaf.and.Hard.of.Hearing	0.082706431 0.1583512127
	Design.and.Development.of.Digital.Games	0.124571433 0.0019629896
	Developmental.Psychology	0.008449420 0.0122489280
	Diabetes. Education	0.038162866 0.0799980464
	Early.Childhood.Education	0.029395279 0.0239961386
	Early.Childhood.Special.Education	0.006780909 0.0781779378
	Economics.and.Education	0.037333170 0.0405606234
	Education. Technology	0.030562828 0.0077161528
	Education.Leadership	0.086763558 0.0512624325
	Education.Policy	0.025905132 0.0037560656
	Inclusive.Education	0.004466472 0.0450734641
	English.Education	0.016710294 0.0293155990
	Change.Leadership	0.012015756 0.0866944692
	Nursing	0.074163317 0.0124380882
	Gifted.Education	0.024447226 0.0270158789
	Health.Education	0.118220897 0.1115695447
	Higher.and.Postsecondary.Education	0.022558629 0.0153814206
	History	0.119186407 0.0664039205
	Instructional. Technology. and. Media	0.022498573 0.0149193926
	Intellectual.Disability.Autism	0.027535610 0.0026463969
	International.and.Comparative.Education	0.032545670 0.0756027437
	Kinesiology	0.001036401 0.0025532878
	Learning.Analytics	0.107278255 0.0528146896
	Literacy	0.017692502 0.0983980124
	Mathematics	0.079662715 0.0718378887
	MeasurementEvaluation.and.Statistics	0.038149904 0.0007998812
	Motor.Learning.and.Control	0.026400466 0.0334771291
	Movement.Science	0.040158127 0.0367126912
	Music	0.067353589 0.0821603141
	Neuroscience	0.116545823 0.0428418079
	Nutrition	0.053632423 0.0785536859
	Leadership	0.023383352 0.0549461320
	Philosophy Physical Education	0.147950471 0.0353906334
	Physical.Education	0.014091975 0.0140648344
	Politics	0.108153331 0.0590001602
	Private.School.Leadership	0.063583943 0.0056203926 0.053827525 0.0004156125
	Psychological.Counseling	
	Psychology	0.003834144 0.0422609799
	Reading School.Psychology	0.041604173 0.0694464759 0.097689183 0.0320252637
	Science.Education	0.097689183 0.0320252637 0.071223704 0.0359695864
	SexualityWomen.and.Gender.in.Psychology	0.135459252 0.0958514087
	Social.Organizational.Psychology	0.071644579 0.0506926233
##	poctat.organizacionai.rsychology	0.011044313 0.0300320233

```
## Sociology
                                                  0.013480624 0.0283815283
## Spirituality.Mind.Body
                                                  0.126288267 0.0634329296
## School.Principals
                                                  0.022425582 0.0647735574
## Urban.Education
                                                  0.001022384 0.1145700237
## Counseling.Psychology
                                                  0.087631399 0.0053573438
## Communication.Media.and.Learning.Technologies 0.023140812 0.0034355547
## cluster
                                                  0.027742172 0.0528935120
##
                                                          PC55
## Adult.Education
                                                  0.0428669352 0.0209447661
## Anthropology
                                                  0.0955344738 0.0767033165
## Social.Studies
                                                  0.0286859832 0.0469687974
## Physiology
                                                  0.0332415199 0.1220857919
## Behavior.Analysis
                                                  0.0013405025 0.0231401747
## Linguistics
                                                  0.1285182221 0.0210510367
## Art.Education
                                                  0.0285164673 0.0502174739
## Teaching.English
                                                  0.0985912432 0.0045140754
## Arts.Administration
                                                  0.0065278064 0.0690958706
## Bilingual.Bicultural.Education
                                                  0.0660782523 0.0624655650
## Clinical.Psychology
                                                  0.0343459503 0.0387908012
## Cognitive.Science
                                                  0.0705917466 0.0006095357
                                                  0.0144683938 0.0650121019
## College.Advising
## Communication.Sciences.and.Disorders
                                                  0.0366318399 0.0512291328
## Cooperation.and.Conflict.Resolution
                                                  0.0571216814 0.0948808084
## Creative.Technologies
                                                  0.0536091732 0.0035671641
## Curriculum.and.Teaching
                                                  0.0436671916 0.1244189563
## Dance.Education
                                                  0.1014989579 0.0009856146
## Deaf.and.Hard.of.Hearing
                                                  0.0435816704 0.0248561007
## Design.and.Development.of.Digital.Games
                                                  0.1859569683 0.0376869147
## Developmental.Psychology
                                                  0.0800663527 0.0619384583
## Diabetes.Education
                                                  0.1027071446 0.0312165190
## Early.Childhood.Education
                                                  0.0249330916 0.0183960082
## Early.Childhood.Special.Education
                                                  0.0332493487 0.1319834934
## Economics.and.Education
                                                  0.0278954602 0.0033481272
## Education.Technology
                                                  0.0841006210 0.0198585383
## Education.Leadership
                                                  0.1108726152 0.0615559379
## Education.Policy
                                                  0.0120390106 0.0025766624
## Inclusive.Education
                                                  0.0402543638 0.0035777614
## English.Education
                                                  0.0011890638 0.1060312245
## Change.Leadership
                                                  0.0233280209 0.0619053997
## Nursing
                                                  0.0353246634 0.0861035889
## Gifted.Education
                                                  0.0368968684 0.0647922292
## Health.Education
                                                  0.0345928622 0.0382535017
## Higher.and.Postsecondary.Education
                                                  0.1272442887 0.0116490193
## History
                                                  0.0514947755 0.0834223438
## Instructional.Technology.and.Media
                                                  0.0384758298 0.0623090812
## Intellectual.Disability.Autism
                                                  0.0707738338 0.0006985237
## International.and.Comparative.Education
                                                  0.0733346553 0.0155892122
                                                  0.0007926486 0.0047774004
## Kinesiology
## Learning.Analytics
                                                  0.0006397866 0.0223481910
## Literacy
                                                  0.0435788451 0.0666075092
## Mathematics
                                                  0.0634657354 0.0050586796
## Measurement..Evaluation.and.Statistics
                                                  0.0623661623 0.0914839219
## Motor.Learning.and.Control
                                                  0.0230122352 0.0288001171
## Movement.Science
                                                  0.0061570015 0.0112690568
```

```
0.0062190721 0.1445359857
## Music
## Neuroscience
                                                  0.0059429630 0.0464655934
                                                  0.0141009714 0.0670815054
## Nutrition
                                                  0.1080210132 0.1028325083
## Leadership
## Philosophy
                                                  0.0264504307 0.0365406900
## Physical.Education
                                                  0.0143897157 0.0096401653
## Politics
                                                  0.0876532502 0.0241575595
## Private.School.Leadership
                                                  0.0715993187 0.0392980988
## Psychological.Counseling
                                                  0.0058558982 0.0692021888
## Psychology
                                                  0.0461798442 0.0436087775
## Reading
                                                  0.0886674945 0.0569980127
## School.Psychology
                                                  0.0374501080 0.1210993848
## Science.Education
                                                  0.1225421983 0.0222458306
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0092367289 0.0272162698
## Social.Organizational.Psychology
                                                  0.0271189178 0.0604381810
## Sociology
                                                  0.0059571236 0.0533789655
## Spirituality.Mind.Body
                                                  0.0700100518 0.0305842632
## School.Principals
                                                  0.0731363155 0.0292466720
## Urban.Education
                                                  0.1015026026 0.0519943176
## Counseling.Psychology
                                                  0.0720316696 0.0155668637
## Communication.Media.and.Learning.Technologies 0.0542423205 0.0732521480
## cluster
                                                  0.0297837145 0.0467859583
##
                                                          PC57
                                                                      PC58
## Adult.Education
                                                  0.1219751365 0.024356114
## Anthropology
                                                  0.0517318509 0.029673553
## Social.Studies
                                                  0.0523265094 0.141283974
## Physiology
                                                  0.0146101324 0.095810978
## Behavior.Analysis
                                                  0.0623370951 0.026081398
## Linguistics
                                                  0.0731360250 0.010808427
## Art.Education
                                                  0.0097761965 0.035091221
## Teaching.English
                                                  0.0903460713 0.024523549
## Arts.Administration
                                                  0.0573318756 0.020443251
## Bilingual.Bicultural.Education
                                                  0.0323851078 0.044867414
## Clinical.Psychology
                                                  0.0819456320 0.127593582
## Cognitive.Science
                                                  0.0904738727 0.046846836
## College.Advising
                                                  0.0001814064 0.028900486
## Communication.Sciences.and.Disorders
                                                  0.0664226534 0.113943162
## Cooperation.and.Conflict.Resolution
                                                  0.0020786690 0.004514406
## Creative.Technologies
                                                  0.0098637840 0.016401781
                                                  0.0176470800 0.059865441
## Curriculum.and.Teaching
## Dance.Education
                                                  0.0192741896 0.030192944
## Deaf.and.Hard.of.Hearing
                                                  0.0844163629 0.007127741
## Design.and.Development.of.Digital.Games
                                                  0.0020875670 0.016257275
## Developmental.Psychology
                                                  0.0623049711 0.038509228
## Diabetes.Education
                                                  0.0514728128 0.026724014
                                                  0.0907111986 0.040912383
## Early.Childhood.Education
## Early.Childhood.Special.Education
                                                  0.0016694562 0.015442257
## Economics.and.Education
                                                  0.0387773683 0.122113109
## Education.Technology
                                                  0.0489856204 0.039176856
## Education.Leadership
                                                  0.0479554355 0.003376475
## Education.Policy
                                                  0.0123037899 0.053099310
## Inclusive.Education
                                                  0.0660489927 0.035368572
## English.Education
                                                  0.0205715219 0.016322946
## Change.Leadership
                                                  0.0400949859 0.099191502
```

```
0.0274431383 0.065312143
## Nursing
## Gifted.Education
                                                  0.0032718343 0.015820649
                                                  0.0055914715 0.022354442
## Health.Education
## Higher.and.Postsecondary.Education
                                                  0.0198052216 0.102865635
## History
                                                  0.0655244720 0.033527370
## Instructional.Technology.and.Media
                                                  0.0312150390 0.028222200
## Intellectual.Disability.Autism
                                                  0.0252798048 0.037490378
## International.and.Comparative.Education
                                                  0.0533852376 0.045413718
## Kinesiology
                                                  0.0084095785 0.061083345
## Learning.Analytics
                                                  0.0596845517 0.066862868
## Literacy
                                                  0.0147667356 0.114160801
## Mathematics
                                                  0.1208459714 0.001696953
## Measurement.. Evaluation.and. Statistics
                                                  0.1639455211 0.071274068
## Motor.Learning.and.Control
                                                  0.0410792661 0.054351638
## Movement.Science
                                                  0.0364614356 0.015948884
## Music
                                                  0.0331258649 0.024346963
## Neuroscience
                                                  0.0424008555 0.114855653
## Nutrition
                                                  0.0306042633 0.048514996
## Leadership
                                                  0.0455325822 0.103238868
                                                  0.0088622533 0.004855744
## Philosophy
## Physical.Education
                                                  0.0676841461 0.004194742
## Politics
                                                  0.0595844208 0.036367961
## Private.School.Leadership
                                                  0.0293809635 0.059595849
## Psychological.Counseling
                                                  0.0871349852 0.000491299
## Psychology
                                                  0.0759025820 0.135952933
## Reading
                                                  0.0604946054 0.032610014
## School.Psychology
                                                  0.0007476308 0.016542080
## Science.Education
                                                  0.2141532160 0.009918494
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0776588530 0.045669023
## Social.Organizational.Psychology
                                                  0.0533178947 0.042623001
## Sociology
                                                  0.1181986018 0.085697427
## Spirituality.Mind.Body
                                                  0.0103006851 0.093374365
## School.Principals
                                                  0.0539672648 0.076532654
## Urban.Education
                                                  0.0019125068 0.045090913
## Counseling.Psychology
                                                  0.0005850526 0.016721701
## Communication.Media.and.Learning.Technologies 0.0776135489 0.017127506
## cluster
                                                  0.0115509454 0.048957785
##
                                                          PC59
                                                                      PC60
## Adult.Education
                                                  0.0263305896 0.048105370
## Anthropology
                                                  0.0688049735 0.057960360
## Social.Studies
                                                  0.0820460324 0.058884132
## Physiology
                                                  0.0364107722 0.056732707
## Behavior.Analysis
                                                  0.0181370792 0.025471984
## Linguistics
                                                  0.1814583999 0.010421348
## Art.Education
                                                  0.0112336000 0.017434387
                                                  0.0042791700 0.076450783
## Teaching.English
## Arts.Administration
                                                  0.0608327655 0.033497724
## Bilingual.Bicultural.Education
                                                  0.0145553138 0.017961418
## Clinical.Psychology
                                                  0.0168964494 0.089710459
## Cognitive.Science
                                                  0.1416312380 0.083767074
## College.Advising
                                                  0.1479498679 0.105505652
## Communication.Sciences.and.Disorders
                                                  0.0007178927 0.010200567
## Cooperation.and.Conflict.Resolution
                                                  0.0908669838 0.002007525
## Creative.Technologies
                                                  0.0027639263 0.071872881
```

```
## Curriculum.and.Teaching
                                                  0.0461062155 0.031885380
## Dance.Education
                                                  0.0315862242 0.050284892
## Deaf.and.Hard.of.Hearing
                                                  0.0519614877 0.058473792
## Design.and.Development.of.Digital.Games
                                                  0.0371520584 0.005703220
## Developmental.Psychology
                                                  0.0199669567 0.061607877
## Diabetes.Education
                                                  0.0365743328 0.028320866
## Early.Childhood.Education
                                                  0.0352557907 0.104893785
## Early.Childhood.Special.Education
                                                  0.0629995893 0.102087531
## Economics.and.Education
                                                  0.0717147438 0.056173619
## Education.Technology
                                                  0.0209680989 0.059377422
## Education.Leadership
                                                  0.0488586478 0.043643202
## Education.Policy
                                                  0.0187397339 0.047088756
## Inclusive.Education
                                                  0.0503357922 0.065639457
## English.Education
                                                  0.0122824628 0.006483934
## Change.Leadership
                                                  0.0658259519 0.015195047
## Nursing
                                                  0.0005503582 0.030173112
## Gifted.Education
                                                  0.0182967990 0.034587667
## Health.Education
                                                  0.0493167083 0.169881218
## Higher.and.Postsecondary.Education
                                                  0.0432104250 0.013172664
## History
                                                  0.0219084412 0.010915836
## Instructional.Technology.and.Media
                                                  0.0572337957 0.002704168
## Intellectual.Disability.Autism
                                                  0.1095759389 0.056731900
## International.and.Comparative.Education
                                                  0.0062370897 0.038159964
## Kinesiology
                                                  0.0402671079 0.098124281
                                                  0.0183631536 0.016175837
## Learning.Analytics
## Literacv
                                                  0.0694084613 0.033620061
## Mathematics
                                                  0.0057528544 0.022955521
## Measurement.. Evaluation.and. Statistics
                                                  0.0503284986 0.073869482
## Motor.Learning.and.Control
                                                  0.0124812058 0.067087908
## Movement.Science
                                                  0.0341132437 0.036315567
## Music
                                                  0.0064823575 0.003564652
## Neuroscience
                                                  0.0362526583 0.015389431
## Nutrition
                                                  0.0513241833 0.132489980
                                                  0.0974316555 0.085076055
## Leadership
## Philosophy
                                                  0.0378993306 0.021130906
## Physical.Education
                                                  0.0072362424 0.110783877
## Politics
                                                  0.0145322274 0.050264165
## Private.School.Leadership
                                                  0.0311517222 0.018657856
## Psychological.Counseling
                                                  0.0765094369 0.007729175
## Psychology
                                                  0.0140394543 0.044880533
## Reading
                                                  0.0371939561 0.079312015
## School.Psychology
                                                  0.0575006610 0.026435074
## Science.Education
                                                  0.0855294153 0.019048016
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0390747386 0.061820228
## Social.Organizational.Psychology
                                                  0.0675675691 0.080711574
## Sociology
                                                  0.0109192507 0.022003704
## Spirituality.Mind.Body
                                                  0.0612183617 0.016036213
## School.Principals
                                                  0.0103003352 0.055491750
## Urban.Education
                                                  0.0111189431 0.071338003
## Counseling.Psychology
                                                  0.1526647742 0.046493604
## Communication.Media.and.Learning.Technologies 0.0551931420 0.047112122
## cluster
                                                  0.1840200779 0.091221413
##
                                                          PC61
                                                                       PC62
## Adult.Education
                                                  0.0092416065 2.912931e-02
```

```
0.0331051561 6.130029e-02
## Anthropology
## Social.Studies
                                                  0.0571114522 2.594045e-02
                                                  0.0031202394 1.346290e-02
## Physiology
## Behavior.Analysis
                                                  0.0365565108 1.503674e-02
## Linguistics
                                                  0.0636072888 1.031394e-03
## Art.Education
                                                  0.0060208935 4.405586e-02
## Teaching.English
                                                  0.0871652720 1.758951e-02
## Arts.Administration
                                                  0.0260759661 3.848363e-02
## Bilingual.Bicultural.Education
                                                  0.0110477789 8.787610e-02
## Clinical.Psychology
                                                  0.0159713577 4.076097e-02
## Cognitive.Science
                                                  0.0821458019 4.502484e-02
                                                  0.0191388496 2.989741e-02
## College.Advising
## Communication.Sciences.and.Disorders
                                                  0.0543055442 3.554330e-02
## Cooperation.and.Conflict.Resolution
                                                  0.0161804618 1.142144e-01
## Creative.Technologies
                                                  0.0038548995 2.373716e-02
## Curriculum.and.Teaching
                                                  0.0657517479 1.116196e-03
## Dance.Education
                                                  0.0238425042 5.469709e-02
## Deaf.and.Hard.of.Hearing
                                                  0.0103757417 1.842506e-02
## Design.and.Development.of.Digital.Games
                                                  0.0945603243 6.918480e-02
## Developmental.Psychology
                                                  0.0599776174 4.197616e-02
## Diabetes.Education
                                                  0.0584694998 5.224561e-02
## Early.Childhood.Education
                                                  0.0252813613 1.407841e-02
## Early.Childhood.Special.Education
                                                  0.0475661745 4.486534e-02
## Economics.and.Education
                                                  0.1089208859 1.031357e-01
## Education.Technology
                                                  0.0824169848 5.474535e-02
## Education.Leadership
                                                  0.0191337628 1.420085e-01
## Education.Policy
                                                  0.0505791248 7.400874e-02
## Inclusive.Education
                                                  0.0641050248 1.928211e-03
## English.Education
                                                  0.0409960866 1.946124e-02
## Change.Leadership
                                                  0.1099226641 9.284194e-02
## Nursing
                                                  0.0294198770 1.914425e-02
## Gifted.Education
                                                  0.0362529314 7.101364e-02
## Health.Education
                                                  0.0092390613 8.564590e-02
## Higher.and.Postsecondary.Education
                                                  0.1429068140 1.617411e-03
## History
                                                  0.0932406664 6.890311e-02
## Instructional.Technology.and.Media
                                                  0.0588912224 1.090858e-02
## Intellectual.Disability.Autism
                                                  0.0575145784 5.069291e-02
## International.and.Comparative.Education
                                                  0.0666960139 6.005671e-02
## Kinesiology
                                                  0.0341271370 4.902084e-03
## Learning.Analytics
                                                  0.0729947256 7.052775e-02
## Literacy
                                                  0.0297012259 3.263605e-02
## Mathematics
                                                  0.0939382835 7.718696e-03
## Measurement.. Evaluation.and. Statistics
                                                  0.1067108343 1.373742e-02
## Motor.Learning.and.Control
                                                  0.0413740746 4.263592e-02
## Movement.Science
                                                  0.0194114854 8.009236e-02
                                                  0.1126901607 1.701680e-02
## Music
## Neuroscience
                                                  0.0090873266 1.114079e-01
## Nutrition
                                                  0.0003980204 4.326090e-02
## Leadership
                                                  0.0343680341 3.152183e-02
## Philosophy
                                                  0.0064123123 1.423484e-03
## Physical.Education
                                                  0.0345318267 3.382173e-02
## Politics
                                                  0.1087590700 1.064877e-01
## Private.School.Leadership
                                                  0.0450082932 1.945449e-01
## Psychological.Counseling
                                                  0.0949465990 7.551923e-03
```

```
## Psychology
                                                  0.1486718027 5.017877e-02
## Reading
                                                  0.0582626827 8.840518e-02
## School.Psychology
                                                  0.0692477434 2.071346e-05
## Science.Education
                                                  0.0294396807 5.075667e-02
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0557389143 6.680422e-02
## Social.Organizational.Psychology
                                                  0.0904767967 1.247750e-01
## Sociology
                                                  0.0570846703 4.822348e-03
## Spirituality.Mind.Body
                                                  0.0419694707 6.394912e-02
## School.Principals
                                                  0.0192734108 1.183386e-02
## Urban.Education
                                                  0.0257369171 2.845485e-02
## Counseling.Psychology
                                                  0.0398615724 5.722257e-04
## Communication.Media.and.Learning.Technologies 0.0991508752 7.401855e-04
                                                  0.0851113540 8.782238e-03
##
                                                         PC63
                                                                      PC64
## Adult.Education
                                                  0.013600539 0.1078889410
## Anthropology
                                                  0.057743333 0.0250776123
## Social.Studies
                                                  0.065934082 0.0727983838
## Physiology
                                                  0.003361193 0.0060656696
## Behavior.Analysis
                                                  0.034919173 0.0170531088
## Linguistics
                                                  0.082079409 0.1412498354
## Art.Education
                                                  0.092202078 0.0484778080
## Teaching.English
                                                  0.054735851 0.0060772960
## Arts.Administration
                                                  0.065985930 0.0151207044
## Bilingual.Bicultural.Education
                                                  0.068672939 0.0285930596
## Clinical.Psychology
                                                  0.039467612 0.0716644922
## Cognitive.Science
                                                  0.022683624 0.0394654694
## College.Advising
                                                  0.009043261 0.0535079014
## Communication.Sciences.and.Disorders
                                                  0.018442854 0.0542371570
## Cooperation.and.Conflict.Resolution
                                                  0.107650788 0.0272092892
## Creative.Technologies
                                                  0.090102062 0.0695407708
## Curriculum.and.Teaching
                                                  0.035874392 0.0808715010
## Dance.Education
                                                  0.008921793 0.0028314723
## Deaf.and.Hard.of.Hearing
                                                  0.072790801 0.0651296515
## Design.and.Development.of.Digital.Games
                                                  0.042421443 0.0010757785
## Developmental.Psychology
                                                  0.012411744 0.0238213515
## Diabetes.Education
                                                  0.011878319 0.0273412906
## Early.Childhood.Education
                                                  0.005929203 0.0242275653
## Early.Childhood.Special.Education
                                                  0.083163803 0.0255513428
## Economics.and.Education
                                                  0.053500862 0.0156977852
## Education.Technology
                                                  0.010007072 0.0367438254
## Education.Leadership
                                                  0.085973007 0.0844282058
## Education.Policy
                                                  0.013849055 0.0423722562
## Inclusive.Education
                                                  0.014365067 0.0140471510
## English.Education
                                                  0.050992497 0.0796253281
## Change.Leadership
                                                  0.129293537 0.0227225785
                                                  0.048892216 0.0003819045
## Nursing
## Gifted.Education
                                                  0.123388163 0.0077518805
## Health.Education
                                                  0.056155137 0.0439156165
## Higher.and.Postsecondary.Education
                                                  0.034290044 0.0790474615
## History
                                                  0.063778652 0.0280617577
## Instructional.Technology.and.Media
                                                  0.139887800 0.0095452570
## Intellectual.Disability.Autism
                                                  0.058564440 0.0223880243
## International.and.Comparative.Education
                                                  0.061539267 0.0247498519
## Kinesiology
                                                  0.186730607 0.0462206477
```

```
## Learning.Analytics
                                                  0.011586070 0.0952070973
## Literacy
                                                  0.073186829 0.1301756448
                                                  0.022307546 0.0674575273
## Mathematics
## Measurement.. Evaluation.and. Statistics
                                                  0.041310936 0.0285794492
## Motor.Learning.and.Control
                                                  0.008844714 0.0743429364
## Movement.Science
                                                  0.161468180 0.0176439676
## Music
                                                  0.045898171 0.1073989098
## Neuroscience
                                                  0.005523202 0.1152142892
## Nutrition
                                                  0.067431364 0.0759128949
## Leadership
                                                  0.024418226 0.0479472773
## Philosophy
                                                  0.037945844 0.0172316823
## Physical.Education
                                                  0.041960597 0.0331005727
## Politics
                                                  0.013912532 0.0245326080
## Private.School.Leadership
                                                  0.003703922 0.0119681893
## Psychological.Counseling
                                                  0.025243987 0.0021086126
## Psychology
                                                  0.066318105 0.0608144125
## Reading
                                                  0.058627976 0.0304165790
## School.Psychology
                                                  0.019822575 0.0580591764
## Science.Education
                                                  0.040654752 0.0153716678
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.037626016 0.1462493628
## Social.Organizational.Psychology
                                                  0.040316028 0.0313283892
## Sociology
                                                  0.034452253 0.0232415826
## Spirituality.Mind.Body
                                                  0.074281750 0.0361727819
## School.Principals
                                                  0.010218030 0.0349491824
## Urban.Education
                                                  0.012356729 0.0121927887
## Counseling.Psychology
                                                  0.099080458 0.0058743291
## Communication.Media.and.Learning.Technologies 0.006874862 0.1048282492
                                                  0.014715727 0.1664110252
##
                                                          PC65
## Adult.Education
                                                  0.0621079931 0.0109027450
## Anthropology
                                                  0.0259974342 0.1202828908
## Social.Studies
                                                  0.0076026462 0.0286851512
## Physiology
                                                  0.0947667884 0.1032422595
## Behavior.Analysis
                                                  0.0484251071 0.0687399468
## Linguistics
                                                  0.1024165766 0.0591310768
## Art.Education
                                                  0.0296742916 0.0438597076
## Teaching.English
                                                  0.0248540454 0.0504845508
## Arts.Administration
                                                  0.0974094168 0.0152030936
## Bilingual.Bicultural.Education
                                                  0.0891151540 0.1046711772
                                                  0.1067708803 0.0221934176
## Clinical.Psychology
## Cognitive.Science
                                                  0.0778678267 0.0724518700
## College.Advising
                                                  0.0286122603 0.0518059503
## Communication.Sciences.and.Disorders
                                                  0.0344964123 0.0006011447
## Cooperation.and.Conflict.Resolution
                                                  0.0384626512 0.0494054253
## Creative.Technologies
                                                  0.1153627893 0.0131938887
## Curriculum.and.Teaching
                                                  0.1393259521 0.0603867453
## Dance.Education
                                                  0.0019498551 0.0168604957
## Deaf.and.Hard.of.Hearing
                                                  0.1277251020 0.0645885200
## Design.and.Development.of.Digital.Games
                                                  0.0520436008 0.0636611026
## Developmental.Psychology
                                                  0.0678219216 0.0775486976
## Diabetes.Education
                                                  0.0294285592 0.0334018066
## Early.Childhood.Education
                                                  0.0094801498 0.0118766504
## Early.Childhood.Special.Education
                                                  0.0331020547 0.0044430054
## Economics.and.Education
                                                  0.0821729920 0.0181527951
```

```
0.0738161687 0.1054893380
## Education.Technology
## Education.Leadership
                                                  0.0580882475 0.0053604244
                                                  0.0164666514 0.0133001924
## Education.Policy
## Inclusive.Education
                                                  0.0733717115 0.0308253741
## English.Education
                                                  0.0640642540 0.0713168800
## Change.Leadership
                                                  0.1295695794 0.0228493904
## Nursing
                                                  0.0319822242 0.0384152198
## Gifted.Education
                                                  0.0398440836 0.0225264567
## Health.Education
                                                  0.0363879416 0.0743583626
## Higher.and.Postsecondary.Education
                                                  0.0271229247 0.0333547190
## History
                                                  0.0773266396 0.0675017561
## Instructional.Technology.and.Media
                                                  0.0279129983 0.0722060995
## Intellectual.Disability.Autism
                                                  0.0342038420 0.0296780889
## International.and.Comparative.Education
                                                  0.1085997610 0.1248063228
## Kinesiology
                                                  0.0460009897 0.0653020233
## Learning.Analytics
                                                  0.0314373455 0.0294559368
                                                  0.0122048620 0.0300043186
## Literacy
## Mathematics
                                                  0.0160234080 0.1570653940
## Measurement.. Evaluation.and. Statistics
                                                  0.0003150728 0.0469846616
## Motor.Learning.and.Control
                                                  0.0423508919 0.0110116307
## Movement.Science
                                                  0.1027168760 0.0426903330
## Music
                                                  0.0631569386 0.0143428292
## Neuroscience
                                                  0.0765821373 0.0784143633
## Nutrition
                                                  0.0237701906 0.0209576917
## Leadership
                                                  0.0404134627 0.0805384421
## Philosophy
                                                  0.0214450161 0.0594462268
## Physical.Education
                                                  0.0175506560 0.0344947173
                                                  0.0430858606 0.0871446022
## Politics
## Private.School.Leadership
                                                  0.0309616971 0.0216798090
## Psychological.Counseling
                                                  0.0723917972 0.0080631823
## Psychology
                                                  0.0390589228 0.0642175962
## Reading
                                                  0.0456491829 0.0420094951
## School.Psychology
                                                  0.0556510670 0.0407602248
## Science.Education
                                                  0.0346978925 0.0505585900
## Sexuality..Women.and.Gender.in.Psychology
                                                  0.0883905917 0.0482402930
## Social.Organizational.Psychology
                                                  0.0543892288 0.0159021467
## Sociology
                                                  0.0565404780 0.0289393994
## Spirituality.Mind.Body
                                                  0.0778041819 0.0163125193
## School.Principals
                                                  0.0084031195 0.0431862217
                                                  0.0271843810 0.1661996898
## Urban.Education
## Counseling.Psychology
                                                  0.0824020555 0.0066047938
## Communication.Media.and.Learning.Technologies 0.0082147895 0.0015602463
                                                  0.0361943823 0.1055152192
##
                                                          PC67
                                                                       PC68
## Adult.Education
                                                  0.0267612538 0.1328544815
                                                  0.0436850536 0.0380483942
## Anthropology
## Social.Studies
                                                  0.0322349887 0.0057836311
                                                  0.0274287695 0.0445379509
## Physiology
## Behavior.Analysis
                                                  0.0219333818 0.0633103999
## Linguistics
                                                  0.0110953220 0.0020047315
## Art.Education
                                                  0.0104717290 0.0088187674
## Teaching.English
                                                  0.0090452255 0.0524047154
## Arts.Administration
                                                  0.0784212820 0.0773276157
## Bilingual.Bicultural.Education
                                                  0.0304124042 0.0584681799
```

		0 044070005	0.0700440004
	Clinical.Psychology		0.0789142304
	Cognitive.Science		0.0973656752
	College.Advising		0.0824593947
	Communication. Sciences. and . Disorders		0.0666316742 0.0850563415
	Cooperation.and.Conflict.Resolution		0.0063731817
	Creative. Technologies		0.0063731817
	Curriculum.and.Teaching Dance.Education		0.0177050503
	Deaf.and.Hard.of.Hearing		0.0309399913
	Design.and.Development.of.Digital.Games		0.0472747660
	Developmental.Psychology		0.0203903580
	Diabetes.Education		0.0190190568
	Early.Childhood.Education		0.0873770940
	Early.Childhood.Special.Education		0.0179161875
	Economics.and.Education		0.0723706702
	Education. Technology		0.0887669003
	Education.Leadership		0.0659029322
	Education.Policy		0.0923770084
	Inclusive.Education		0.0363400804
##	English.Education	0.1032117623	0.0586707854
	Change.Leadership	0.0895721211	0.0007141681
	Nursing	0.0570161854	0.0379036871
##	Gifted. Education	0.0529837862	0.0649243047
##	Health.Education	0.0244298959	0.0731597465
##	Higher.and.Postsecondary.Education	0.0257094985	0.0310195652
##	History	0.0998371353	0.0043198624
	Instructional.Technology.and.Media		0.0281583088
	Intellectual.Disability.Autism	0.0237759089	0.0904355744
	International.and.Comparative.Education		0.0892099571
	Kinesiology		0.0091886513
	Learning.Analytics		0.0217828880
	Literacy		0.0303384211
	Mathematics		0.0223036827
	MeasurementEvaluation.and.Statistics		0.0257456149
	Motor.Learning.and.Control Movement.Science		0.0088467126
			0.0407780555 0.0047506347
	Music Neuroscience	*	0.0047506347
	Nutrition		0.0428508631
	Leadership		0.0428308631
	Philosophy		0.0301594903
	Physical.Education		0.0380503967
	Politics		0.0939893836
	Private.School.Leadership		0.0734743024
	Psychological.Counseling		0.0140630145
	Psychology		0.0443285107
	Reading		0.0040407817
	School.Psychology	0.0668811224	0.0026956387
	Science.Education	0.0239133778	0.0552222166
	SexualityWomen.and.Gender.in.Psychology		0.0649855860
	Social.Organizational.Psychology	0.1181288504	0.0718086089
##	Sociology	0.0627191975	0.1174478676
	Spirituality.Mind.Body	0.1589741462	0.0336439761
##	School.Principals	0.0265207226	0.0524637832

```
## Urban.Education 0.0333025734 0.0680840193
## Counseling.Psychology 0.0731489859 0.1357572642
## Communication.Media.and.Learning.Technologies 0.1172872773 0.0051560796
## cluster 0.1520505055 0.0678834970
```

biplot(pca_tc)

