

Principle Component Aanalysis Response

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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

```
#Probably going to need this  
library(tidyverse)
```

```
#Read in the data  
#We won't need the id variable, so remove that.  
D1 <- read_csv("Assistments-confidence.csv") %>% select(-id)
```

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 correlograms)  
library(corrplot)
```

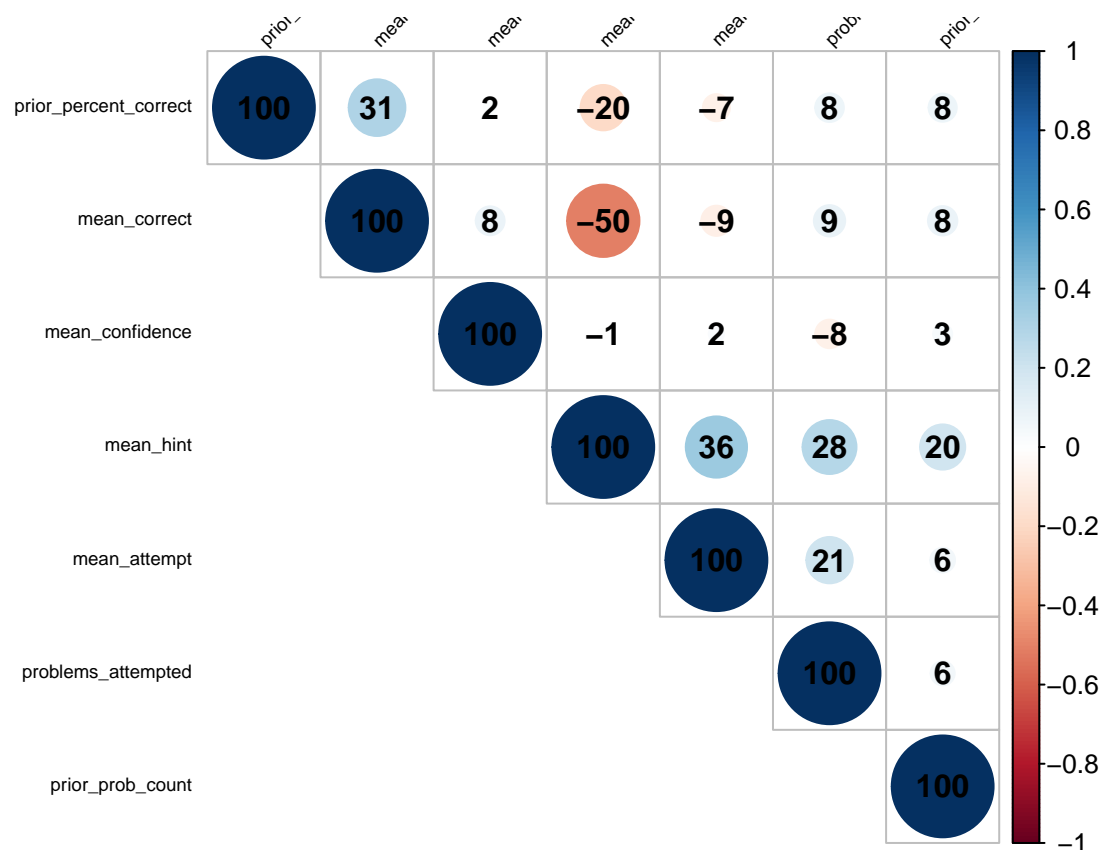
```
## corrplot 0.84 loaded
```

```
#Generate pairwise correlations  
COR <- cor(D1)  
  
corrplot(COR,  
          order = "AOE",
```

```

method = "circle",
tl.pos = "lt",
type = "upper",
tl.col = "black",
tl.cex = 0.6,
tl.srt = 45,
addCoef.col = "black",
addCoefasPercent = TRUE,
sig.level = 0.50, insig = "blank")

```



#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)
```

#Then, scale and center your data for easier interpretation

```
D2 <- scale(D2, center = TRUE)
```

Now run the PCA on the new data frame

```
pca <- prcomp(D2, scale = TRUE)
```

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.

```
##$sdev gives the standard deviations of the principal components  
pca$sdev
```

```
## [1] 1.2825140 1.0543565 1.0245688 0.9621486 0.8556715 0.7320146
```

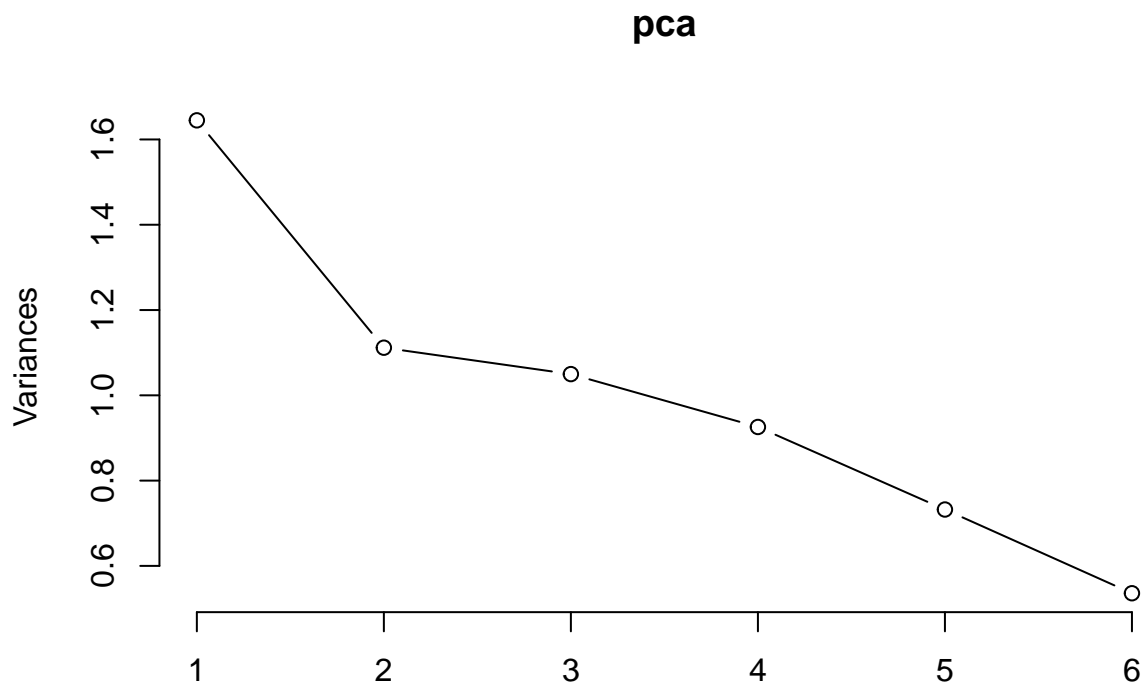
```
##To convert this into variance accounted for we can square it, these numbers are proportional to the ei.  
pca$sdev^2
```

```
## [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  
## Standard deviation    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")
```



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

Probably PC6, but given the next code chunk, I think most would take that back

Part II

#Now, create a data frame of the transformed data from your pca.

```
D3 <- data.frame(pca$x)
```

#Attach the variable "mean_correct" from your original data frame to D3.

```
D4 <- cbind(D3, as.data.frame(D1$mean_correct)) %>% rename("mean_correct" = "D1$mean_correct")
```

#Now re-run your scatterplots and correlations between the transformed data and mean_correct. If you ha

#Generate pairwise correlations

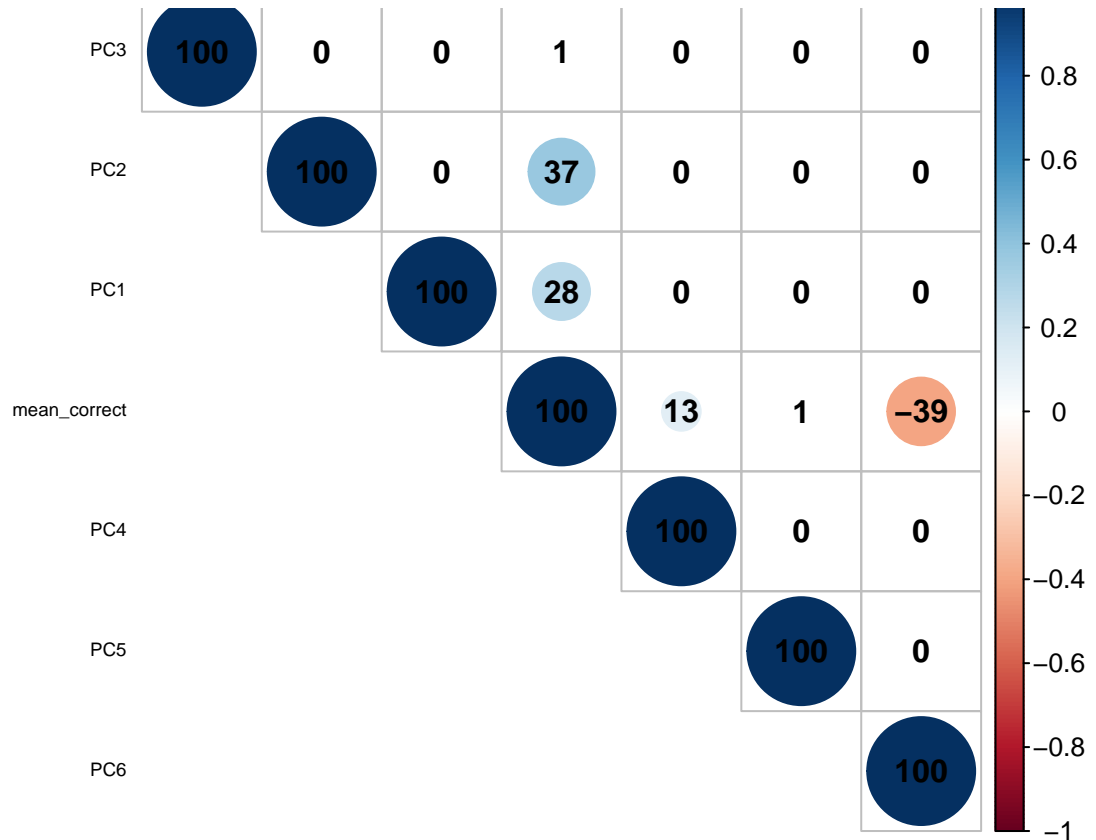
```
COR2 <- cor(D4)
```

```
corrplot(COR2,
  order = "AOE",
  method = "circle",
  tl.pos = "lt",
```

```

type = "upper",
tl.col = "black",
tl.cex = 0.6,
tl.srt = 45,
addCoef.col = "black",
addCoefasPercent = TRUE,
sig.level = 0.50, insig = "blank")

```



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

```
pca$rotation
```

```

##          PC1          PC2          PC3          PC4
## prior_prob_count    -0.26034140  0.45818753 -0.40090679 -0.6897642
## 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_attempt         -0.54200011 -0.08510858 -0.04585364  0.3108682
## mean_confidence       0.03581325  0.02547483 -0.83051917  0.4948890
##          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
```

```
sweep(loadings, 2, colSums(loadings), "/") #sweep() computes each row as a proportion of the column. (T
```

##	PC1	PC2	PC3	PC4
## prior_prob_count	0.12423113	0.25081186	0.22101700	0.31516257
## prior_percent_correct	0.08035956	0.44677621	0.05108998	0.12062699
## problems_attempted	0.21744737	0.17344469	0.20060288	0.14475664
## 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		
## prior_prob_count	0.003664468	0.14011651		
## 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
#PC1 - Mean hint (most), followed by mean_attempt (this is correlated with mean hint), and problems_att
represents how much people are trying questions.

#PC2 - Prior % correct, with some prior prob count. Seems to represent student prior competence.

#PC3 - Mean confidence, with some prior pro count and mean attempt. Probably confidence, related to com
previous experience.

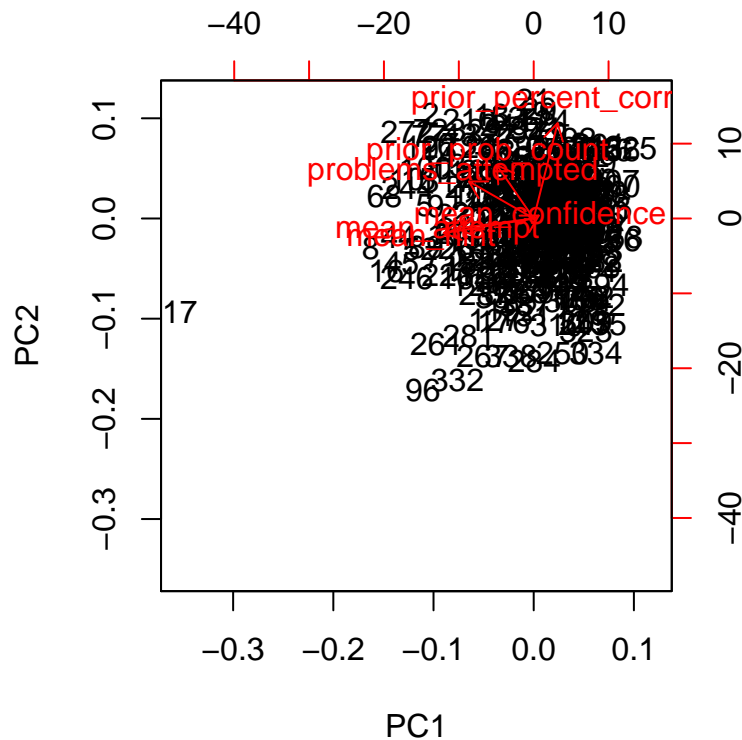
#PC4 - Prior prob count, and mean confidence - rest of variation from these, left by PC2 and 3

#PC5 - Problems attempted and mean attempt. Rest of variation from these left by of PC1.

#PC6 - Mean hint, with a little smattering of everything else. Given that PC6 is related to mean correc
hint has already shown up in PC1, PC6 likely represents variation in hints/hint-use that actually lea
correct responses among learners, whereas PC1's mean-hint reflects experience in using them to make o

#You can generate a biplot to help you, though these can be a bit confusing. They plot the transformed

```
biplot(pca)
```

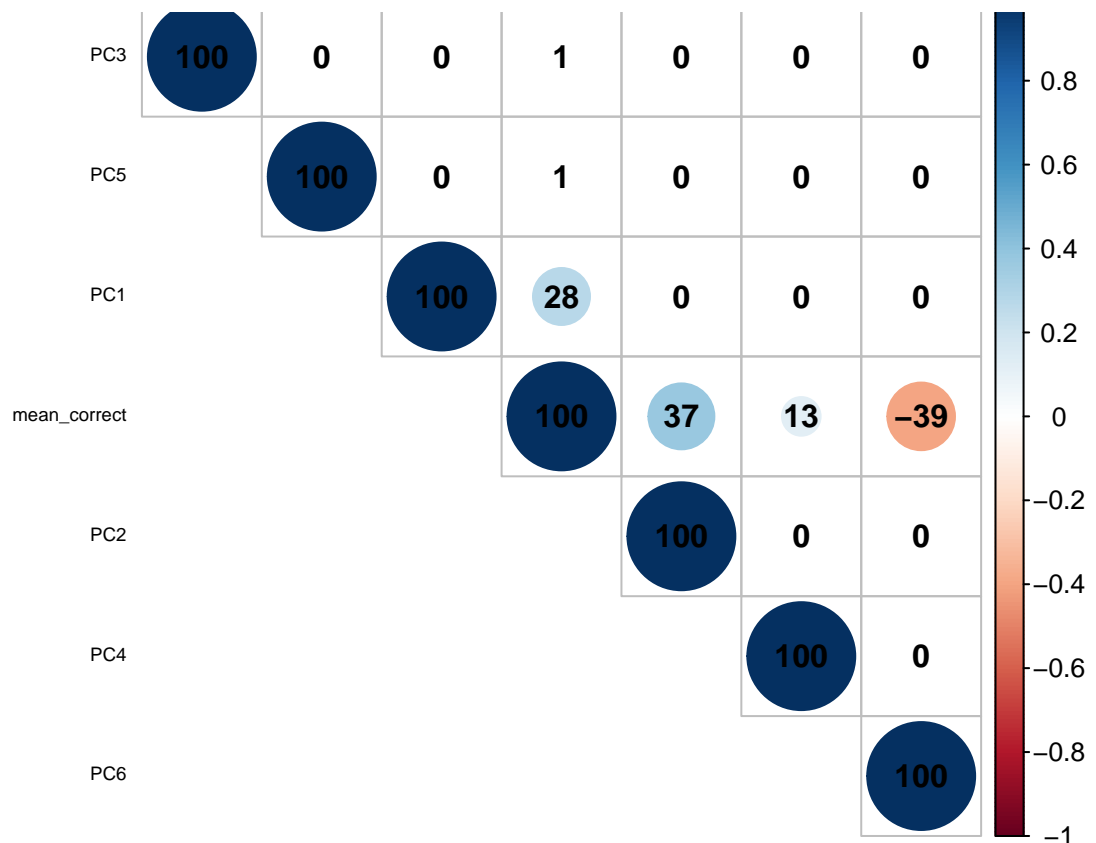


```
#Calculate values for each student that represent these your composite variables and then create a new
student_on_components <- D2 %%% pca$rotation

student_on_pc_outcome <- cbind(student_on_components, as.data.frame(D1$mean_correct)) %>% rename("mean_

COR_student_on_pc_outcome <- cor(student_on_pc_outcome)

corrplot(COR_student_on_pc_outcome,
  order = "AOE",
  method = "circle",
  tl.pos = "lt",
  type = "upper",
  tl.col = "black",
  tl.cex = 0.6,
  tl.srt = 45,
  addCoef.col = "black",
  addCoefasPercent = TRUE,
  sig.level = 0.50, insig = "blank")
```



Part III

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

The underlying structure of the data is a square matrix of 68 programs x 68 programs. Each program is listed as a column name and in the column "program". The numbers in the cells represent the number of people who said that the programs of the row and column which the cell is in are related. This includes the diagonals, instances where the row and column refer to the same program

```
#Read in space delimited data
TCprograms <- read_table2("TCprograms.csv")

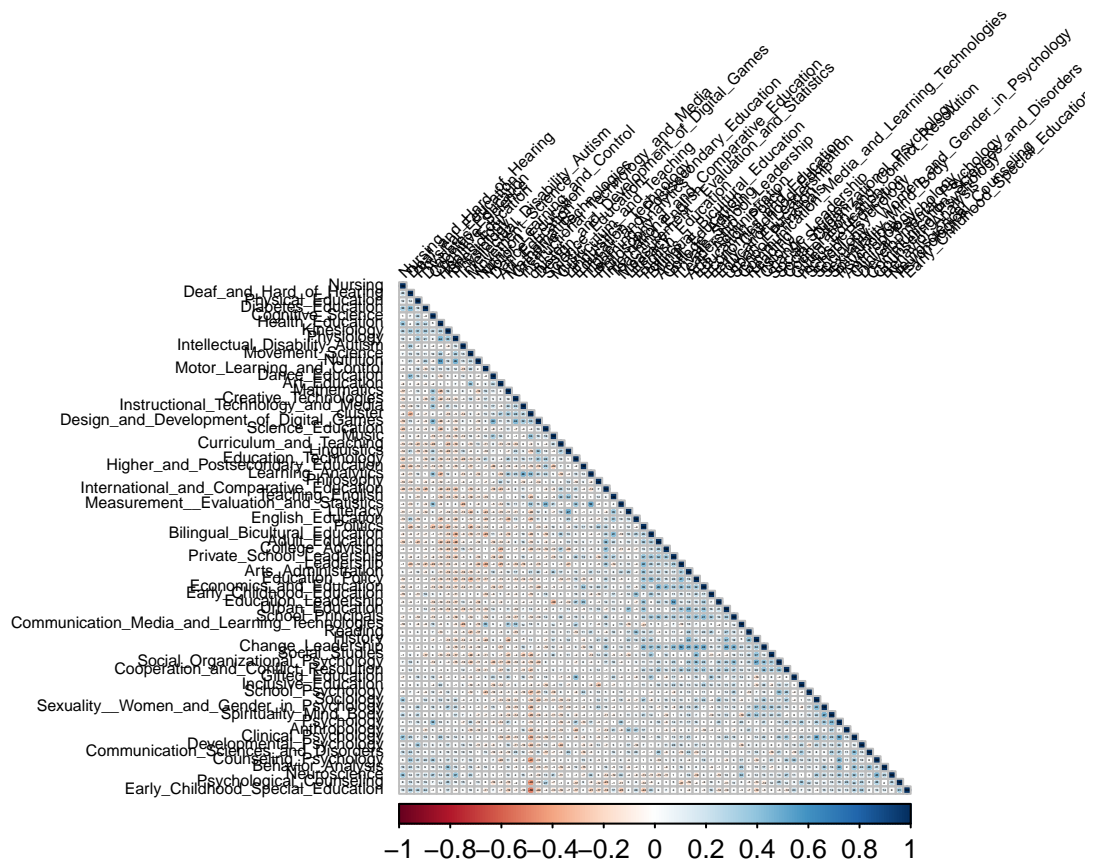
#Get rid of all those annoying dots and quotes
colnames(TCprograms) <- str_remove_all(string = colnames(TCprograms), pattern = '"') %>%
  str_replace_all(pattern = "\\.", replacement = "_")
TCprograms$program <- str_remove_all(string = colnames(TCprograms), pattern = '"') %>%
  str_replace_all(pattern = "\\.", replacement = "_")

#Remove program field, Remove program row
programs_only <- filter(TCprograms, program != "program")
```



```
#Recode diagonals as 0?  
#diag(programs_numbers_only) <- 0
```

```
corrplot(COR_programs,
         order = "AOE",
         method = "circle",
         tl.pos = "lt",
         type = "lower",
         tl.col = "black",
         tl.cex = 0.5,
         tl.srt = 45,
         addCoef.col = "black",
         addCoefasPercent = TRUE,
         sig.level = 0.50, insig = "blank",
         number.cex = 0.1
       )
```



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```
#Fix diagonals to 1, because there should be full correspondence between something and itself. This is well in the data because not everyone got an option to select something on the diagonal.
diag(programs_scaled) <- 1
```

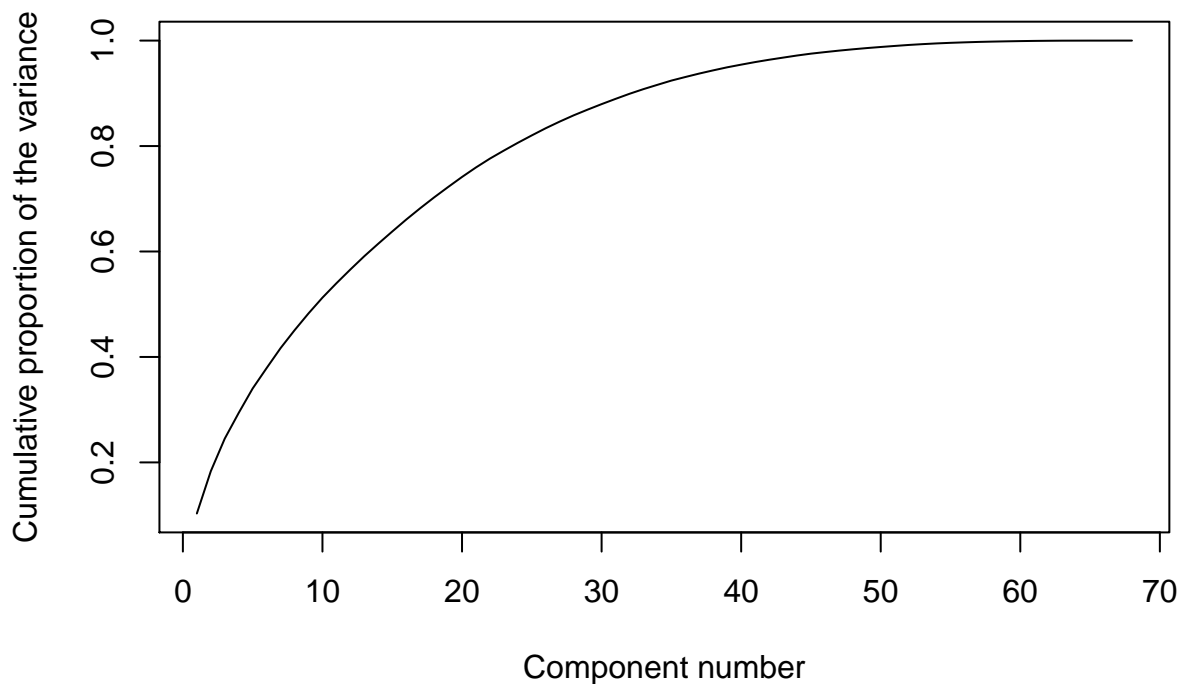
```
#PCA
pca_programs <- prcomp(programs_scaled, scale = TRUE)

#A summary of our pca will give us the proportion of variance accounted for by each component
pca_programs_summary <- summary(pca_programs)

#Plot Cumulative proportion of variance accounted for against component
plot(pca_programs_summary$importance[,3, ],
     type = "lines",
     main = "Cumulative proportion of variance accounted for against component",
     xlab = "Component number",
     ylab = "Cumulative proportion of the variance"
)
```

```
## Warning in plot.xy(xy, type, ...): plot type 'lines' will be truncated to
## first character
```

Cumulative proportion of variance accounted for against componer



```
#Now, create a data frame of the transformed data from your pca.
pca_programs_df <- data.frame(pca_programs$x)
```

What we want to do here is to get the loadings of each program on the PCs, then find which ones contribute the most/least to the PC.

It should be the case that programs with high loadings onto the same PC are ‘related programs’ since the same component captures a larger degree of variation in both/all these programs. The PC is then a ‘component of related programs’.

It is also worth looking at the programs with the lowest loadings onto the same PC as they’re likely ‘related programs’ insofar as the same component fails to capture much variation in these programs. The PC is then also a ‘component of related programs’

```
#Get original feature loadings on principal components
loadings_programs <- abs(pca_programs$rotation) #abs() will make all eigenvectors positive

#sweep() computes each row as a proportion of the column. (There must be a way to do this with dplyr()?)
loadings_programs_df <- as.data.frame(sweep(loadings_programs,
                                           2,
                                           colSums(loadings_programs),
                                           "/" )

                                           )

#Define blank data frame
components_by_related_program <- data.frame(initialise = matrix(NA, nrow = 68, ncol = 1))

#Get the PC names to build a for loop
PCs <- colnames(loadings_programs_df)

#Add the program names as a column instead of rownames to stop them disappearing when using dplyr funct
loadings_programs_df <- rownames_to_column(loadings_programs_df, "programs")

#For loop to iterate through the PCs, sort them in descending order, and return the most highly weighte
for (column in PCs) {
  sorted_programs <- arrange(loadings_programs_df, desc(!sym(column)))
  components_by_related_program <- cbind(components_by_related_program, sorted_programs$programs, stringr::str_extract(sorted_programs$programs, "(.*)"))
}

#clean the output df
components_by_related_program <- components_by_related_program[, -1]
colnames(components_by_related_program) <- PCs
```

```
components_by_related_program
```

```
##                                PC1
## 1                        Change_Leadership
## 2                Economics_and_Education
## 3                School_Principals
## 4                Education_Policy
## 5                        Politics
## 6        Social_Organizational_Psychology
## 7        Cooperation_and_Conflict_Resolution
## 8                Arts_Administration
## 9                Adult_Education
## 10           Private_School_Leadership
## 11                        Leadership
## 12           Bilingual_Bicultural_Education
## 13                        History
## 14                Urban_Education
```

```

## 15             Education_Leadership
## 16             Clinical_Psychology
## 17     Sexuality__Women_and_Gender_in_Psychology
## 18             Sociology
## 19             Reading
## 20             Psychology
## 21             College_Advising
## 22     International_and_Comparative_Education
## 23             Spirituality_Mind_Body
## 24             Physiology
## 25             Art_Education
## 26             Social_Studies
## 27             Nutrition
## 28             cluster
## 29             Inclusive_Education
## 30     Early_Childhood_Education
## 31             Movement_Science
## 32             School_Psychology
## 33     Motor_Learning_and_Control
## 34             Teaching_English
## 35             Literacy
## 36             Developmental_Psychology
## 37             Counseling_Psychology
## 38     Communication_Sciences_and_Disorders
## 39             Behavior_Analysis
## 40             English_Education
## 41             Kinesiology
## 42             Health_Education
## 43     Design_and_Development_of_Digital_Games
## 44             Education_Technology
## 45             Gifted_Education
## 46     Communication_Media_and_Learning_Technologies
## 47             Mathematics
## 48             Anthropology
## 49     Higher_and_Postsecondary_Education
## 50             Psychological_Counseling
## 51     Measurement__Evaluation_and_Statistics
## 52             Intellectual_Disability_Autism
## 53             Neuroscience
## 54             Curriculum_and_Teaching
## 55             Creative_Technologies
## 56             Philosophy
## 57             Learning_Analytics
## 58             Diabetes_Education
## 59             Linguistics
## 60             Dance_Education
## 61     Early_Childhood_Special_Education
## 62             Music
## 63             Science_Education
## 64             Nursing
## 65             Cognitive_Science
## 66             Physical_Education
## 67             Deaf_and_Hard_of_Hearing
## 68     Instructional_Technology_and_Media

```

```

##                                     PC2
## 1                                Kinesiology
## 2                        Clinical_Psychology
## 3                        Health_Education
## 4                        Physiology
## 5                        Neuroscience
## 6                        Nursing
## 7                        cluster
## 8                Psychological_Counseling
## 9                Deaf_and_Hard_of_Hearing
## 10        Early_Childhood_Special_Education
## 11                Diabetes_Education
## 12                Counseling_Psychology
## 13                Behavior_Analysis
## 14                Psychology
## 15        Sexuality__Women_and_Gender_in_Psychology
## 16                Spirituality_Mind_Body
## 17                Physical_Education
## 18        International_and_Comparative_Education
## 19                Sociology
## 20        Design_and_Development_of_Digital_Games
## 21                Developmental_Psychology
## 22        Communication_Sciences_and_Disorders
## 23                Education_Technology
## 24                Curriculum_and_Teaching
## 25                Movement_Science
## 26                Politics
## 27                Nutrition
## 28                Creative_Technologies
## 29                Music
## 30                Adult_Education
## 31                Teaching_English
## 32                Inclusive_Education
## 33                Anthropology
## 34                School_Psychology
## 35                College_Advising
## 36                Arts_Administration
## 37        Higher_and_Postsecondary_Education
## 38                Learning_Analytics
## 39        Social_Organizational_Psychology
## 40                Cognitive_Science
## 41                Linguistics
## 42                Science_Education
## 43        Intellectual_Disability_Autism
## 44                Private_School_Leadership
## 45        Bilingual_Bicultural_Education
## 46                Education_Policy
## 47        Measurement__Evaluation_and_Statistics
## 48        Cooperation_and_Conflict_Resolution
## 49                Mathematics
## 50                Education_Leadership
## 51                Art_Education
## 52                Economics_and_Education
## 53                Literacy

```

```

## 54      Instructional_Technology_and_Media
## 55      School_Principals
## 56      English_Education
## 57      Leadership
## 58      Philosophy
## 59 Communication_Media_and_Learning_Technologies
## 60      Urban_Education
## 61      Change_Leadership
## 62      Gifted_Education
## 63      Social_Studies
## 64      Reading
## 65      Early_Childhood_Education
## 66      History
## 67      Motor_Learning_and_Control
## 68      Dance_Education
##          PC3
## 1      Cognitive_Science
## 2      Learning_Analytics
## 3      Mathematics
## 4      Measurement__Evaluation_and_Statistics
## 5      Design_and_Development_of_Digital_Games
## 6      Instructional_Technology_and_Media
## 7      cluster
## 8      Education_Technology
## 9      Neuroscience
## 10 Communication_Media_and_Learning_Technologies
## 11      Creative_Technologies
## 12      Motor_Learning_and_Control
## 13      Psychology
## 14      Music
## 15      Early_Childhood_Special_Education
## 16      Physical_Education
## 17      Arts_Administration
## 18      Behavior_Analysis
## 19      Dance_Education
## 20      Gifted_Education
## 21      Movement_Science
## 22      Nutrition
## 23      Curriculum_and_Teaching
## 24      Kinesiology
## 25      Higher_and_Postsecondary_Education
## 26      Science_Education
## 27      Communication_Sciences_and_Disorders
## 28      Intellectual_Disability_Autism
## 29      Change_Leadership
## 30      College_Advising
## 31      Counseling_Psychology
## 32      Social_Studies
## 33      Cooperation_and_Conflict_Resolution
## 34      Psychological_Counseling
## 35      Leadership
## 36      English_Education
## 37      Bilingual_Bicultural_Education
## 38      Urban_Education

```

```

## 39 Health_Education
## 40 Sexuality__Women_and_Gender_in_Psychology
## 41 Education_Policy
## 42 Reading
## 43 Literacy
## 44 Physiology
## 45 School_Psychology
## 46 Philosophy
## 47 School_Principals
## 48 Clinical_Psychology
## 49 Nursing
## 50 Teaching_English
## 51 Deaf_and_Hard_of_Hearing
## 52 International_and_Comparative_Education
## 53 Anthropology
## 54 Private_School_Leadership
## 55 Art_Education
## 56 Politics
## 57 Diabetes_Education
## 58 Social_Organizational_Psychology
## 59 Economics_and_Education
## 60 Early_Childhood_Education
## 61 Adult_Education
## 62 Linguistics
## 63 Education_Leadership
## 64 Sociology
## 65 Developmental_Psychology
## 66 Spirituality_Mind_Body
## 67 History
## 68 Inclusive_Education
## PC4
## 1 Linguistics
## 2 English_Education
## 3 Teaching_English
## 4 Deaf_and_Hard_of_Hearing
## 5 cluster
## 6 Literacy
## 7 Early_Childhood_Special_Education
## 8 Design_and_Development_of_Digital_Games
## 9 Communication_Sciences_and_Disorders
## 10 Leadership
## 11 Sociology
## 12 Politics
## 13 Bilingual_Bicultural_Education
## 14 Early_Childhood_Education
## 15 Cognitive_Science
## 16 Anthropology
## 17 Creative_Technologies
## 18 Health_Education
## 19 Psychological_Counseling
## 20 Physiology
## 21 Curriculum_and_Teaching
## 22 Change_Leadership
## 23 Education_Leadership

```

24 Gifted_Education
 ## 25 Intellectual_Disability_Autism
 ## 26 Dance_Education
 ## 27 Instructional_Technology_and_Media
 ## 28 Economics_and_Education
 ## 29 Education_Policy
 ## 30 Counseling_Psychology
 ## 31 Sexuality__Women_and_Gender_in_Psychology
 ## 32 Philosophy
 ## 33 Urban_Education
 ## 34 Reading
 ## 35 Motor_Learning_and_Control
 ## 36 Science_Education
 ## 37 Nursing
 ## 38 Physical_Education
 ## 39 Adult_Education
 ## 40 Learning_Analytics
 ## 41 Cooperation_and_Conflict_Resolution
 ## 42 Mathematics
 ## 43 Movement_Science
 ## 44 Communication_Media_and_Learning_Technologies
 ## 45 Measurement__Evaluation_and_Statistics
 ## 46 Music
 ## 47 Private_School_Leadership
 ## 48 Neuroscience
 ## 49 School_Principals
 ## 50 Education_Technology
 ## 51 Clinical_Psychology
 ## 52 History
 ## 53 Arts_Administration
 ## 54 College_Advising
 ## 55 International_and_Comparative_Education
 ## 56 Kinesiology
 ## 57 Spirituality_Mind_Body
 ## 58 Diabetes_Education
 ## 59 Nutrition
 ## 60 Developmental_Psychology
 ## 61 Social_Organizational_Psychology
 ## 62 Behavior_Analysis
 ## 63 Higher_and_Postsecondary_Education
 ## 64 Psychology
 ## 65 Social_Studies
 ## 66 Inclusive_Education
 ## 67 School_Psychology
 ## 68 Art_Education
 ## PC5
 ## 1 History
 ## 2 Urban_Education
 ## 3 Higher_and_Postsecondary_Education
 ## 4 Dance_Education
 ## 5 Music
 ## 6 Counseling_Psychology
 ## 7 Arts_Administration
 ## 8 Private_School_Leadership


```

## 9           Education_Technology
## 10          Reading
## 11          Philosophy
## 12          Psychological_Counseling
## 13          Education_Leadership
## 14          Gifted_Education
## 15          Inclusive_Education
## 16          Linguistics
## 17          Spirituality_Mind_Body
## 18  Sexuality__Women_and_Gender_in_Psychology
## 19          cluster
## 20          Nursing
## 21          Art_Education
## 22          Science_Education
## 23          College_Advising
## 24          Literacy
## 25          Economics_and_Education
## 26          Motor_Learning_and_Control
## 27          Early_Childhood_Special_Education
## 28          Psychology
## 29  Design_and_Development_of_Digital_Games
## 30          Early_Childhood_Education
## 31          Change_Leadership
## 32          Social_Studies
## 33          Adult_Education
## 34          Cognitive_Science
## 35          Developmental_Psychology
## 36          Communication_Sciences_and_Disorders
## 37  Communication_Media_and_Learning_Technologies
## 38          Anthropology
## 39          Mathematics
## 40          Physiology
## 41  International_and_Comparative_Education
## 42          Deaf_and_Hard_of_Hearing
## 43          Social_Organizational_Psychology
## 44          Nutrition
## 45          Neuroscience
## 46          Teaching_English
## 47          Politics
## 48          Health_Education
## 49  Measurement__Evaluation_and_Statistics
## 50          Clinical_Psychology
## 51          Kinesiology
## 52          School_Psychology
## 53          English_Education
## 54          Creative_Technologies
## 55          Curriculum_and_Teaching
## 56          Diabetes_Education
## 57          Leadership
## 58  Bilingual_Bicultural_Education
## 59          Physical_Education
## 60          Education_Policy
## 61  Intellectual_Disability_Autism
## 62          Sociology

```

```

## 63                School_Principals
## 64      Instructional_Technology_and_Media
## 65                Learning_Analytics
## 66      Cooperation_and_Conflict_Resolution
## 67                Behavior_Analysis
## 68                Movement_Science
##                PC6
## 1                Science_Education
## 2      Higher_and_Postsecondary_Education
## 3                School_Psychology
## 4                Private_School_Leadership
## 5      Measurement__Evaluation_and_Statistics
## 6                Movement_Science
## 7                College_Advising
## 8      Communication_Sciences_and_Disorders
## 9                Social_Studies
## 10               Learning_Analytics
## 11               Inclusive_Education
## 12               Health_Education
## 13               Nutrition
## 14      International_and_Comparative_Education
## 15               Anthropology
## 16               Adult_Education
## 17               Reading
## 18      Instructional_Technology_and_Media
## 19               Change_Leadership
## 20               Creative_Technologies
## 21      Design_and_Development_of_Digital_Games
## 22      Sexuality__Women_and_Gender_in_Psychology
## 23               Psychological_Counseling
## 24               Social_Organizational_Psychology
## 25               Dance_Education
## 26               Diabetes_Education
## 27      Intellectual_Disability_Autism
## 28      Deaf_and_Hard_of_Hearing
## 29      Bilingual_Bicultural_Education
## 30               Philosophy
## 31      Curriculum_and_Teaching
## 32      Spirituality_Mind_Body
## 33               Neuroscience
## 34               cluster
## 35               Nursing
## 36               Behavior_Analysis
## 37      Motor_Learning_and_Control
## 38               Cognitive_Science
## 39               Physiology
## 40               English_Education
## 41      Counseling_Psychology
## 42      Clinical_Psychology
## 43               History
## 44      Education_Leadership
## 45      Education_Technology
## 46               Literacy
## 47      School_Principals

```

## 48	Mathematics
## 49	Art_Education
## 50	Kinesiology
## 51	Arts_Administration
## 52	Politics
## 53	Early_Childhood_Special_Education
## 54	Teaching_English
## 55	Early_Childhood_Education
## 56	Leadership
## 57	Cooperation_and_Conflict_Resolution
## 58	Gifted_Education
## 59	Developmental_Psychology
## 60	Economics_and_Education
## 61	Music
## 62	Psychology
## 63	Physical_Education
## 64	Education_Policy
## 65	Urban_Education
## 66	Communication_Media_and_Learning_Technologies
## 67	Sociology
## 68	Linguistics
##	PC7
## 1	Gifted_Education
## 2	Communication_Sciences_and_Disorders
## 3	Dance_Education
## 4	Music
## 5	Education_Policy
## 6	Early_Childhood_Education
## 7	Social_Studies
## 8	Literacy
## 9	School_Principals
## 10	Deaf_and_Hard_of_Hearing
## 11	Bilingual_Bicultural_Education
## 12	Diabetes_Education
## 13	Adult_Education
## 14	Art_Education
## 15	Counseling_Psychology
## 16	Anthropology
## 17	Creative_Technologies
## 18	Spirituality_Mind_Body
## 19	Linguistics
## 20	Early_Childhood_Special_Education
## 21	Communication_Media_and_Learning_Technologies
## 22	Clinical_Psychology
## 23	Measurement__Evaluation_and_Statistics
## 24	Education_Leadership
## 25	Inclusive_Education
## 26	Higher_and_Postsecondary_Education
## 27	Learning_Analytics
## 28	Sexuality__Women_and_Gender_in_Psychology
## 29	Education_Technology
## 30	Science_Education
## 31	Psychology
## 32	Sociology

```

## 33          Motor_Learning_and_Control
## 34              Mathematics
## 35          Change_Leadership
## 36              Kinesiology
## 37          School_Psychology
## 38          Private_School_Leadership
## 39              Arts_Administration
## 40          Instructional_Technology_and_Media
## 41          Cooperation_and_Conflict_Resolution
## 42              Cognitive_Science
## 43              English_Education
## 44              Neuroscience
## 45              Economics_and_Education
## 46              Politics
## 47          Behavior_Analysis
## 48              Reading
## 49              Physiology
## 50              cluster
## 51          Teaching_English
## 52              Nursing
## 53          Developmental_Psychology
## 54              Nutrition
## 55              Health_Education
## 56              History
## 57          Intellectual_Disability_Autism
## 58              Philosophy
## 59          Social_Organizational_Psychology
## 60              Curriculum_and_Teaching
## 61              Movement_Science
## 62              Physical_Education
## 63          International_and_Comparative_Education
## 64          Design_and_Development_of_Digital_Games
## 65              Psychological_Counseling
## 66              Leadership
## 67              College_Advising
## 68              Urban_Education
##          PC8
## 1          Social_Studies
## 2          International_and_Comparative_Education
## 3              Urban_Education
## 4              Literacy
## 5  Communication_Media_and_Learning_Technologies
## 6              Mathematics
## 7          Early_Childhood_Education
## 8          Motor_Learning_and_Control
## 9              Creative_Technologies
## 10              Gifted_Education
## 11              Diabetes_Education
## 12          Developmental_Psychology
## 13          Social_Organizational_Psychology
## 14              College_Advising
## 15              Learning_Analytics
## 16              Teaching_English
## 17              Politics

```

```

## 18      Sexuality__Women_and_Gender_in_Psychology
## 19              Behavior_Analysis
## 20                      Economics_and_Education
## 21          Higher_and_Postsecondary_Education
## 22                  Leadership
## 23                      History
## 24                  Physiology
## 25                      Reading
## 26          Private_School_Leadership
## 27              Education_Leadership
## 28          Instructional_Technology_and_Media
## 29          Early_Childhood_Special_Education
## 30              Arts_Administration
## 31              Inclusive_Education
## 32                  Sociology
## 33          Deaf_and_Hard_of_Hearing
## 34                  cluster
## 35                  Art_Education
## 36          Communication_Sciences_and_Disorders
## 37              Adult_Education
## 38              Cognitive_Science
## 39              Dance_Education
## 40              Education_Policy
## 41              School_Psychology
## 42                  Anthropology
## 43              Physical_Education
## 44          Design_and_Development_of_Digital_Games
## 45                  Nutrition
## 46              Education_Technology
## 47              English_Education
## 48              Science_Education
## 49          Intellectual_Disability_Autism
## 50                  Linguistics
## 51                  Movement_Science
## 52                  Psychology
## 53              Clinical_Psychology
## 54                  Nursing
## 55          Curriculum_and_Teaching
## 56                  Neuroscience
## 57                  Music
## 58                  Kinesiology
## 59          Bilingual_Bicultural_Education
## 60              Health_Education
## 61              Spirituality_Mind_Body
## 62              Change_Leadership
## 63              Psychological_Counseling
## 64              Counseling_Psychology
## 65          Cooperation_and_Conflict_Resolution
## 66                  Philosophy
## 67          Measurement__Evaluation_and_Statistics
## 68              School_Principals
##              PC9
## 1          Curriculum_and_Teaching
## 2          Developmental_Psychology

```

```

## 3 Nutrition
## 4 School_Principals
## 5 Spirituality_Mind_Body
## 6 Social_Organizational_Psychology
## 7 School_Psychology
## 8 Health_Education
## 9 Physical_Education
## 10 Sexuality__Women_and_Gender_in_Psychology
## 11 Communication_Media_and_Learning_Technologies
## 12 Bilingual_Bicultural_Education
## 13 Early_Childhood_Education
## 14 Diabetes_Education
## 15 Early_Childhood_Special_Education
## 16 Gifted_Education
## 17 Cooperation_and_Conflict_Resolution
## 18 Neuroscience
## 19 Politics
## 20 Education_Policy
## 21 Leadership
## 22 Inclusive_Education
## 23 Urban_Education
## 24 Social_Studies
## 25 Psychological_Counseling
## 26 Anthropology
## 27 Measurement__Evaluation_and_Statistics
## 28 Dance_Education
## 29 Higher_and_Postsecondary_Education
## 30 Philosophy
## 31 Mathematics
## 32 Clinical_Psychology
## 33 Music
## 34 Arts_Administration
## 35 Science_Education
## 36 Psychology
## 37 Intellectual_Disability_Autism
## 38 Behavior_Analysis
## 39 Education_Leadership
## 40 Change_Leadership
## 41 Creative_Technologies
## 42 cluster
## 43 Physiology
## 44 English_Education
## 45 Art_Education
## 46 Deaf_and_Hard_of_Hearing
## 47 Economics_and_Education
## 48 Teaching_English
## 49 Cognitive_Science
## 50 Learning_Analytics
## 51 Education_Technology
## 52 Design_and_Development_of_Digital_Games
## 53 Nursing
## 54 History
## 55 Counseling_Psychology
## 56 Motor_Learning_and_Control

```

## 57	Literacy
## 58	Instructional_Technology_and_Media
## 59	Kinesiology
## 60	College_Advising
## 61	Sociology
## 62	Reading
## 63	Movement_Science
## 64	Private_School_Leadership
## 65	International_and_Comparative_Education
## 66	Linguistics
## 67	Adult_Education
## 68	Communication_Sciences_and_Disorders
##	PC10
## 1	Intellectual_Disability_Autism
## 2	Philosophy
## 3	Cooperation_and_Conflict_Resolution
## 4	Deaf_and_Hard_of_Hearing
## 5	Behavior_Analysis
## 6	College_Advising
## 7	Mathematics
## 8	Education_Leadership
## 9	Bilingual_Bicultural_Education
## 10	Communication_Media_and_Learning_Technologies
## 11	Anthropology
## 12	Linguistics
## 13	Nursing
## 14	Health_Education
## 15	School_Psychology
## 16	Measurement__Evaluation_and_Statistics
## 17	Movement_Science
## 18	Leadership
## 19	Literacy
## 20	Dance_Education
## 21	Design_and_Development_of_Digital_Games
## 22	Science_Education
## 23	Early_Childhood_Special_Education
## 24	Higher_and_Postsecondary_Education
## 25	Teaching_English
## 26	English_Education
## 27	Developmental_Psychology
## 28	Adult_Education
## 29	Economics_and_Education
## 30	Art_Education
## 31	Education_Policy
## 32	Physical_Education
## 33	Education_Technology
## 34	Reading
## 35	Early_Childhood_Education
## 36	Psychological_Counseling
## 37	Creative_Technologies
## 38	Inclusive_Education
## 39	Diabetes_Education
## 40	Instructional_Technology_and_Media
## 41	Change_Leadership

```

## 42          Sociology
## 43          Kinesiology
## 44          Nutrition
## 45      Social_Organizational_Psychology
## 46          Social_Studies
## 47          Psychology
## 48      Communication_Sciences_and_Disorders
## 49          Politics
## 50          cluster
## 51          Gifted_Education
## 52          School_Principals
## 53      Counseling_Psychology
## 54          Arts_Administration
## 55      Private_School_Leadership
## 56          Urban_Education
## 57          History
## 58      International_and_Comparative_Education
## 59          Learning_Analytics
## 60      Curriculum_and_Teaching
## 61      Motor_Learning_and_Control
## 62      Sexuality__Women_and_Gender_in_Psychology
## 63          Spirituality_Mind_Body
## 64          Cognitive_Science
## 65          Neuroscience
## 66          Clinical_Psychology
## 67          Music
## 68          Physiology
##          PC11
## 1          Art_Education
## 2          Curriculum_and_Teaching
## 3      Instructional_Technology_and_Media
## 4          College_Advising
## 5          Learning_Analytics
## 6      Intellectual_Disability_Autism
## 7          Neuroscience
## 8      Motor_Learning_and_Control
## 9          Counseling_Psychology
## 10     Communication_Sciences_and_Disorders
## 11     Social_Organizational_Psychology
## 12          Behavior_Analysis
## 13          Philosophy
## 14          Social_Studies
## 15          Anthropology
## 16          Nursing
## 17          Cognitive_Science
## 18          English_Education
## 19          Physiology
## 20      Bilingual_Bicultural_Education
## 21 Communication_Media_and_Learning_Technologies
## 22          Adult_Education
## 23      Deaf_and_Hard_of_Hearing
## 24          Dance_Education
## 25          Urban_Education
## 26      Early_Childhood_Education

```



```

## 27             Education_Policy
## 28             Economics_and_Education
## 29             Sociology
## 30             Leadership
## 31             Psychology
## 32             History
## 33             Developmental_Psychology
## 34             Kinesiology
## 35             Diabetes_Education
## 36             Education_Leadership
## 37             Early_Childhood_Special_Education
## 38             Inclusive_Education
## 39             Private_School_Leadership
## 40             Creative_Technologies
## 41             International_and_Comparative_Education
## 42             Nutrition
## 43             Clinical_Psychology
## 44             Movement_Science
## 45             Education_Technology
## 46             Reading
## 47             cluster
## 48             Politics
## 49             Sexuality__Women_and_Gender_in_Psychology
## 50             Cooperation_and_Conflict_Resolution
## 51             Measurement__Evaluation_and_Statistics
## 52             Spirituality_Mind_Body
## 53             Linguistics
## 54             Science_Education
## 55             Literacy
## 56             Psychological_Counseling
## 57             Change_Leadership
## 58             Design_and_Development_of_Digital_Games
## 59             Music
## 60             Physical_Education
## 61             Arts_Administration
## 62             School_Psychology
## 63             Higher_and_Postsecondary_Education
## 64             Health_Education
## 65             School_Principals
## 66             Teaching_English
## 67             Gifted_Education
## 68             Mathematics
##             PC12
## 1             Education_Technology
## 2             Reading
## 3             College_Advising
## 4             Diabetes_Education
## 5             Nutrition
## 6             Movement_Science
## 7             Psychology
## 8             Science_Education
## 9             Art_Education
## 10            Learning_Analytics
## 11            Measurement__Evaluation_and_Statistics

```

```

## 12                Linguistics
## 13        Social_Organizational_Psychology
## 14                Health_Education
## 15                Leadership
## 16                Mathematics
## 17                Kinesiology
## 18                Anthropology
## 19                Nursing
## 20                Literacy
## 21    Sexuality__Women_and_Gender_in_Psychology
## 22                Economics_and_Education
## 23                Early_Childhood_Education
## 24                Physical_Education
## 25                Spirituality_Mind_Body
## 26    Communication_Media_and_Learning_Technologies
## 27                Instructional_Technology_and_Media
## 28                School_Psychology
## 29                Cognitive_Science
## 30    International_and_Comparative_Education
## 31                Curriculum_and_Teaching
## 32                Gifted_Education
## 33                Physiology
## 34                Sociology
## 35                Education_Leadership
## 36                Deaf_and_Hard_of_Hearing
## 37                Creative_Technologies
## 38                Inclusive_Education
## 39                Motor_Learning_and_Control
## 40    Design_and_Development_of_Digital_Games
## 41                Teaching_English
## 42                Clinical_Psychology
## 43                Intellectual_Disability_Autism
## 44    Early_Childhood_Special_Education
## 45                Behavior_Analysis
## 46                Counseling_Psychology
## 47                Politics
## 48                cluster
## 49    Cooperation_and_Conflict_Resolution
## 50                History
## 51                Psychological_Counseling
## 52                Social_Studies
## 53                Adult_Education
## 54                English_Education
## 55                School_Principals
## 56    Private_School_Leadership
## 57                Music
## 58                Arts_Administration
## 59    Bilingual_Bicultural_Education
## 60                Urban_Education
## 61    Developmental_Psychology
## 62                Philosophy
## 63                Education_Policy
## 64    Higher_and_Postsecondary_Education
## 65                Change_Leadership

```

```

## 66          Dance_Education
## 67          Neuroscience
## 68      Communication_Sciences_and_Disorders
##          PC13
## 1          Leadership
## 2          Inclusive_Education
## 3          Teaching_English
## 4          Music
## 5          Philosophy
## 6          Gifted_Education
## 7      Intellectual_Disability_Autism
## 8          Physical_Education
## 9          Education_Leadership
## 10         Sociology
## 11      Instructional_Technology_and_Media
## 12         Education_Technology
## 13         Motor_Learning_and_Control
## 14         Nutrition
## 15      Cooperation_and_Conflict_Resolution
## 16         Psychology
## 17         Private_School_Leadership
## 18         Movement_Science
## 19         Kinesiology
## 20      Sexuality__Women_and_Gender_in_Psychology
## 21         Health_Education
## 22      Higher_and_Postsecondary_Education
## 23         Curriculum_and_Teaching
## 24         Creative_Technologies
## 25         History
## 26         Clinical_Psychology
## 27         Nursing
## 28      Design_and_Development_of_Digital_Games
## 29         Social_Organizational_Psychology
## 30      International_and_Comparative_Education
## 31         Linguistics
## 32         Psychological_Counseling
## 33         Physiology
## 34         English_Education
## 35         Diabetes_Education
## 36         Education_Policy
## 37         Cognitive_Science
## 38         cluster
## 39         Behavior_Analysis
## 40         Learning_Analytics
## 41         Anthropology
## 42         Literacy
## 43         Counseling_Psychology
## 44         Early_Childhood_Education
## 45         Developmental_Psychology
## 46      Early_Childhood_Special_Education
## 47         Arts_Administration
## 48         Neuroscience
## 49      Communication_Sciences_and_Disorders
## 50         Urban_Education

```

```

## 51          Change_Leadership
## 52          Politics
## 53          School_Principals
## 54 Communication_Media_and_Learning_Technologies
## 55          Science_Education
## 56          Deaf_and_Hard_of_Hearing
## 57          Measurement__Evaluation_and_Statistics
## 58          Dance_Education
## 59          Mathematics
## 60          Bilingual_Bicultural_Education
## 61          Economics_and_Education
## 62          School_Psychology
## 63          Spirituality_Mind_Body
## 64          Adult_Education
## 65          Art_Education
## 66          Reading
## 67          College_Advising
## 68          Social_Studies
##          PC14
## 1          Behavior_Analysis
## 2          Inclusive_Education
## 3          School_Psychology
## 4          Psychological_Counseling
## 5          Philosophy
## 6          Leadership
## 7          Health_Education
## 8          Education_Leadership
## 9          Social_Studies
## 10         Social_Organizational_Psychology
## 11         Design_and_Development_of_Digital_Games
## 12         Developmental_Psychology
## 13         Physical_Education
## 14         International_and_Comparative_Education
## 15         Spirituality_Mind_Body
## 16         Science_Education
## 17 Communication_Media_and_Learning_Technologies
## 18         Music
## 19         Mathematics
## 20         Counseling_Psychology
## 21         Physiology
## 22         History
## 23         Nursing
## 24         English_Education
## 25         Economics_and_Education
## 26         Kinesiology
## 27         Motor_Learning_and_Control
## 28         Literacy
## 29         Education_Technology
## 30         Higher_and_Postsecondary_Education
## 31         Education_Policy
## 32         cluster
## 33         Private_School_Leadership
## 34         Movement_Science
## 35         Learning_Analytics

```

```

## 36                Adult_Education
## 37      Instructional_Technology_and_Media
## 38                Teaching_English
## 39      Early_Childhood_Special_Education
## 40                Dance_Education
## 41      Bilingual_Bicultural_Education
## 42                Gifted_Education
## 43                Nutrition
## 44      Change_Leadership
## 45                Politics
## 46      Sexuality__Women_and_Gender_in_Psychology
## 47                Cognitive_Science
## 48      Communication_Sciences_and_Disorders
## 49                Clinical_Psychology
## 50                Art_Education
## 51                Anthropology
## 52                Neuroscience
## 53                Reading
## 54      Urban_Education
## 55      Arts_Administration
## 56      Measurement__Evaluation_and_Statistics
## 57                Curriculum_and_Teaching
## 58                Creative_Technologies
## 59                Sociology
## 60                Linguistics
## 61      Deaf_and_Hard_of_Hearing
## 62      Intellectual_Disability_Autism
## 63      Cooperation_and_Conflict_Resolution
## 64                Psychology
## 65      College_Advising
## 66      School_Principals
## 67      Diabetes_Education
## 68      Early_Childhood_Education
##                PC15
## 1      Education_Leadership
## 2      Developmental_Psychology
## 3                Philosophy
## 4                Literacy
## 5      Economics_and_Education
## 6      Physical_Education
## 7      Private_School_Leadership
## 8                Linguistics
## 9      Diabetes_Education
## 10      English_Education
## 11      Spirituality_Mind_Body
## 12                Music
## 13      Inclusive_Education
## 14      Deaf_and_Hard_of_Hearing
## 15      Clinical_Psychology
## 16      Dance_Education
## 17      Psychology
## 18      Higher_and_Postsecondary_Education
## 19      College_Advising
## 20      Intellectual_Disability_Autism

```

```

## 21 Nursing
## 22 Mathematics
## 23 Motor_Learning_and_Control
## 24 Arts_Administration
## 25 Curriculum_and_Teaching
## 26 Neuroscience
## 27 Health_Education
## 28 Learning_Analytics
## 29 History
## 30 cluster
## 31 Teaching_English
## 32 School_Psychology
## 33 Sociology
## 34 Cognitive_Science
## 35 Nutrition
## 36 Politics
## 37 Psychological_Counseling
## 38 Kinesiology
## 39 Communication_Sciences_and_Disorders
## 40 Anthropology
## 41 International_and_Comparative_Education
## 42 Adult_Education
## 43 Social_Organizational_Psychology
## 44 Movement_Science
## 45 Leadership
## 46 Physiology
## 47 Instructional_Technology_and_Media
## 48 Social_Studies
## 49 Creative_Technologies
## 50 Art_Education
## 51 Early_Childhood_Education
## 52 Behavior_Analysis
## 53 Bilingual_Bicultural_Education
## 54 Counseling_Psychology
## 55 Design_and_Development_of_Digital_Games
## 56 Education_Policy
## 57 Science_Education
## 58 School_Principals
## 59 Reading
## 60 Communication_Media_and_Learning_Technologies
## 61 Early_Childhood_Special_Education
## 62 Sexuality__Women_and_Gender_in_Psychology
## 63 Measurement__Evaluation_and_Statistics
## 64 Gifted_Education
## 65 Education_Technology
## 66 Cooperation_and_Conflict_Resolution
## 67 Change_Leadership
## 68 Urban_Education
## PC16
## 1 Instructional_Technology_and_Media
## 2 Curriculum_and_Teaching
## 3 Sexuality__Women_and_Gender_in_Psychology
## 4 Nursing
## 5 Early_Childhood_Education

```

## 6	Nutrition
## 7	Teaching_English
## 8	Counseling_Psychology
## 9	School_Principals
## 10	Cooperation_and_Conflict_Resolution
## 11	Change_Leadership
## 12	Learning_Analytics
## 13	Adult_Education
## 14	Physiology
## 15	Cognitive_Science
## 16	Mathematics
## 17	Kinesiology
## 18	Clinical_Psychology
## 19	Music
## 20	Spirituality_Mind_Body
## 21	Communication_Media_and_Learning_Technologies
## 22	Psychology
## 23	Education_Technology
## 24	Psychological_Counseling
## 25	English_Education
## 26	College_Advising
## 27	Behavior_Analysis
## 28	Private_School_Leadership
## 29	Philosophy
## 30	Neuroscience
## 31	Creative_Technologies
## 32	Reading
## 33	International_and_Comparative_Education
## 34	Design_and_Development_of_Digital_Games
## 35	Education_Leadership
## 36	Linguistics
## 37	Art_Education
## 38	Urban_Education
## 39	Physical_Education
## 40	Communication_Sciences_and_Disorders
## 41	Education_Policy
## 42	Early_Childhood_Special_Education
## 43	Deaf_and_Hard_of_Hearing
## 44	Science_Education
## 45	Economics_and_Education
## 46	Intellectual_Disability_Autism
## 47	Gifted_Education
## 48	Social_Studies
## 49	Politics
## 50	Developmental_Psychology
## 51	Movement_Science
## 52	Dance_Education
## 53	Health_Education
## 54	cluster
## 55	History
## 56	Bilingual_Bicultural_Education
## 57	Anthropology
## 58	Motor_Learning_and_Control
## 59	Social_Organizational_Psychology

```

## 60           Arts_Administration
## 61       Higher_and_Postsecondary_Education
## 62           Inclusive_Education
## 63           Sociology
## 64           Diabetes_Education
## 65           Literacy
## 66       Measurement__Evaluation_and_Statistics
## 67           Leadership
## 68           School_Psychology
##           PC17
## 1           Anthropology
## 2           Art_Education
## 3           Neuroscience
## 4       Communication_Media_and_Learning_Technologies
## 5           School_Psychology
## 6           Movement_Science
## 7           Kinesiology
## 8       Higher_and_Postsecondary_Education
## 9           Motor_Learning_and_Control
## 10          Deaf_and_Hard_of_Hearing
## 11          Reading
## 12          Education_Policy
## 13          Counseling_Psychology
## 14          Social_Studies
## 15          Politics
## 16          Physiology
## 17          Early_Childhood_Education
## 18          Learning_Analytics
## 19          Diabetes_Education
## 20          Music
## 21          Economics_and_Education
## 22       Measurement__Evaluation_and_Statistics
## 23          Cognitive_Science
## 24          Creative_Technologies
## 25          Education_Technology
## 26          Psychological_Counseling
## 27          Private_School_Leadership
## 28       Design_and_Development_of_Digital_Games
## 29          English_Education
## 30          Nursing
## 31          Gifted_Education
## 32          Mathematics
## 33          Sociology
## 34          Psychology
## 35          Arts_Administration
## 36          Philosophy
## 37          Behavior_Analysis
## 38          Science_Education
## 39       Social_Organizational_Psychology
## 40          Literacy
## 41          Health_Education
## 42          Physical_Education
## 43          Leadership
## 44          Education_Leadership

```



```

## 45         Intellectual_Disability_Autism
## 46             Dance_Education
## 47         Early_Childhood_Special_Education
## 48             Adult_Education
## 49         International_and_Comparative_Education
## 50             School_Principals
## 51             Change_Leadership
## 52         Communication_Sciences_and_Disorders
## 53             Developmental_Psychology
## 54                 History
## 55                 Spirituality_Mind_Body
## 56         Instructional_Technology_and_Media
## 57             Curriculum_and_Teaching
## 58                 Linguistics
## 59         Cooperation_and_Conflict_Resolution
## 60             cluster
## 61             Clinical_Psychology
## 62                 Teaching_English
## 63                 Urban_Education
## 64                 Inclusive_Education
## 65         Sexuality__Women_and_Gender_in_Psychology
## 66             Nutrition
## 67                 College_Advising
## 68         Bilingual_Bicultural_Education
##             PC18
## 1         Measurement__Evaluation_and_Statistics
## 2             Anthropology
## 3             Mathematics
## 4             Movement_Science
## 5             Diabetes_Education
## 6             Nursing
## 7             Sociology
## 8         Intellectual_Disability_Autism
## 9             Learning_Analytics
## 10        Early_Childhood_Special_Education
## 11            Inclusive_Education
## 12            English_Education
## 13        Social_Organizational_Psychology
## 14            Physiology
## 15            School_Psychology
## 16            Gifted_Education
## 17            Economics_and_Education
## 18 Communication_Media_and_Learning_Technologies
## 19             Philosophy
## 20         Private_School_Leadership
## 21             Science_Education
## 22             College_Advising
## 23        Instructional_Technology_and_Media
## 24            Bilingual_Bicultural_Education
## 25                Music
## 26            Developmental_Psychology
## 27                Adult_Education
## 28            Creative_Technologies
## 29                Neuroscience

```

```

## 30             Education_Leadership
## 31                 Reading
## 32                 School_Principals
## 33                 Spirituality_Mind_Body
## 34                 Behavior_Analysis
## 35                 Early_Childhood_Education
## 36                 Curriculum_and_Teaching
## 37             Higher_and_Postsecondary_Education
## 38 International_and_Comparative_Education
## 39                 Education_Policy
## 40                 Urban_Education
## 41                 Education_Technology
## 42                 Teaching_English
## 43                 Dance_Education
## 44                 Motor_Learning_and_Control
## 45 Communication_Sciences_and_Disorders
## 46                 Psychological_Counseling
## 47                 Cooperation_and_Conflict_Resolution
## 48                 Kinesiology
## 49                 Social_Studies
## 50                 Psychology
## 51                 Literacy
## 52                 Counseling_Psychology
## 53                 cluster
## 54                 History
## 55                 Deaf_and_Hard_of_Hearing
## 56                 Art_Education
## 57                 Arts_Administration
## 58                 Linguistics
## 59                 Health_Education
## 60                 Politics
## 61                 Leadership
## 62 Sexuality__Women_and_Gender_in_Psychology
## 63                 Nutrition
## 64                 Cognitive_Science
## 65                 Change_Leadership
## 66                 Clinical_Psychology
## 67                 Physical_Education
## 68 Design_and_Development_of_Digital_Games
##             PC19
## 1             Cognitive_Science
## 2             Creative_Technologies
## 3             Science_Education
## 4             Behavior_Analysis
## 5             Deaf_and_Hard_of_Hearing
## 6             Psychology
## 7             Cooperation_and_Conflict_Resolution
## 8             Reading
## 9             Intellectual_Disability_Autism
## 10            Motor_Learning_and_Control
## 11            Music
## 12 International_and_Comparative_Education
## 13 Measurement__Evaluation_and_Statistics
## 14            English_Education

```

```

## 15      Communication_Sciences_and_Disorders
## 16      Education_Technology
## 17      Physiology
## 18      School_Psychology
## 19      Urban_Education
## 20      Dance_Education
## 21      Developmental_Psychology
## 22      Kinesiology
## 23      Philosophy
## 24      Bilingual_Bicultural_Education
## 25      Health_Education
## 26      Art_Education
## 27      Curriculum_and_Teaching
## 28      Higher_and_Postsecondary_Education
## 29      Education_Policy
## 30      Education_Leadership
## 31      Economics_and_Education
## 32      Social_Organizational_Psychology
## 33      Private_School_Leadership
## 34      Politics
## 35      Gifted_Education
## 36      Movement_Science
## 37      Psychological_Counseling
## 38      Social_Studies
## 39      School_Principals
## 40      Early_Childhood_Education
## 41      Adult_Education
## 42      Spirituality_Mind_Body
## 43      Communication_Media_and_Learning_Technologies
## 44      History
## 45      Linguistics
## 46      Leadership
## 47      Physical_Education
## 48      Mathematics
## 49      Sexuality__Women_and_Gender_in_Psychology
## 50      Early_Childhood_Special_Education
## 51      Nursing
## 52      Counseling_Psychology
## 53      Teaching_English
## 54      Neuroscience
## 55      Sociology
## 56      Design_and_Development_of_Digital_Games
## 57      College_Advising
## 58      Change_Leadership
## 59      Diabetes_Education
## 60      Learning_Analytics
## 61      Clinical_Psychology
## 62      Instructional_Technology_and_Media
## 63      Nutrition
## 64      Inclusive_Education
## 65      Anthropology
## 66      Arts_Administration
## 67      cluster
## 68      Literacy

```

##		PC20
## 1		Physical_Education
## 2		Psychological_Counseling
## 3		Sociology
## 4		Reading
## 5		Instructional_Technology_and_Media
## 6		Higher_and_Postsecondary_Education
## 7		Adult_Education
## 8		Science_Education
## 9		Counseling_Psychology
## 10		Anthropology
## 11		Arts_Administration
## 12		Health_Education
## 13		History
## 14		Cognitive_Science
## 15		Movement_Science
## 16		College_Advising
## 17		English_Education
## 18		Clinical_Psychology
## 19		Education_Policy
## 20		Politics
## 21		Diabetes_Education
## 22		School_Psychology
## 23		Music
## 24		Bilingual_Bicultural_Education
## 25		Neuroscience
## 26		Teaching_English
## 27		Private_School_Leadership
## 28		Spirituality_Mind_Body
## 29		School_Principals
## 30		Early_Childhood_Education
## 31		Change_Leadership
## 32		Curriculum_and_Teaching
## 33		Philosophy
## 34		Literacy
## 35		Nursing
## 36		Social_Organizational_Psychology
## 37		Leadership
## 38		Cooperation_and_Conflict_Resolution
## 39		Inclusive_Education
## 40		Kinesiology
## 41		Measurement__Evaluation_and_Statistics
## 42		cluster
## 43		Education_Technology
## 44		Physiology
## 45		Urban_Education
## 46		Early_Childhood_Special_Education
## 47		Education_Leadership
## 48		Developmental_Psychology
## 49		Social_Studies
## 50		Intellectual_Disability_Autism
## 51		Communication_Media_and_Learning_Technologies
## 52		Deaf_and_Hard_of_Hearing
## 53		Dance_Education

54 Gifted_Education
 ## 55 Sexuality__Women_and_Gender_in_Psychology
 ## 56 Mathematics
 ## 57 Communication_Sciences_and_Disorders
 ## 58 Economics_and_Education
 ## 59 Linguistics
 ## 60 International_and_Comparative_Education
 ## 61 Learning_Analytics
 ## 62 Motor_Learning_and_Control
 ## 63 Creative_Technologies
 ## 64 Behavior_Analysis
 ## 65 Psychology
 ## 66 Art_Education
 ## 67 Nutrition
 ## 68 Design_and_Development_of_Digital_Games
 ## PC21
 ## 1 Dance_Education
 ## 2 Developmental_Psychology
 ## 3 Intellectual_Disability_Autism
 ## 4 Mathematics
 ## 5 Early_Childhood_Special_Education
 ## 6 Creative_Technologies
 ## 7 Early_Childhood_Education
 ## 8 Economics_and_Education
 ## 9 Cooperation_and_Conflict_Resolution
 ## 10 Reading
 ## 11 Teaching_English
 ## 12 Physical_Education
 ## 13 Arts_Administration
 ## 14 Motor_Learning_and_Control
 ## 15 Higher_and_Postsecondary_Education
 ## 16 Social_Organizational_Psychology
 ## 17 Clinical_Psychology
 ## 18 Politics
 ## 19 Private_School_Leadership
 ## 20 Movement_Science
 ## 21 Bilingual_Bicultural_Education
 ## 22 Urban_Education
 ## 23 International_and_Comparative_Education
 ## 24 Neuroscience
 ## 25 Cognitive_Science
 ## 26 School_Psychology
 ## 27 Gifted_Education
 ## 28 Inclusive_Education
 ## 29 Behavior_Analysis
 ## 30 Counseling_Psychology
 ## 31 Psychological_Counseling
 ## 32 Nursing
 ## 33 Spirituality_Mind_Body
 ## 34 Nutrition
 ## 35 Deaf_and_Hard_of_Hearing
 ## 36 Art_Education
 ## 37 Literacy
 ## 38 Anthropology

```

## 39                      History
## 40          Education_Technology
## 41                      Music
## 42                      Health_Education
## 43                      Science_Education
## 44                      Physiology
## 45          Instructional_Technology_and_Media
## 46                      Education_Policy
## 47                      cluster
## 48                      Leadership
## 49          Design_and_Development_of_Digital_Games
## 50                      English_Education
## 51                      Kinesiology
## 52          Sexuality__Women_and_Gender_in_Psychology
## 53 Communication_Media_and_Learning_Technologies
## 54          Communication_Sciences_and_Disorders
## 55                      Diabetes_Education
## 56                      College_Advising
## 57                      School_Principals
## 58                      Change_Leadership
## 59          Measurement__Evaluation_and_Statistics
## 60                      Linguistics
## 61                      Sociology
## 62                      Philosophy
## 63          Curriculum_and_Teaching
## 64                      Learning_Analytics
## 65                      Education_Leadership
## 66                      Social_Studies
## 67                      Adult_Education
## 68                      Psychology
##                      PC22
## 1                      Movement_Science
## 2                      English_Education
## 3          Early_Childhood_Special_Education
## 4                      School_Principals
## 5                      Sociology
## 6                      Diabetes_Education
## 7                      School_Psychology
## 8          Private_School_Leadership
## 9                      Counseling_Psychology
## 10                     Nutrition
## 11                     Early_Childhood_Education
## 12                     Education_Policy
## 13                     Politics
## 14                     Psychological_Counseling
## 15                     Art_Education
## 16                     Reading
## 17                     Science_Education
## 18                     Curriculum_and_Teaching
## 19                     Instructional_Technology_and_Media
## 20                     Social_Organizational_Psychology
## 21          Sexuality__Women_and_Gender_in_Psychology
## 22                     Behavior_Analysis
## 23                     Bilingual_Bicultural_Education

```

```

## 24 Teaching_English
## 25 Physiology
## 26 Deaf_and_Hard_of_Hearing
## 27 Cognitive_Science
## 28 Social_Studies
## 29 Physical_Education
## 30 Literacy
## 31 Music
## 32 Education_Technology
## 33 Health_Education
## 34 Nursing
## 35 Spirituality_Mind_Body
## 36 Linguistics
## 37 Developmental_Psychology
## 38 Arts_Administration
## 39 Intellectual_Disability_Autism
## 40 Economics_and_Education
## 41 Psychology
## 42 Higher_and_Postsecondary_Education
## 43 Cooperation_and_Conflict_Resolution
## 44 Inclusive_Education
## 45 Dance_Education
## 46 Neuroscience
## 47 International_and_Comparative_Education
## 48 Gifted_Education
## 49 Measurement__Evaluation_and_Statistics
## 50 Adult_Education
## 51 Philosophy
## 52 Urban_Education
## 53 History
## 54 Design_and_Development_of_Digital_Games
## 55 Creative_Technologies
## 56 College_Advising
## 57 cluster
## 58 Communication_Media_and_Learning_Technologies
## 59 Kinesiology
## 60 Mathematics
## 61 Clinical_Psychology
## 62 Anthropology
## 63 Communication_Sciences_and_Disorders
## 64 Motor_Learning_and_Control
## 65 Learning_Analytics
## 66 Education_Leadership
## 67 Leadership
## 68 Change_Leadership
## PC23
## 1 Literacy
## 2 Psychology
## 3 Curriculum_and_Teaching
## 4 Inclusive_Education
## 5 Design_and_Development_of_Digital_Games
## 6 Philosophy
## 7 Music
## 8 Politics

```

```

## 9 Leadership
## 10 Linguistics
## 11 Diabetes_Education
## 12 Deaf_and_Hard_of_Hearing
## 13 Cooperation_and_Conflict_Resolution
## 14 Private_School_Leadership
## 15 Spirituality_Mind_Body
## 16 Urban_Education
## 17 English_Education
## 18 Change_Leadership
## 19 Measurement__Evaluation_and_Statistics
## 20 Motor_Learning_and_Control
## 21 Arts_Administration
## 22 Gifted_Education
## 23 School_Psychology
## 24 Intellectual_Disability_Autism
## 25 Counseling_Psychology
## 26 Creative_Technologies
## 27 cluster
## 28 Movement_Science
## 29 Bilingual_Bicultural_Education
## 30 Economics_and_Education
## 31 Education_Leadership
## 32 Kinesiology
## 33 Communication_Sciences_and_Disorders
## 34 Education_Policy
## 35 Instructional_Technology_and_Media
## 36 Developmental_Psychology
## 37 Early_Childhood_Education
## 38 Nutrition
## 39 Nursing
## 40 Mathematics
## 41 Communication_Media_and_Learning_Technologies
## 42 Teaching_English
## 43 Clinical_Psychology
## 44 Social_Studies
## 45 College_Advising
## 46 Dance_Education
## 47 Sociology
## 48 Education_Technology
## 49 Psychological_Counseling
## 50 Science_Education
## 51 Physical_Education
## 52 Early_Childhood_Special_Education
## 53 Neuroscience
## 54 Cognitive_Science
## 55 International_and_Comparative_Education
## 56 Adult_Education
## 57 Sexuality__Women_and_Gender_in_Psychology
## 58 Reading
## 59 Social_Organizational_Psychology
## 60 Anthropology
## 61 Higher_and_Postsecondary_Education
## 62 History

```



```

## 63             Art_Education
## 64         Learning_Analytics
## 65             Health_Education
## 66                 Physiology
## 67                 Behavior_Analysis
## 68                 School_Principals
##                     PC24
## 1             College_Advising
## 2         Bilingual_Bicultural_Education
## 3                 Sociology
## 4                 Linguistics
## 5             Learning_Analytics
## 6                 Politics
## 7                 Social_Studies
## 8                 Arts_Administration
## 9     Sexuality__Women_and_Gender_in_Psychology
## 10                 Physiology
## 11                 Early_Childhood_Education
## 12                 Cognitive_Science
## 13                 Anthropology
## 14                 Nutrition
## 15                 Private_School_Leadership
## 16     International_and_Comparative_Education
## 17                 Spirituality_Mind_Body
## 18     Communication_Sciences_and_Disorders
## 19                 English_Education
## 20                 Education_Policy
## 21     Communication_Media_and_Learning_Technologies
## 22                 Social_Organizational_Psychology
## 23                 Gifted_Education
## 24                 Adult_Education
## 25                 Urban_Education
## 26     Instructional_Technology_and_Media
## 27                 Developmental_Psychology
## 28                 Dance_Education
## 29                 Education_Leadership
## 30                 Art_Education
## 31     Design_and_Development_of_Digital_Games
## 32                 Counseling_Psychology
## 33                 Deaf_and_Hard_of_Hearing
## 34                 Clinical_Psychology
## 35                 Curriculum_and_Teaching
## 36                 Movement_Science
## 37                 Music
## 38                 Literacy
## 39     Early_Childhood_Special_Education
## 40                 Nursing
## 41     Higher_and_Postsecondary_Education
## 42                 Creative_Technologies
## 43                 Mathematics
## 44                 Behavior_Analysis
## 45                 Economics_and_Education
## 46                 cluster
## 47                 Leadership

```

```

## 48             Psychological_Counseling
## 49         Cooperation_and_Conflict_Resolution
## 50             History
## 51             Change_Leadership
## 52             Diabetes_Education
## 53             Kinesiology
## 54             Inclusive_Education
## 55         Measurement__Evaluation_and_Statistics
## 56             Science_Education
## 57         Intellectual_Disability_Autism
## 58             School_Psychology
## 59             Psychology
## 60             Health_Education
## 61             Teaching_English
## 62         Motor_Learning_and_Control
## 63             Neuroscience
## 64             Education_Technology
## 65             Physical_Education
## 66             Philosophy
## 67             Reading
## 68             School_Principals
##             PC25
## 1             Creative_Technologies
## 2             Reading
## 3             Adult_Education
## 4             Kinesiology
## 5         Cooperation_and_Conflict_Resolution
## 6             Clinical_Psychology
## 7         Design_and_Development_of_Digital_Games
## 8             Diabetes_Education
## 9     Communication_Media_and_Learning_Technologies
## 10             Art_Education
## 11             Nutrition
## 12             Curriculum_and_Teaching
## 13             History
## 14             Arts_Administration
## 15         Motor_Learning_and_Control
## 16             Neuroscience
## 17             Anthropology
## 18             Sociology
## 19             Literacy
## 20         International_and_Comparative_Education
## 21             Inclusive_Education
## 22         Higher_and_Postsecondary_Education
## 23             Dance_Education
## 24         Social_Organizational_Psychology
## 25             Private_School_Leadership
## 26         Bilingual_Bicultural_Education
## 27             Change_Leadership
## 28             cluster
## 29             Science_Education
## 30             Physiology
## 31         Developmental_Psychology
## 32             Mathematics

```

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## 33          Deaf_and_Hard_of_Hearing
## 34          Intellectual_Disability_Autism
## 35          Instructional_Technology_and_Media
## 36                      Music
## 37          Early_Childhood_Special_Education
## 38                      Urban_Education
## 39          Sexuality__Women_and_Gender_in_Psychology
## 40                      Leadership
## 41                      Health_Education
## 42                      Learning_Analytics
## 43                      Physical_Education
## 44          Early_Childhood_Education
## 45                      Psychology
## 46          Psychological_Counseling
## 47                      Cognitive_Science
## 48                      Politics
## 49          Communication_Sciences_and_Disorders
## 50                      Education_Technology
## 51                      College_Advising
## 52                      Gifted_Education
## 53                      Movement_Science
## 54          English_Education
## 55                      Philosophy
## 56          School_Principals
## 57          Education_Leadership
## 58          Education_Policy
## 59          School_Psychology
## 60          Social_Studies
## 61          Teaching_English
## 62          Economics_and_Education
## 63                      Nursing
## 64          Counseling_Psychology
## 65          Behavior_Analysis
## 66          Spirituality_Mind_Body
## 67          Measurement__Evaluation_and_Statistics
## 68                      Linguistics
##                      PC26
## 1                      Nursing
## 2                      Movement_Science
## 3                      Psychology
## 4          Higher_and_Postsecondary_Education
## 5                      Teaching_English
## 6                      Neuroscience
## 7          School_Principals
## 8                      Nutrition
## 9                      Music
## 10                     Arts_Administration
## 11          Communication_Sciences_and_Disorders
## 12          Motor_Learning_and_Control
## 13          Early_Childhood_Education
## 14          Creative_Technologies
## 15                      Kinesiology
## 16          Art_Education
## 17          Gifted_Education

```

```

## 18      Sexuality__Women_and_Gender_in_Psychology
## 19              Education_Policy
## 20              Curriculum_and_Teaching
## 21              Linguistics
## 22              College_Advising
## 23              Literacy
## 24      Measurement__Evaluation_and_Statistics
## 25              Inclusive_Education
## 26              English_Education
## 27      Cooperation_and_Conflict_Resolution
## 28              Mathematics
## 29              Cognitive_Science
## 30      International_and_Comparative_Education
## 31              cluster
## 32              Politics
## 33      Psychological_Counseling
## 34              Urban_Education
## 35              Clinical_Psychology
## 36              Leadership
## 37      Intellectual_Disability_Autism
## 38              Education_Technology
## 39              Change_Leadership
## 40              Science_Education
## 41      Deaf_and_Hard_of_Hearing
## 42              Physical_Education
## 43              Adult_Education
## 44              Anthropology
## 45              Physiology
## 46      Social_Organizational_Psychology
## 47              Philosophy
## 48              Education_Leadership
## 49              Reading
## 50      Developmental_Psychology
## 51      Design_and_Development_of_Digital_Games
## 52      Early_Childhood_Special_Education
## 53      Bilingual_Bicultural_Education
## 54      Spirituality_Mind_Body
## 55      School_Psychology
## 56              History
## 57      Health_Education
## 58              Sociology
## 59      Instructional_Technology_and_Media
## 60              Counseling_Psychology
## 61              Social_Studies
## 62              Learning_Analytics
## 63      Private_School_Leadership
## 64              Diabetes_Education
## 65              Behavior_Analysis
## 66              Dance_Education
## 67      Economics_and_Education
## 68      Communication_Media_and_Learning_Technologies
##              PC27
## 1      Motor_Learning_and_Control
## 2      Inclusive_Education

```

```

## 3           Arts_Administration
## 4           Adult_Education
## 5           History
## 6           Psychological_Counseling
## 7           Gifted_Education
## 8           Urban_Education
## 9           Kinesiology
## 10          Nursing
## 11          Instructional_Technology_and_Media
## 12          Sexuality__Women_and_Gender_in_Psychology
## 13          Early_Childhood_Special_Education
## 14          Developmental_Psychology
## 15          Creative_Technologies
## 16          Anthropology
## 17          Early_Childhood_Education
## 18          Spirituality_Mind_Body
## 19          Mathematics
## 20          Behavior_Analysis
## 21          Curriculum_and_Teaching
## 22          Communication_Sciences_and_Disorders
## 23          Counseling_Psychology
## 24          Communication_Media_and_Learning_Technologies
## 25          Diabetes_Education
## 26          Nutrition
## 27          Change_Leadership
## 28          Dance_Education
## 29          Social_Organizational_Psychology
## 30          Music
## 31          Linguistics
## 32          Private_School_Leadership
## 33          School_Principals
## 34          Education_Leadership
## 35          Higher_and_Postsecondary_Education
## 36          Clinical_Psychology
## 37          Art_Education
## 38          Intellectual_Disability_Autism
## 39          Design_and_Development_of_Digital_Games
## 40          International_and_Comparative_Education
## 41          Science_Education
## 42          Cooperation_and_Conflict_Resolution
## 43          English_Education
## 44          Measurement__Evaluation_and_Statistics
## 45          Cognitive_Science
## 46          Deaf_and_Hard_of_Hearing
## 47          Health_Education
## 48          Economics_and_Education
## 49          Philosophy
## 50          Sociology
## 51          cluster
## 52          Reading
## 53          Literacy
## 54          School_Psychology
## 55          Psychology
## 56          Politics

```

57 Bilingual_Bicultural_Education
 ## 58 Education_Technology
 ## 59 College_Advising
 ## 60 Neuroscience
 ## 61 Learning_Analytics
 ## 62 Physical_Education
 ## 63 Movement_Science
 ## 64 Social_Studies
 ## 65 Physiology
 ## 66 Teaching_English
 ## 67 Leadership
 ## 68 Education_Policy
 ## PC28
 ## 1 Spirituality_Mind_Body
 ## 2 Cooperation_and_Conflict_Resolution
 ## 3 Physiology
 ## 4 Physical_Education
 ## 5 Teaching_English
 ## 6 Psychology
 ## 7 School_Psychology
 ## 8 English_Education
 ## 9 Diabetes_Education
 ## 10 Measurement__Evaluation_and_Statistics
 ## 11 Anthropology
 ## 12 Art_Education
 ## 13 Linguistics
 ## 14 Mathematics
 ## 15 Reading
 ## 16 Design_and_Development_of_Digital_Games
 ## 17 Creative_Technologies
 ## 18 Counseling_Psychology
 ## 19 Sociology
 ## 20 Education_Policy
 ## 21 Change_Leadership
 ## 22 Social_Organizational_Psychology
 ## 23 Curriculum_and_Teaching
 ## 24 Urban_Education
 ## 25 Leadership
 ## 26 Cognitive_Science
 ## 27 Psychological_Counseling
 ## 28 Politics
 ## 29 History
 ## 30 Communication_Media_and_Learning_Technologies
 ## 31 Higher_and_Postsecondary_Education
 ## 32 Dance_Education
 ## 33 Movement_Science
 ## 34 School_Principals
 ## 35 Adult_Education
 ## 36 Private_School_Leadership
 ## 37 International_and_Comparative_Education
 ## 38 Arts_Administration
 ## 39 Education_Technology
 ## 40 Clinical_Psychology
 ## 41 Nutrition

```

## 42          Bilingual_Bicultural_Education
## 43      Communication_Sciences_and_Disorders
## 44          Motor_Learning_and_Control
## 45              Health_Education
## 46                  Nursing
## 47                      Literacy
## 48                          Kinesiology
## 49                              College_Advising
## 50                                  Inclusive_Education
## 51      Sexuality__Women_and_Gender_in_Psychology
## 52          Early_Childhood_Special_Education
## 53              Gifted_Education
## 54          Instructional_Technology_and_Media
## 55              Social_Studies
## 56                  Education_Leadership
## 57                      Developmental_Psychology
## 58                          Behavior_Analysis
## 59          Intellectual_Disability_Autism
## 60              cluster
## 61          Early_Childhood_Education
## 62              Science_Education
## 63                  Learning_Analytics
## 64                      Neuroscience
## 65                          Music
## 66                              Philosophy
## 67                      Deaf_and_Hard_of_Hearing
## 68                      Economics_and_Education
##          PC29
## 1      Measurement__Evaluation_and_Statistics
## 2          History
## 3              Linguistics
## 4                  Kinesiology
## 5      Cooperation_and_Conflict_Resolution
## 6          Education_Technology
## 7              Inclusive_Education
## 8                  Urban_Education
## 9      Bilingual_Bicultural_Education
## 10          Reading
## 11              Sociology
## 12          Clinical_Psychology
## 13              Literacy
## 14                  Teaching_English
## 15                      Education_Policy
## 16                          Education_Leadership
## 17      Design_and_Development_of_Digital_Games
## 18          Diabetes_Education
## 19              Anthropology
## 20          Early_Childhood_Education
## 21              Gifted_Education
## 22                  Dance_Education
## 23                      Politics
## 24      International_and_Comparative_Education
## 25          Curriculum_and_Teaching
## 26              School_Principals

```

```

## 27                                     cluster
## 28                               Private_School_Leadership
## 29                               Intellectual_Disability_Autism
## 30                               Social_Organizational_Psychology
## 31                                   Neuroscience
## 32                                   Arts_Administration
## 33                                   Psychology
## 34                               Early_Childhood_Special_Education
## 35                                   Psychological_Counseling
## 36                                   Developmental_Psychology
## 37                                   Cognitive_Science
## 38                                   Economics_and_Education
## 39                                   Music
## 40                                   Change_Leadership
## 41                                   Physiology
## 42                               Communication_Sciences_and_Disorders
## 43                                   College_Advising
## 44                                   Art_Education
## 45                                   School_Psychology
## 46                                   Behavior_Analysis
## 47                                   Spirituality_Mind_Body
## 48                                   Adult_Education
## 49                                   Deaf_and_Hard_of_Hearing
## 50                                   Learning_Analytics
## 51                                   Nutrition
## 52                                   Physical_Education
## 53                                   Social_Studies
## 54                               Sexuality__Women_and_Gender_in_Psychology
## 55                                   English_Education
## 56                                   Philosophy
## 57                               Communication_Media_and_Learning_Technologies
## 58                                   Leadership
## 59                                   Movement_Science
## 60                                   Counseling_Psychology
## 61                                   Mathematics
## 62                                   Motor_Learning_and_Control
## 63                                   Creative_Technologies
## 64                                   Health_Education
## 65                                   Science_Education
## 66                                   Nursing
## 67                               Higher_and_Postsecondary_Education
## 68                               Instructional_Technology_and_Media
##                               PC30
## 1                                   Nutrition
## 2                                   Physical_Education
## 3                               Instructional_Technology_and_Media
## 4                               Communication_Media_and_Learning_Technologies
## 5                               Higher_and_Postsecondary_Education
## 6                                   Early_Childhood_Education
## 7                                   Arts_Administration
## 8                               International_and_Comparative_Education
## 9                                   Counseling_Psychology
## 10                               Social_Organizational_Psychology
## 11                               Bilingual_Bicultural_Education

```



```

## 12      Sexuality__Women_and_Gender_in_Psychology
## 13              Mathematics
## 14              Urban_Education
## 15      Measurement__Evaluation_and_Statistics
## 16              Behavior_Analysis
## 17              Neuroscience
## 18              School_Psychology
## 19              Education_Leadership
## 20              English_Education
## 21              History
## 22              Developmental_Psychology
## 23              Music
## 24      Intellectual_Disability_Autism
## 25              Health_Education
## 26              Reading
## 27              Social_Studies
## 28              Teaching_English
## 29              Movement_Science
## 30              Learning_Analytics
## 31              Kinesiology
## 32              Leadership
## 33              Nursing
## 34              cluster
## 35              Art_Education
## 36              Creative_Technologies
## 37              Change_Leadership
## 38              Gifted_Education
## 39      Early_Childhood_Special_Education
## 40      Cooperation_and_Conflict_Resolution
## 41              College_Advising
## 42              Inclusive_Education
## 43              Diabetes_Education
## 44              Clinical_Psychology
## 45              Education_Policy
## 46              Dance_Education
## 47              Psychological_Counseling
## 48      Communication_Sciences_and_Disorders
## 49              Cognitive_Science
## 50      Motor_Learning_and_Control
## 51      Deaf_and_Hard_of_Hearing
## 52              School_Principals
## 53              Politics
## 54              Science_Education
## 55              Literacy
## 56              Spirituality_Mind_Body
## 57              Anthropology
## 58              Adult_Education
## 59              Psychology
## 60              Sociology
## 61      Design_and_Development_of_Digital_Games
## 62              Private_School_Leadership
## 63              Education_Technology
## 64              Philosophy
## 65              Physiology

```

```

## 66 Curriculum_and_Teaching
## 67 Linguistics
## 68 Economics_and_Education
## PC31
## 1 Art_Education
## 2 Early_Childhood_Special_Education
## 3 Counseling_Psychology
## 4 Economics_and_Education
## 5 Anthropology
## 6 Cooperation_and_Conflict_Resolution
## 7 Communication_Media_and_Learning_Technologies
## 8 Clinical_Psychology
## 9 Cognitive_Science
## 10 Sexuality__Women_and_Gender_in_Psychology
## 11 Deaf_and_Hard_of_Hearing
## 12 Linguistics
## 13 School_Psychology
## 14 Physiology
## 15 Early_Childhood_Education
## 16 Creative_Technologies
## 17 Science_Education
## 18 Leadership
## 19 School_Principals
## 20 Nursing
## 21 College_Advising
## 22 Physical_Education
## 23 Intellectual_Disability_Autism
## 24 Literacy
## 25 Movement_Science
## 26 Motor_Learning_and_Control
## 27 Measurement__Evaluation_and_Statistics
## 28 Social_Organizational_Psychology
## 29 Higher_and_Postsecondary_Education
## 30 Behavior_Analysis
## 31 Dance_Education
## 32 Urban_Education
## 33 Spirituality_Mind_Body
## 34 cluster
## 35 Philosophy
## 36 Education_Leadership
## 37 Diabetes_Education
## 38 Instructional_Technology_and_Media
## 39 Nutrition
## 40 Politics
## 41 Bilingual_Bicultural_Education
## 42 Health_Education
## 43 Education_Policy
## 44 Change_Leadership
## 45 Arts_Administration
## 46 Psychology
## 47 Curriculum_and_Teaching
## 48 Kinesiology
## 49 Inclusive_Education
## 50 Reading

```

```

## 51          Private_School_Leadership
## 52              Social_Studies
## 53              Learning_Analytics
## 54              Developmental_Psychology
## 55      International_and_Comparative_Education
## 56              History
## 57              Psychological_Counseling
## 58              Teaching_English
## 59              Sociology
## 60              Gifted_Education
## 61      Design_and_Development_of_Digital_Games
## 62              Adult_Education
## 63              Neuroscience
## 64              Music
## 65      Communication_Sciences_and_Disorders
## 66              English_Education
## 67              Mathematics
## 68              Education_Technology
##              PC32
## 1          Spirituality_Mind_Body
## 2              Clinical_Psychology
## 3              Health_Education
## 4              Anthropology
## 5              Physiology
## 6              Economics_and_Education
## 7              Developmental_Psychology
## 8              Counseling_Psychology
## 9              Nursing
## 10             History
## 11             Urban_Education
## 12             Neuroscience
## 13             Nutrition
## 14      Social_Organizational_Psychology
## 15              cluster
## 16              Behavior_Analysis
## 17              Change_Leadership
## 18              Learning_Analytics
## 19              Arts_Administration
## 20              English_Education
## 21      Instructional_Technology_and_Media
## 22      Higher_and_Postsecondary_Education
## 23      Communication_Media_and_Learning_Technologies
## 24      Cooperation_and_Conflict_Resolution
## 25      Bilingual_Bicultural_Education
## 26              Politics
## 27              Inclusive_Education
## 28              School_Psychology
## 29              Sociology
## 30      Communication_Sciences_and_Disorders
## 31              Philosophy
## 32      International_and_Comparative_Education
## 33              Music
## 34      Early_Childhood_Special_Education
## 35      Measurement__Evaluation_and_Statistics

```

```

## 36                Education_Policy
## 37                Psychological_Counseling
## 38                Curriculum_and_Teaching
## 39                Adult_Education
## 40    Sexuality__Women_and_Gender_in_Psychology
## 41                Psychology
## 42                Dance_Education
## 43                Science_Education
## 44                Education_Technology
## 45                Motor_Learning_and_Control
## 46                Social_Studies
## 47                Kinesiology
## 48                Gifted_Education
## 49                Private_School_Leadership
## 50                Mathematics
## 51    Intellectual_Disability_Autism
## 52                Education_Leadership
## 53                Art_Education
## 54                Physical_Education
## 55                Creative_Technologies
## 56                Cognitive_Science
## 57                Reading
## 58                Literacy
## 59                Movement_Science
## 60                Leadership
## 61                Early_Childhood_Education
## 62                Diabetes_Education
## 63    Design_and_Development_of_Digital_Games
## 64                Teaching_English
## 65                Deaf_and_Hard_of_Hearing
## 66                College_Advising
## 67                Linguistics
## 68                School_Principals
##                PC33
## 1                Change_Leadership
## 2                Health_Education
## 3                Learning_Analytics
## 4                Gifted_Education
## 5                Physical_Education
## 6                Reading
## 7                Anthropology
## 8                Arts_Administration
## 9                College_Advising
## 10               Politics
## 11               Physiology
## 12    Communication_Sciences_and_Disorders
## 13               Philosophy
## 14               English_Education
## 15               Clinical_Psychology
## 16               Education_Technology
## 17    Communication_Media_and_Learning_Technologies
## 18                Higher_and_Postsecondary_Education
## 19                Linguistics
## 20                Education_Policy

```

```

## 21      Measurement__Evaluation_and_Statistics
## 22          Bilingual_Bicultural_Education
## 23          Intellectual_Disability_Autism
## 24              Kinesiology
## 25      Sexuality__Women_and_Gender_in_Psychology
## 26          Cognitive_Science
## 27              Leadership
## 28              Neuroscience
## 29          Motor_Learning_and_Control
## 30              Economics_and_Education
## 31              Movement_Science
## 32              History
## 33          Diabetes_Education
## 34          Dance_Education
## 35              Music
## 36          Deaf_and_Hard_of_Hearing
## 37      Instructional_Technology_and_Media
## 38          Creative_Technologies
## 39              Nutrition
## 40      Cooperation_and_Conflict_Resolution
## 41          Science_Education
## 42      International_and_Comparative_Education
## 43          Mathematics
## 44          Spirituality_Mind_Body
## 45              Teaching_English
## 46              Sociology
## 47          Behavior_Analysis
## 48              Nursing
## 49          Private_School_Leadership
## 50              cluster
## 51          Inclusive_Education
## 52              Literacy
## 53              Psychology
## 54              Social_Studies
## 55              Adult_Education
## 56          Counseling_Psychology
## 57          School_Psychology
## 58          Education_Leadership
## 59          Early_Childhood_Education
## 60      Design_and_Development_of_Digital_Games
## 61          Art_Education
## 62          Curriculum_and_Teaching
## 63          Social_Organizational_Psychology
## 64          Developmental_Psychology
## 65          School_Principals
## 66          Urban_Education
## 67      Early_Childhood_Special_Education
## 68          Psychological_Counseling
##          PC34
## 1          Adult_Education
## 2          Developmental_Psychology
## 3          Dance_Education
## 4          Philosophy
## 5      Sexuality__Women_and_Gender_in_Psychology

```

```

## 6 Politics
## 7 History
## 8 Motor_Learning_and_Control
## 9 School_Principals
## 10 Change_Leadership
## 11 Science_Education
## 12 Psychological_Counseling
## 13 Physiology
## 14 Education_Technology
## 15 Teaching_English
## 16 Diabetes_Education
## 17 College_Advising
## 18 Counseling_Psychology
## 19 Neuroscience
## 20 Cooperation_and_Conflict_Resolution
## 21 Communication_Media_and_Learning_Technologies
## 22 Arts_Administration
## 23 Kinesiology
## 24 Sociology
## 25 Creative_Technologies
## 26 Early_Childhood_Education
## 27 Physical_Education
## 28 Nursing
## 29 Measurement__Evaluation_and_Statistics
## 30 Early_Childhood_Special_Education
## 31 Private_School_Leadership
## 32 Behavior_Analysis
## 33 Deaf_and_Hard_of_Hearing
## 34 Anthropology
## 35 Higher_and_Postsecondary_Education
## 36 Intellectual_Disability_Autism
## 37 Urban_Education
## 38 Learning_Analytics
## 39 Leadership
## 40 Design_and_Development_of_Digital_Games
## 41 Gifted_Education
## 42 Movement_Science
## 43 Mathematics
## 44 Communication_Sciences_and_Disorders
## 45 Economics_and_Education
## 46 School_Psychology
## 47 Psychology
## 48 Inclusive_Education
## 49 Linguistics
## 50 Social_Organizational_Psychology
## 51 Reading
## 52 Social_Studies
## 53 Health_Education
## 54 cluster
## 55 Spirituality_Mind_Body
## 56 Music
## 57 Instructional_Technology_and_Media
## 58 Cognitive_Science
## 59 Art_Education

```

```

## 60                Education_Policy
## 61                Curriculum_and_Teaching
## 62                Bilingual_Bicultural_Education
## 63                Literacy
## 64                Clinical_Psychology
## 65                International_and_Comparative_Education
## 66                English_Education
## 67                Education_Leadership
## 68                Nutrition
##                PC35
## 1                Teaching_English
## 2                Higher_and_Postsecondary_Education
## 3                Private_School_Leadership
## 4                Sexuality__Women_and_Gender_in_Psychology
## 5                English_Education
## 6                Social_Organizational_Psychology
## 7                Reading
## 8                Politics
## 9                Diabetes_Education
## 10               Economics_and_Education
## 11               Psychological_Counseling
## 12               Early_Childhood_Special_Education
## 13               Clinical_Psychology
## 14               Music
## 15               Adult_Education
## 16               Sociology
## 17               Nutrition
## 18               Education_Technology
## 19               Mathematics
## 20               Health_Education
## 21               Education_Leadership
## 22               Education_Policy
## 23               School_Psychology
## 24               Physiology
## 25               School_Principals
## 26               Art_Education
## 27               Design_and_Development_of_Digital_Games
## 28               Cooperation_and_Conflict_Resolution
## 29               Developmental_Psychology
## 30               Neuroscience
## 31               Motor_Learning_and_Control
## 32               Counseling_Psychology
## 33               Social_Studies
## 34               Inclusive_Education
## 35               Communication_Sciences_and_Disorders
## 36               Intellectual_Disability_Autism
## 37               Dance_Education
## 38               Learning_Analytics
## 39               History
## 40               Kinesiology
## 41               Leadership
## 42               International_and_Comparative_Education
## 43               Early_Childhood_Education
## 44               Cognitive_Science

```

```

## 45      Measurement__Evaluation_and_Statistics
## 46          Curriculum_and_Teaching
## 47              Anthropology
## 48              Urban_Education
## 49              Behavior_Analysis
## 50              Physical_Education
## 51      Instructional_Technology_and_Media
## 52          Psychology
## 53          Literacy
## 54          Change_Leadership
## 55          Philosophy
## 56          Gifted_Education
## 57      Communication_Media_and_Learning_Technologies
## 58          Linguistics
## 59          Deaf_and_Hard_of_Hearing
## 60          Creative_Technologies
## 61          Arts_Administration
## 62          Science_Education
## 63          College_Advising
## 64          Nursing
## 65          Movement_Science
## 66          cluster
## 67      Bilingual_Bicultural_Education
## 68          Spirituality_Mind_Body
##          PC36
## 1          School_Principals
## 2          Kinesiology
## 3      International_and_Comparative_Education
## 4          Private_School_Leadership
## 5          Health_Education
## 6          Arts_Administration
## 7          Education_Technology
## 8          Behavior_Analysis
## 9      Intellectual_Disability_Autism
## 10          Art_Education
## 11          Adult_Education
## 12          Movement_Science
## 13          Music
## 14          Neuroscience
## 15          Economics_and_Education
## 16          Nutrition
## 17          Science_Education
## 18          Learning_Analytics
## 19          Physical_Education
## 20          Dance_Education
## 21          Physiology
## 22          Leadership
## 23          Anthropology
## 24          Philosophy
## 25          Mathematics
## 26      Communication_Sciences_and_Disorders
## 27          Early_Childhood_Special_Education
## 28          Higher_and_Postsecondary_Education
## 29          Social_Organizational_Psychology

```



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## 30          Deaf_and_Hard_of_Hearing
## 31    Design_and_Development_of_Digital_Games
## 32          Gifted_Education
## 33          Nursing
## 34 Communication_Media_and_Learning_Technologies
## 35          Education_Policy
## 36    Sexuality__Women_and_Gender_in_Psychology
## 37          Creative_Technologies
## 38          Bilingual_Bicultural_Education
## 39          Psychological_Counseling
## 40          Developmental_Psychology
## 41          Teaching_English
## 42    Measurement__Evaluation_and_Statistics
## 43          Spirituality_Mind_Body
## 44          Literacy
## 45          College_Advising
## 46          Reading
## 47          Education_Leadership
## 48    Early_Childhood_Education
## 49          Sociology
## 50          Counseling_Psychology
## 51          Cognitive_Science
## 52          Inclusive_Education
## 53          Linguistics
## 54          Curriculum_and_Teaching
## 55          Change_Leadership
## 56    Motor_Learning_and_Control
## 57          Psychology
## 58          Urban_Education
## 59          cluster
## 60          Clinical_Psychology
## 61          School_Psychology
## 62          English_Education
## 63          Diabetes_Education
## 64          Politics
## 65          Social_Studies
## 66    Cooperation_and_Conflict_Resolution
## 67    Instructional_Technology_and_Media
## 68          History
##          PC37
## 1          Music
## 2          School_Psychology
## 3          Change_Leadership
## 4          Physiology
## 5          Sociology
## 6          Diabetes_Education
## 7          Education_Policy
## 8          School_Principals
## 9          Economics_and_Education
## 10         Gifted_Education
## 11         Intellectual_Disability_Autism
## 12         Early_Childhood_Special_Education
## 13         Measurement__Evaluation_and_Statistics
## 14         Politics

```

```

## 15             Adult_Education
## 16             Curriculum_and_Teaching
## 17             Physical_Education
## 18             Movement_Science
## 19             cluster
## 20             Science_Education
## 21             Anthropology
## 22             Developmental_Psychology
## 23             History
## 24             Spirituality_Mind_Body
## 25             Mathematics
## 26             Instructional_Technology_and_Media
## 27             Nursing
## 28             Behavior_Analysis
## 29             Communication_Sciences_and_Disorders
## 30             Health_Education
## 31             Psychological_Counseling
## 32             Neuroscience
## 33             Arts_Administration
## 34             Creative_Technologies
## 35             International_and_Comparative_Education
## 36             Urban_Education
## 37             Design_and_Development_of_Digital_Games
## 38             Education_Leadership
## 39             Early_Childhood_Education
## 40             Motor_Learning_and_Control
## 41             Art_Education
## 42             Philosophy
## 43             College_Advising
## 44             Learning_Analytics
## 45             Bilingual_Bicultural_Education
## 46             Nutrition
## 47             Sexuality__Women_and_Gender_in_Psychology
## 48             Social_Studies
## 49             Clinical_Psychology
## 50             English_Education
## 51             Kinesiology
## 52             Social_Organizational_Psychology
## 53             Education_Technology
## 54             Teaching_English
## 55             Literacy
## 56             Private_School_Leadership
## 57             Cognitive_Science
## 58             Linguistics
## 59             Counseling_Psychology
## 60             Reading
## 61             Higher_and_Postsecondary_Education
## 62             Inclusive_Education
## 63             Leadership
## 64             Deaf_and_Hard_of_Hearing
## 65             Dance_Education
## 66             Communication_Media_and_Learning_Technologies
## 67             Psychology
## 68             Cooperation_and_Conflict_Resolution

```

```

##                                     PC38
## 1                                Social_Studies
## 2                                Education_Policy
## 3                                Urban_Education
## 4                                Sociology
## 5                                Adult_Education
## 6                                Gifted_Education
## 7                                College_Advising
## 8                                Behavior_Analysis
## 9                                Curriculum_and_Teaching
## 10                               Measurement__Evaluation_and_Statistics
## 11                               Arts_Administration
## 12                               Creative_Technologies
## 13                               Developmental_Psychology
## 14                               Linguistics
## 15                               Social_Organizational_Psychology
## 16                               Inclusive_Education
## 17                               Higher_and_Postsecondary_Education
## 18                               Education_Leadership
## 19                               Philosophy
## 20                               Movement_Science
## 21                               Counseling_Psychology
## 22                               Health_Education
## 23                               Psychological_Counseling
## 24                               History
## 25                               Politics
## 26                               Diabetes_Education
## 27                               Motor_Learning_and_Control
## 28                               School_Principals
## 29                               Reading
## 30                               English_Education
## 31                               Dance_Education
## 32                               Art_Education
## 33                               Nutrition
## 34                               Science_Education
## 35                               Early_Childhood_Education
## 36                               Education_Technology
## 37                               School_Psychology
## 38                               cluster
## 39                               Design_and_Development_of_Digital_Games
## 40                               Change_Leadership
## 41                               Bilingual_Bicultural_Education
## 42                               Anthropology
## 43                               Communication_Sciences_and_Disorders
## 44                               Clinical_Psychology
## 45                               Sexuality__Women_and_Gender_in_Psychology
## 46                               Cognitive_Science
## 47                               Spirituality_Mind_Body
## 48                               Learning_Analytics
## 49                               Leadership
## 50                               Physical_Education
## 51                               Economics_and_Education
## 52                               Music
## 53                               Nursing

```

54 Kinesiology
 ## 55 Early_Childhood_Special_Education
 ## 56 Deaf_and_Hard_of_Hearing
 ## 57 Neuroscience
 ## 58 Cooperation_and_Conflict_Resolution
 ## 59 Intellectual_Disability_Autism
 ## 60 Literacy
 ## 61 Private_School_Leadership
 ## 62 Mathematics
 ## 63 Communication_Media_and_Learning_Technologies
 ## 64 Instructional_Technology_and_Media
 ## 65 Physiology
 ## 66 Psychology
 ## 67 International_and_Comparative_Education
 ## 68 Teaching_English
 ## PC39
 ## 1 School_Psychology
 ## 2 Diabetes_Education
 ## 3 Behavior_Analysis
 ## 4 Cognitive_Science
 ## 5 English_Education
 ## 6 College_Advising
 ## 7 Motor_Learning_and_Control
 ## 8 Economics_and_Education
 ## 9 Politics
 ## 10 History
 ## 11 Psychology
 ## 12 Philosophy
 ## 13 Instructional_Technology_and_Media
 ## 14 Music
 ## 15 School_Principals
 ## 16 Kinesiology
 ## 17 Neuroscience
 ## 18 Bilingual_Bicultural_Education
 ## 19 Arts_Administration
 ## 20 Sociology
 ## 21 Psychological_Counseling
 ## 22 Higher_and_Postsecondary_Education
 ## 23 Physiology
 ## 24 Communication_Sciences_and_Disorders
 ## 25 Urban_Education
 ## 26 Education_Leadership
 ## 27 Education_Policy
 ## 28 Education_Technology
 ## 29 Design_and_Development_of_Digital_Games
 ## 30 Mathematics
 ## 31 Private_School_Leadership
 ## 32 Deaf_and_Hard_of_Hearing
 ## 33 Literacy
 ## 34 Teaching_English
 ## 35 Inclusive_Education
 ## 36 Nutrition
 ## 37 Creative_Technologies
 ## 38 Sexuality__Women_and_Gender_in_Psychology

```

## 39          Early_Childhood_Education
## 40          Health_Education
## 41          Social_Organizational_Psychology
## 42 Communication_Media_and_Learning_Technologies
## 43          Clinical_Psychology
## 44          Movement_Science
## 45          International_and_Comparative_Education
## 46          Gifted_Education
## 47          Intellectual_Disability_Autism
## 48          Leadership
## 49          Spirituality_Mind_Body
## 50          Nursing
## 51          Social_Studies
## 52          Counseling_Psychology
## 53          Developmental_Psychology
## 54          Dance_Education
## 55          Change_Leadership
## 56          Early_Childhood_Special_Education
## 57          Cooperation_and_Conflict_Resolution
## 58          Physical_Education
## 59          cluster
## 60          Linguistics
## 61          Art_Education
## 62          Anthropology
## 63          Measurement__Evaluation_and_Statistics
## 64          Adult_Education
## 65          Science_Education
## 66          Reading
## 67          Learning_Analytics
## 68          Curriculum_and_Teaching
##          PC40
## 1          Learning_Analytics
## 2          Art_Education
## 3          Mathematics
## 4          Instructional_Technology_and_Media
## 5          Movement_Science
## 6          Social_Studies
## 7          Early_Childhood_Education
## 8          Sociology
## 9          School_Principals
## 10         Communication_Sciences_and_Disorders
## 11         Intellectual_Disability_Autism
## 12         Nursing
## 13         School_Psychology
## 14         Education_Policy
## 15         Literacy
## 16         Higher_and_Postsecondary_Education
## 17         Economics_and_Education
## 18         Nutrition
## 19         Sexuality__Women_and_Gender_in_Psychology
## 20         Clinical_Psychology
## 21         Diabetes_Education
## 22         Neuroscience
## 23         Inclusive_Education

```

```

## 24                                     cluster
## 25                                Science_Education
## 26                                    Philosophy
## 27                                Psychological_Counseling
## 28                                    Urban_Education
## 29    Design_and_Development_of_Digital_Games
## 30                                    Change_Leadership
## 31                                    Dance_Education
## 32                                    Reading
## 33                                Spirituality_Mind_Body
## 34                                    Kinesiology
## 35    Motor_Learning_and_Control
## 36                                    Physiology
## 37                                Health_Education
## 38                                Cognitive_Science
## 39    Social_Organizational_Psychology
## 40                                Creative_Technologies
## 41                                Education_Technology
## 42    Private_School_Leadership
## 43    Measurement__Evaluation_and_Statistics
## 44                                    Arts_Administration
## 45                                    Leadership
## 46    Bilingual_Bicultural_Education
## 47                                Behavior_Analysis
## 48    Developmental_Psychology
## 49    Curriculum_and_Teaching
## 50                                    Music
## 51                                Education_Leadership
## 52    Cooperation_and_Conflict_Resolution
## 53                                    History
## 54    Deaf_and_Hard_of_Hearing
## 55    International_and_Comparative_Education
## 56                                    Politics
## 57    Physical_Education
## 58                                Adult_Education
## 59    Counseling_Psychology
## 60                                College_Advising
## 61                                Linguistics
## 62                                Gifted_Education
## 63                                Anthropology
## 64                                Psychology
## 65    Early_Childhood_Special_Education
## 66                                English_Education
## 67                                Teaching_English
## 68    Communication_Media_and_Learning_Technologies
##                                     PC41
## 1    Design_and_Development_of_Digital_Games
## 2                                Art_Education
## 3                                Gifted_Education
## 4                                Behavior_Analysis
## 5    Early_Childhood_Education
## 6                                Education_Policy
## 7                                Neuroscience
## 8    Developmental_Psychology

```

```

## 9          Movement_Science
## 10         Reading
## 11         Physical_Education
## 12         Linguistics
## 13         Intellectual_Disability_Autism
## 14         College_Advising
## 15     Sexuality__Women_and_Gender_in_Psychology
## 16         School_Principals
## 17 Communication_Media_and_Learning_Technologies
## 18         Philosophy
## 19         Counseling_Psychology
## 20     Communication_Sciences_and_Disorders
## 21         Psychology
## 22         School_Psychology
## 23         Social_Studies
## 24     Instructional_Technology_and_Media
## 25         Diabetes_Education
## 26         cluster
## 27         Economics_and_Education
## 28         Motor_Learning_and_Control
## 29         Curriculum_and_Teaching
## 30         Urban_Education
## 31     Higher_and_Postsecondary_Education
## 32         Kinesiology
## 33         Deaf_and_Hard_of_Hearing
## 34         Anthropology
## 35     International_and_Comparative_Education
## 36         Science_Education
## 37         Health_Education
## 38         Inclusive_Education
## 39         Education_Technology
## 40         Adult_Education
## 41         Physiology
## 42         Private_School_Leadership
## 43     Early_Childhood_Special_Education
## 44         Literacy
## 45         Politics
## 46     Social_Organizational_Psychology
## 47         English_Education
## 48         Sociology
## 49         Nursing
## 50         Spirituality_Mind_Body
## 51         Clinical_Psychology
## 52         Learning_Analytics
## 53         Leadership
## 54         Teaching_English
## 55         Change_Leadership
## 56         Arts_Administration
## 57         Education_Leadership
## 58         History
## 59     Cooperation_and_Conflict_Resolution
## 60         Music
## 61         Psychological_Counseling
## 62         Creative_Technologies

```

```

## 63             Mathematics
## 64             Cognitive_Science
## 65             Nutrition
## 66             Dance_Education
## 67     Measurement__Evaluation_and_Statistics
## 68             Bilingual_Bicultural_Education
##             PC42
## 1             Education_Technology
## 2             Education_Leadership
## 3             Early_Childhood_Special_Education
## 4             Gifted_Education
## 5             Creative_Technologies
## 6             Motor_Learning_and_Control
## 7             Bilingual_Bicultural_Education
## 8             Private_School_Leadership
## 9             Higher_and_Postsecondary_Education
## 10    Design_and_Development_of_Digital_Games
## 11             Cognitive_Science
## 12             Social_Studies
## 13             Learning_Analytics
## 14    Communication_Sciences_and_Disorders
## 15             Psychological_Counseling
## 16             Adult_Education
## 17             Curriculum_and_Teaching
## 18    Measurement__Evaluation_and_Statistics
## 19             Social_Organizational_Psychology
## 20             History
## 21    Sexuality__Women_and_Gender_in_Psychology
## 22             Developmental_Psychology
## 23             Dance_Education
## 24             Kinesiology
## 25             Literacy
## 26    Instructional_Technology_and_Media
## 27             Diabetes_Education
## 28             Deaf_and_Hard_of_Hearing
## 29             Economics_and_Education
## 30             Early_Childhood_Education
## 31             Sociology
## 32             Politics
## 33             Music
## 34             Urban_Education
## 35             Arts_Administration
## 36    Cooperation_and_Conflict_Resolution
## 37             Physiology
## 38             College_Advising
## 39             School_Psychology
## 40             Nutrition
## 41             Clinical_Psychology
## 42    International_and_Comparative_Education
## 43             Counseling_Psychology
## 44             Anthropology
## 45             Neuroscience
## 46             Leadership
## 47             Mathematics

```



```

## 48          English_Education
## 49          Art_Education
## 50          Health_Education
## 51          Inclusive_Education
## 52          Change_Leadership
## 53          Intellectual_Disability_Autism
## 54 Communication_Media_and_Learning_Technologies
## 55          Education_Policy
## 56          Teaching_English
## 57          School_Principals
## 58          Science_Education
## 59          Physical_Education
## 60          Reading
## 61          Philosophy
## 62          Nursing
## 63          Psychology
## 64          Behavior_Analysis
## 65          cluster
## 66          Linguistics
## 67          Movement_Science
## 68          Spirituality_Mind_Body
##          PC43
## 1          Behavior_Analysis
## 2          Developmental_Psychology
## 3          History
## 4          Motor_Learning_and_Control
## 5          College_Advising
## 6          Music
## 7          Art_Education
## 8          Cognitive_Science
## 9          Psychological_Counseling
## 10         Communication_Sciences_and_Disorders
## 11          Linguistics
## 12          Education_Leadership
## 13          Clinical_Psychology
## 14         Instructional_Technology_and_Media
## 15          Teaching_English
## 16         Bilingual_Bicultural_Education
## 17          Science_Education
## 18          Reading
## 19          Counseling_Psychology
## 20          Gifted_Education
## 21          School_Principals
## 22          Leadership
## 23          cluster
## 24         International_and_Comparative_Education
## 25          Spirituality_Mind_Body
## 26          Physical_Education
## 27         Measurement__Evaluation_and_Statistics
## 28          Economics_and_Education
## 29          Mathematics
## 30          Private_School_Leadership
## 31 Communication_Media_and_Learning_Technologies
## 32          Early_Childhood_Special_Education

```

33 School_Psychology
 ## 34 Inclusive_Education
 ## 35 Arts_Administration
 ## 36 Sociology
 ## 37 Cooperation_and_Conflict_Resolution
 ## 38 Urban_Education
 ## 39 Movement_Science
 ## 40 Education_Policy
 ## 41 Social_Studies
 ## 42 Literacy
 ## 43 Deaf_and_Hard_of_Hearing
 ## 44 English_Education
 ## 45 Psychology
 ## 46 Education_Technology
 ## 47 Nutrition
 ## 48 Change_Leadership
 ## 49 Adult_Education
 ## 50 Sexuality__Women_and_Gender_in_Psychology
 ## 51 Higher_and_Postsecondary_Education
 ## 52 Intellectual_Disability_Autism
 ## 53 Health_Education
 ## 54 Early_Childhood_Education
 ## 55 Learning_Analytics
 ## 56 Dance_Education
 ## 57 Nursing
 ## 58 Philosophy
 ## 59 Creative_Technologies
 ## 60 Neuroscience
 ## 61 Politics
 ## 62 Physiology
 ## 63 Anthropology
 ## 64 Diabetes_Education
 ## 65 Design_and_Development_of_Digital_Games
 ## 66 Curriculum_and_Teaching
 ## 67 Kinesiology
 ## 68 Social_Organizational_Psychology
 ## PC44
 ## 1 School_Principals
 ## 2 Bilingual_Bicultural_Education
 ## 3 Nursing
 ## 4 Learning_Analytics
 ## 5 School_Psychology
 ## 6 International_and_Comparative_Education
 ## 7 Communication_Sciences_and_Disorders
 ## 8 Urban_Education
 ## 9 Education_Technology
 ## 10 Reading
 ## 11 Art_Education
 ## 12 English_Education
 ## 13 Early_Childhood_Education
 ## 14 Cognitive_Science
 ## 15 Politics
 ## 16 Private_School_Leadership
 ## 17 Sociology

```

## 18          Change_Leadership
## 19          Adult_Education
## 20          Education_Policy
## 21          Linguistics
## 22          Teaching_English
## 23 Communication_Media_and_Learning_Technologies
## 24          Philosophy
## 25          Neuroscience
## 26          Health_Education
## 27          Literacy
## 28          Developmental_Psychology
## 29          Kinesiology
## 30          Arts_Administration
## 31          Economics_and_Education
## 32 Sexuality__Women_and_Gender_in_Psychology
## 33          Diabetes_Education
## 34          Psychological_Counseling
## 35          Physical_Education
## 36          Movement_Science
## 37          Motor_Learning_and_Control
## 38          Counseling_Psychology
## 39          Social_Studies
## 40          Higher_and_Postsecondary_Education
## 41          Inclusive_Education
## 42          Curriculum_and_Teaching
## 43          Deaf_and_Hard_of_Hearing
## 44          Spirituality_Mind_Body
## 45          Early_Childhood_Special_Education
## 46          Cooperation_and_Conflict_Resolution
## 47 Measurement__Evaluation_and_Statistics
## 48          History
## 49          Education_Leadership
## 50          Nutrition
## 51          Psychology
## 52          Anthropology
## 53 Design_and_Development_of_Digital_Games
## 54          Creative_Technologies
## 55 Instructional_Technology_and_Media
## 56          cluster
## 57          Science_Education
## 58          Dance_Education
## 59          Clinical_Psychology
## 60 Social_Organizational_Psychology
## 61          Mathematics
## 62          Behavior_Analysis
## 63          College_Advising
## 64          Gifted_Education
## 65          Physiology
## 66          Leadership
## 67          Music
## 68 Intellectual_Disability_Autism
##          PC45
## 1          Psychological_Counseling
## 2          Creative_Technologies

```

```

## 3          Early_Childhood_Education
## 4    Design_and_Development_of_Digital_Games
## 5          Kinesiology
## 6          Art_Education
## 7    Bilingual_Bicultural_Education
## 8          Diabetes_Education
## 9          Politics
## 10         Arts_Administration
## 11         Economics_and_Education
## 12         Inclusive_Education
## 13         English_Education
## 14         cluster
## 15         Music
## 16         Clinical_Psychology
## 17         Counseling_Psychology
## 18         Deaf_and_Hard_of_Hearing
## 19         Private_School_Leadership
## 20         Dance_Education
## 21         Movement_Science
## 22         Leadership
## 23         Physical_Education
## 24         Literacy
## 25         Cognitive_Science
## 26    Sexuality__Women_and_Gender_in_Psychology
## 27         Instructional_Technology_and_Media
## 28         Education_Policy
## 29    International_and_Comparative_Education
## 30         Intellectual_Disability_Autism
## 31         School_Principals
## 32         Cooperation_and_Conflict_Resolution
## 33         Anthropology
## 34         Nursing
## 35         Psychology
## 36         Neuroscience
## 37         College_Advising
## 38         Developmental_Psychology
## 39    Communication_Media_and_Learning_Technologies
## 40         Education_Leadership
## 41         Health_Education
## 42         Philosophy
## 43         Motor_Learning_and_Control
## 44         Learning_Analytics
## 45         Sociology
## 46         Urban_Education
## 47         Social_Organizational_Psychology
## 48         Teaching_English
## 49         Social_Studies
## 50         Reading
## 51         Linguistics
## 52         Behavior_Analysis
## 53    Communication_Sciences_and_Disorders
## 54         Mathematics
## 55         Gifted_Education
## 56         School_Psychology

```

57 Higher_and_Postsecondary_Education
 ## 58 Science_Education
 ## 59 Physiology
 ## 60 Spirituality_Mind_Body
 ## 61 Adult_Education
 ## 62 Measurement__Evaluation_and_Statistics
 ## 63 History
 ## 64 Early_Childhood_Special_Education
 ## 65 Education_Technology
 ## 66 Nutrition
 ## 67 Curriculum_and_Teaching
 ## 68 Change_Leadership
 ## PC46
 ## 1 Psychological_Counseling
 ## 2 Literacy
 ## 3 Physical_Education
 ## 4 Leadership
 ## 5 History
 ## 6 International_and_Comparative_Education
 ## 7 Bilingual_Bicultural_Education
 ## 8 Philosophy
 ## 9 Communication_Sciences_and_Disorders
 ## 10 Science_Education
 ## 11 Social_Studies
 ## 12 Education_Leadership
 ## 13 Art_Education
 ## 14 Deaf_and_Hard_of_Hearing
 ## 15 Dance_Education
 ## 16 Urban_Education
 ## 17 Early_Childhood_Education
 ## 18 Physiology
 ## 19 Education_Technology
 ## 20 Clinical_Psychology
 ## 21 Motor_Learning_and_Control
 ## 22 Linguistics
 ## 23 Spirituality_Mind_Body
 ## 24 Diabetes_Education
 ## 25 Nutrition
 ## 26 Teaching_English
 ## 27 Music
 ## 28 Cognitive_Science
 ## 29 Developmental_Psychology
 ## 30 Mathematics
 ## 31 Kinesiology
 ## 32 Private_School_Leadership
 ## 33 Movement_Science
 ## 34 cluster
 ## 35 Sociology
 ## 36 College_Advising
 ## 37 Instructional_Technology_and_Media
 ## 38 Learning_Analytics
 ## 39 Inclusive_Education
 ## 40 School_Psychology
 ## 41 Arts_Administration

```

## 42          Intellectual_Disability_Autism
## 43          Creative_Technologies
## 44          Change_Leadership
## 45          Health_Education
## 46          Social_Organizational_Psychology
## 47          Anthropology
## 48          Psychology
## 49          Cooperation_and_Conflict_Resolution
## 50          Sexuality__Women_and_Gender_in_Psychology
## 51          Measurement__Evaluation_and_Statistics
## 52          Curriculum_and_Teaching
## 53          School_Principals
## 54          Economics_and_Education
## 55 Communication_Media_and_Learning_Technologies
## 56          Gifted_Education
## 57          Education_Policy
## 58          Behavior_Analysis
## 59          Neuroscience
## 60          Adult_Education
## 61          Early_Childhood_Special_Education
## 62          Nursing
## 63          English_Education
## 64          Reading
## 65          Higher_and_Postsecondary_Education
## 66          Counseling_Psychology
## 67          Design_and_Development_of_Digital_Games
## 68          Politics
##          PC47
## 1          Philosophy
## 2          Education_Policy
## 3          Diabetes_Education
## 4          Developmental_Psychology
## 5          Communication_Sciences_and_Disorders
## 6          Leadership
## 7          Creative_Technologies
## 8 Communication_Media_and_Learning_Technologies
## 9          Early_Childhood_Education
## 10         Early_Childhood_Special_Education
## 11         Behavior_Analysis
## 12         Counseling_Psychology
## 13         Motor_Learning_and_Control
## 14         Literacy
## 15         Urban_Education
## 16         Social_Organizational_Psychology
## 17         cluster
## 18         Measurement__Evaluation_and_Statistics
## 19         Gifted_Education
## 20         English_Education
## 21         Education_Leadership
## 22         History
## 23         Inclusive_Education
## 24         Science_Education
## 25         Health_Education
## 26         Nutrition

```

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## 27                      Linguistics
## 28                Deaf_and_Hard_of_Hearing
## 29                      Physiology
## 30                Teaching_English
## 31        Cooperation_and_Conflict_Resolution
## 32                Psychological_Counseling
## 33                Private_School_Leadership
## 34                      Nursing
## 35                      Psychology
## 36                Physical_Education
## 37                Economics_and_Education
## 38                      Reading
## 39                College_Advising
## 40        Intellectual_Disability_Autism
## 41                Spirituality_Mind_Body
## 42                Adult_Education
## 43        Instructional_Technology_and_Media
## 44                School_Principals
## 45                      Neuroscience
## 46                Movement_Science
## 47                      Politics
## 48                      Mathematics
## 49                Change_Leadership
## 50                Social_Studies
## 51        Bilingual_Bicultural_Education
## 52        Design_and_Development_of_Digital_Games
## 53        Sexuality__Women_and_Gender_in_Psychology
## 54                School_Psychology
## 55                Curriculum_and_Teaching
## 56        Higher_and_Postsecondary_Education
## 57                Art_Education
## 58                Cognitive_Science
## 59                      Music
## 60                Education_Technology
## 61                Arts_Administration
## 62        International_and_Comparative_Education
## 63                Kinesiology
## 64                Anthropology
## 65                Dance_Education
## 66                Sociology
## 67                Learning_Analytics
## 68                Clinical_Psychology
##                      PC48
## 1        Social_Organizational_Psychology
## 2                Arts_Administration
## 3                      Mathematics
## 4                Social_Studies
## 5                Dance_Education
## 6        Bilingual_Bicultural_Education
## 7                Teaching_English
## 8        Instructional_Technology_and_Media
## 9                Clinical_Psychology
## 10                Kinesiology
## 11        Intellectual_Disability_Autism

```

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## 12          Diabetes_Education
## 13          Urban_Education
## 14          Science_Education
## 15      Early_Childhood_Special_Education
## 16          Nutrition
## 17          Nursing
## 18          School_Principals
## 19          School_Psychology
## 20          Counseling_Psychology
## 21      Motor_Learning_and_Control
## 22      Cooperation_and_Conflict_Resolution
## 23          Education_Policy
## 24      Measurement__Evaluation_and_Statistics
## 25          College_Advising
## 26          Early_Childhood_Education
## 27      Sexuality__Women_and_Gender_in_Psychology
## 28          Sociology
## 29          Literacy
## 30          Movement_Science
## 31          Developmental_Psychology
## 32          Leadership
## 33          Psychology
## 34          Education_Leadership
## 35      Communication_Media_and_Learning_Technologies
## 36          Economics_and_Education
## 37          Private_School_Leadership
## 38          Psychological_Counseling
## 39          Physical_Education
## 40          cluster
## 41          Deaf_and_Hard_of_Hearing
## 42          Education_Technology
## 43      Communication_Sciences_and_Disorders
## 44          English_Education
## 45          Change_Leadership
## 46          Physiology
## 47          Spirituality_Mind_Body
## 48          Health_Education
## 49          Anthropology
## 50          Politics
## 51          Linguistics
## 52          Learning_Analytics
## 53          Reading
## 54      Higher_and_Postsecondary_Education
## 55          Creative_Technologies
## 56          Neuroscience
## 57          Philosophy
## 58          Inclusive_Education
## 59          History
## 60          Gifted_Education
## 61          Music
## 62      International_and_Comparative_Education
## 63      Design_and_Development_of_Digital_Games
## 64          Art_Education
## 65          Behavior_Analysis

```



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## 66          Curriculum_and_Teaching
## 67          Cognitive_Science
## 68          Adult_Education
##          PC49
## 1          Teaching_English
## 2          Gifted_Education
## 3          Nursing
## 4          Instructional_Technology_and_Media
## 5          Education_Policy
## 6          Anthropology
## 7          Psychological_Counseling
## 8          Reading
## 9          Deaf_and_Hard_of_Hearing
## 10         Curriculum_and_Teaching
## 11         Leadership
## 12         cluster
## 13         Movement_Science
## 14         Cooperation_and_Conflict_Resolution
## 15         Developmental_Psychology
## 16         English_Education
## 17         Measurement__Evaluation_and_Statistics
## 18         Private_School_Leadership
## 19         Social_Studies
## 20         Kinesiology
## 21         Counseling_Psychology
## 22         Creative_Technologies
## 23         Urban_Education
## 24         Inclusive_Education
## 25         Linguistics
## 26         Dance_Education
## 27         Higher_and_Postsecondary_Education
## 28         Learning_Analytics
## 29         Spirituality_Mind_Body
## 30         School_Principals
## 31         Sociology
## 32         Communication_Sciences_and_Disorders
## 33         Physical_Education
## 34         Diabetes_Education
## 35         Sexuality__Women_and_Gender_in_Psychology
## 36         Behavior_Analysis
## 37         Literacy
## 38         History
## 39         Adult_Education
## 40         Social_Organizational_Psychology
## 41         Education_Technology
## 42         Music
## 43         Early_Childhood_Special_Education
## 44         Clinical_Psychology
## 45         School_Psychology
## 46         Health_Education
## 47         Economics_and_Education
## 48         Early_Childhood_Education
## 49         Science_Education
## 50         Mathematics

```

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## 51             Motor_Learning_and_Control
## 52                 Neuroscience
## 53     Design_and_Development_of_Digital_Games
## 54                 College_Advising
## 55                 Education_Leadership
## 56                 Psychology
## 57                 Nutrition
## 58                 Cognitive_Science
## 59                 Politics
## 60     Intellectual_Disability_Autism
## 61                 Change_Leadership
## 62                 Physiology
## 63     Communication_Media_and_Learning_Technologies
## 64                 Bilingual_Bicultural_Education
## 65                 Philosophy
## 66     International_and_Comparative_Education
## 67                 Art_Education
## 68                 Arts_Administration
##             PC50
## 1             Dance_Education
## 2             Deaf_and_Hard_of_Hearing
## 3             Spirituality_Mind_Body
## 4     Design_and_Development_of_Digital_Games
## 5             Cognitive_Science
## 6             Music
## 7             Motor_Learning_and_Control
## 8             Higher_and_Postsecondary_Education
## 9     Communication_Sciences_and_Disorders
## 10                 Sociology
## 11                 Clinical_Psychology
## 12                 Politics
## 13                 Gifted_Education
## 14                 College_Advising
## 15                 Health_Education
## 16                 Science_Education
## 17     Sexuality__Women_and_Gender_in_Psychology
## 18                 Philosophy
## 19                 School_Principals
## 20                 Education_Leadership
## 21                 Nursing
## 22                 Literacy
## 23                 Nutrition
## 24                 Physical_Education
## 25                 Change_Leadership
## 26                 Arts_Administration
## 27     Communication_Media_and_Learning_Technologies
## 28                 Counseling_Psychology
## 29                 Diabetes_Education
## 30     Early_Childhood_Special_Education
## 31                 Creative_Technologies
## 32                 English_Education
## 33                 Inclusive_Education
## 34                 Behavior_Analysis
## 35                 Neuroscience

```

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## 36          Curriculum_and_Teaching
## 37          Education_Technology
## 38      Measurement__Evaluation_and_Statistics
## 39          Anthropology
## 40          Adult_Education
## 41          Psychological_Counseling
## 42          Linguistics
## 43      Social_Organizational_Psychology
## 44          Social_Studies
## 45          Education_Policy
## 46          History
## 47          Urban_Education
## 48      Bilingual_Bicultural_Education
## 49          Movement_Science
## 50          Leadership
## 51          Kinesiology
## 52          Economics_and_Education
## 53      International_and_Comparative_Education
## 54          Mathematics
## 55          cluster
## 56          Learning_Analytics
## 57          Reading
## 58          Developmental_Psychology
## 59          Private_School_Leadership
## 60      Intellectual_Disability_Autism
## 61          Psychology
## 62      Cooperation_and_Conflict_Resolution
## 63          Early_Childhood_Education
## 64          Physiology
## 65      Instructional_Technology_and_Media
## 66          School_Psychology
## 67          Teaching_English
## 68          Art_Education
##          PC51
## 1          Neuroscience
## 2          Education_Policy
## 3          Nutrition
## 4      Design_and_Development_of_Digital_Games
## 5          Deaf_and_Hard_of_Hearing
## 6          Nursing
## 7          Psychology
## 8      Intellectual_Disability_Autism
## 9          Change_Leadership
## 10         Sociology
## 11         Urban_Education
## 12      Motor_Learning_and_Control
## 13          Arts_Administration
## 14          School_Psychology
## 15          Learning_Analytics
## 16          Science_Education
## 17          Philosophy
## 18      International_and_Comparative_Education
## 19          Dance_Education
## 20          Private_School_Leadership

```

```

## 21          English_Education
## 22          Physiology
## 23          Cognitive_Science
## 24          Mathematics
## 25          Art_Education
## 26          Instructional_Technology_and_Media
## 27          History
## 28          Literacy
## 29          Measurement__Evaluation_and_Statistics
## 30          Economics_and_Education
## 31          Curriculum_and_Teaching
## 32          Developmental_Psychology
## 33          Higher_and_Postsecondary_Education
## 34          Cooperation_and_Conflict_Resolution
## 35          Linguistics
## 36          Kinesiology
## 37          Spirituality_Mind_Body
## 38          Social_Studies
## 39          Behavior_Analysis
## 40          Bilingual_Bicultural_Education
## 41          Education_Leadership
## 42          Clinical_Psychology
## 43          School_Principals
## 44          Communication_Media_and_Learning_Technologies
## 45          Diabetes_Education
## 46          Music
## 47          Communication_Sciences_and_Disorders
## 48          Creative_Technologies
## 49          Early_Childhood_Education
## 50          Gifted_Education
## 51          Counseling_Psychology
## 52          Anthropology
## 53          Inclusive_Education
## 54          Adult_Education
## 55          Leadership
## 56          Social_Organizational_Psychology
## 57          Sexuality__Women_and_Gender_in_Psychology
## 58          Physical_Education
## 59          College_Advising
## 60          Movement_Science
## 61          Teaching_English
## 62          Education_Technology
## 63          Early_Childhood_Special_Education
## 64          Health_Education
## 65          Reading
## 66          Psychological_Counseling
## 67          cluster
## 68          Politics
##          PC52
## 1          Health_Education
## 2          Politics
## 3          Early_Childhood_Special_Education
## 4          Urban_Education
## 5          Mathematics

```

```

## 6           Learning_Analytics
## 7   Instructional_Technology_and_Media
## 8           Physiology
## 9           Nutrition
## 10          Philosophy
## 11          Diabetes_Education
## 12          Reading
## 13   Cooperation_and_Conflict_Resolution
## 14          Literacy
## 15          Gifted_Education
## 16          Leadership
## 17          School_Principals
## 18          English_Education
## 19          Counseling_Psychology
## 20          Physical_Education
## 21          Inclusive_Education
## 22          Change_Leadership
## 23   Design_and_Development_of_Digital_Games
## 24          Economics_and_Education
## 25   Sexuality__Women_and_Gender_in_Psychology
## 26          Dance_Education
## 27          Movement_Science
## 28          Linguistics
## 29   Higher_and_Postsecondary_Education
## 30          Behavior_Analysis
## 31          Private_School_Leadership
## 32          Education_Leadership
## 33   International_and_Comparative_Education
## 34          Deaf_and_Hard_of_Hearing
## 35          Clinical_Psychology
## 36   Measurement__Evaluation_and_Statistics
## 37          Bilingual_Bicultural_Education
## 38          Curriculum_and_Teaching
## 39          Developmental_Psychology
## 40          Science_Education
## 41          cluster
## 42          Spirituality_Mind_Body
## 43          Teaching_English
## 44          Psychological_Counseling
## 45          Education_Policy
## 46          Arts_Administration
## 47   Intellectual_Disability_Autism
## 48          Art_Education
## 49          Kinesiology
## 50          History
## 51          Music
## 52   Communication_Media_and_Learning_Technologies
## 53          Education_Technology
## 54          Motor_Learning_and_Control
## 55          Nursing
## 56          Social_Studies
## 57          Adult_Education
## 58          Neuroscience
## 59          College_Advising

```

```

## 60          Early_Childhood_Education
## 61          Creative_Technologies
## 62          Psychology
## 63          Cognitive_Science
## 64    Communication_Sciences_and_Disorders
## 65          Anthropology
## 66          Sociology
## 67          School_Psychology
## 68    Social_Organizational_Psychology
##          PC53
## 1          History
## 2          Leadership
## 3    Early_Childhood_Special_Education
## 4          Arts_Administration
## 5          Nursing
## 6          Private_School_Leadership
## 7    Motor_Learning_and_Control
## 8          Mathematics
## 9          Inclusive_Education
## 10         cluster
## 11    Developmental_Psychology
## 12    School_Principals
## 13    Change_Leadership
## 14    Health_Education
## 15    Dance_Education
## 16 Communication_Media_and_Learning_Technologies
## 17    Creative_Technologies
## 18    Teaching_English
## 19    Nutrition
## 20    Intellectual_Disability_Autism
## 21    Early_Childhood_Education
## 22    Counseling_Psychology
## 23    International_and_Comparative_Education
## 24    Cognitive_Science
## 25    Literacy
## 26    Communication_Sciences_and_Disorders
## 27    Sociology
## 28    Movement_Science
## 29    Neuroscience
## 30    Cooperation_and_Conflict_Resolution
## 31    Kinesiology
## 32    Psychology
## 33    Learning_Analytics
## 34    Curriculum_and_Teaching
## 35    Education_Technology
## 36    School_Psychology
## 37    Music
## 38    Gifted_Education
## 39    Social_Organizational_Psychology
## 40    Higher_and_Postsecondary_Education
## 41    College_Advising
## 42    Reading
## 43    Behavior_Analysis
## 44    Diabetes_Education

```

```

## 45             Deaf_and_Hard_of_Hearing
## 46                 Anthropology
## 47                     Politics
## 48             Measurement__Evaluation_and_Statistics
## 49                 Instructional_Technology_and_Media
## 50                     Social_Studies
## 51                         Linguistics
## 52                             Art_Education
## 53                                 Education_Leadership
## 54                                     Adult_Education
## 55                                         Spirituality_Mind_Body
## 56                                             Physiology
## 57             Sexuality__Women_and_Gender_in_Psychology
## 58                 Clinical_Psychology
## 59                     Philosophy
## 60                         Education_Policy
## 61                             Economics_and_Education
## 62                                 Physical_Education
## 63             Design_and_Development_of_Digital_Games
## 64                 Bilingual_Bicultural_Education
## 65                     Science_Education
## 66                         English_Education
## 67                             Urban_Education
## 68             Psychological_Counseling
##                                     PC54
## 1             Inclusive_Education
## 2             Communication_Sciences_and_Disorders
## 3             Design_and_Development_of_Digital_Games
## 4                 Physiology
## 5                     Social_Studies
## 6             Motor_Learning_and_Control
## 7                 Education_Technology
## 8                     Reading
## 9             Arts_Administration
## 10                 Leadership
## 11                     Adult_Education
## 12             Sexuality__Women_and_Gender_in_Psychology
## 13                 Behavior_Analysis
## 14                     Urban_Education
## 15                         Sociology
## 16             International_and_Comparative_Education
## 17                 Literacy
## 18                     College_Advising
## 19             Early_Childhood_Education
## 20                 Dance_Education
## 21             Measurement__Evaluation_and_Statistics
## 22                 Physical_Education
## 23                     Education_Policy
## 24                         Economics_and_Education
## 25                             Psychological_Counseling
## 26                                 Curriculum_and_Teaching
## 27                                     Philosophy
## 28                                         Science_Education
## 29                                             Music

```

```

## 30 Psychology
## 31 Spirituality_Mind_Body
## 32 Creative_Technologies
## 33 Mathematics
## 34 History
## 35 Kinesiology
## 36 Linguistics
## 37 Learning_Analytics
## 38 Teaching_English
## 39 Early_Childhood_Special_Education
## 40 Private_School_Leadership
## 41 Health_Education
## 42 Anthropology
## 43 Art_Education
## 44 Deaf_and_Hard_of_Hearing
## 45 Education_Leadership
## 46 Counseling_Psychology
## 47 cluster
## 48 Gifted_Education
## 49 Nutrition
## 50 Cognitive_Science
## 51 Bilingual_Bicultural_Education
## 52 Neuroscience
## 53 Movement_Science
## 54 Communication_Media_and_Learning_Technologies
## 55 Diabetes_Education
## 56 School_Psychology
## 57 Intellectual_Disability_Autism
## 58 Social_Organizational_Psychology
## 59 Nursing
## 60 Instructional_Technology_and_Media
## 61 Clinical_Psychology
## 62 Politics
## 63 Higher_and_Postsecondary_Education
## 64 Developmental_Psychology
## 65 Cooperation_and_Conflict_Resolution
## 66 English_Education
## 67 Change_Leadership
## 68 School_Principals
## PC55
## 1 Curriculum_and_Teaching
## 2 Early_Childhood_Special_Education
## 3 Music
## 4 Neuroscience
## 5 Clinical_Psychology
## 6 Design_and_Development_of_Digital_Games
## 7 Anthropology
## 8 Science_Education
## 9 Philosophy
## 10 Nursing
## 11 School_Principals
## 12 English_Education
## 13 Reading
## 14 Deaf_and_Hard_of_Hearing

```



```

## 15                cluster
## 16                Sociology
## 17                Learning_Analytics
## 18                Instructional_Technology_and_Media
## 19                Arts_Administration
## 20                Leadership
## 21    Sexuality__Women_and_Gender_in_Psychology
## 22                Linguistics
## 23                Adult_Education
## 24                Mathematics
## 25                Health_Education
## 26                Literacy
## 27                Psychological_Counseling
## 28                Change_Leadership
## 29    Communication_Media_and_Learning_Technologies
## 30                Higher_and_Postsecondary_Education
## 31                Communication_Sciences_and_Disorders
## 32                Politics
## 33                Social_Organizational_Psychology
## 34                Movement_Science
## 35                Private_School_Leadership
## 36                Developmental_Psychology
## 37                Inclusive_Education
## 38                Teaching_English
## 39                Behavior_Analysis
## 40                History
## 41    Measurement__Evaluation_and_Statistics
## 42                Counseling_Psychology
## 43                Physiology
## 44                College_Advising
## 45                Motor_Learning_and_Control
## 46                Early_Childhood_Education
## 47                Spirituality_Mind_Body
## 48                Psychology
## 49                Cognitive_Science
## 50                Bilingual_Bicultural_Education
## 51                Gifted_Education
## 52                Kinesiology
## 53                Art_Education
## 54                Urban_Education
## 55                Education_Policy
## 56                Intellectual_Disability_Autism
## 57                Diabetes_Education
## 58                Economics_and_Education
## 59                Social_Studies
## 60                Dance_Education
## 61                School_Psychology
## 62                Education_Leadership
## 63    International_and_Comparative_Education
## 64                Physical_Education
## 65                Creative_Technologies
## 66                Education_Technology
## 67                Cooperation_and_Conflict_Resolution
## 68                Nutrition

```

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##                                     PC56
## 1      Measurement__Evaluation_and_Statistics
## 2      International_and_Comparative_Education
## 3              English_Education
## 4              Physiology
## 5      Cooperation_and_Conflict_Resolution
## 6              School_Psychology
## 7              Education_Leadership
## 8              Adult_Education
## 9              Leadership
## 10             Music
## 11             Nursing
## 12      Social_Organizational_Psychology
## 13             Economics_and_Education
## 14             Kinesiology
## 15             Deaf_and_Hard_of_Hearing
## 16             Psychological_Counseling
## 17             Science_Education
## 18      Intellectual_Disability_Autism
## 19             Dance_Education
## 20             Social_Studies
## 21             Inclusive_Education
## 22             Politics
## 23      Instructional_Technology_and_Media
## 24             Cognitive_Science
## 25             Education_Policy
## 26             Spirituality_Mind_Body
## 27             Psychology
## 28             School_Principals
## 29      Early_Childhood_Special_Education
## 30             Philosophy
## 31             Urban_Education
## 32             Curriculum_and_Teaching
## 33             Movement_Science
## 34             Clinical_Psychology
## 35      Communication_Sciences_and_Disorders
## 36             Gifted_Education
## 37             Learning_Analytics
## 38             Art_Education
## 39             History
## 40             College_Advising
## 41      Bilingual_Bicultural_Education
## 42             Literacy
## 43             Private_School_Leadership
## 44             Early_Childhood_Education
## 45             Physical_Education
## 46      Design_and_Development_of_Digital_Games
## 47             Motor_Learning_and_Control
## 48      Sexuality__Women_and_Gender_in_Psychology
## 49             Anthropology
## 50             Linguistics
## 51             Developmental_Psychology
## 52             Behavior_Analysis
## 53             Sociology

```

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## 54         Higher_and_Postsecondary_Education
## 55             Arts_Administration
## 56             Creative_Technologies
## 57             Change_Leadership
## 58             Reading
## 59             Neuroscience
## 60             Mathematics
## 61             Diabetes_Education
## 62 Communication_Media_and_Learning_Technologies
## 63             Teaching_English
## 64             Nutrition
## 65             Health_Education
## 66             cluster
## 67             Counseling_Psychology
## 68             Education_Technology
##             PC57
## 1             Politics
## 2             Education_Leadership
## 3             Anthropology
## 4             Diabetes_Education
## 5             Adult_Education
## 6             Science_Education
## 7             Physical_Education
## 8             Social_Studies
## 9             Philosophy
## 10            Linguistics
## 11            Counseling_Psychology
## 12 Communication_Media_and_Learning_Technologies
## 13            Leadership
## 14            History
## 15            Private_School_Leadership
## 16            Clinical_Psychology
## 17            Learning_Analytics
## 18            Teaching_English
## 19            Motor_Learning_and_Control
## 20            Early_Childhood_Education
## 21            Music
## 22            Measurement__Evaluation_and_Statistics
## 23            Communication_Sciences_and_Disorders
## 24            Economics_and_Education
## 25            Behavior_Analysis
## 26            Neuroscience
## 27            Sociology
## 28            Arts_Administration
## 29            School_Psychology
## 30            Nutrition
## 31            Deaf_and_Hard_of_Hearing
## 32            Kinesiology
## 33            Design_and_Development_of_Digital_Games
## 34            Education_Technology
## 35            Curriculum_and_Teaching
## 36            Physiology
## 37            Intellectual_Disability_Autism
## 38            Dance_Education

```

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## 39      International_and_Comparative_Education
## 40                Psychology
## 41                Mathematics
## 42                Urban_Education
## 43      Higher_and_Postsecondary_Education
## 44      Instructional_Technology_and_Media
## 45                Nursing
## 46                Movement_Science
## 47      Social_Organizational_Psychology
## 48      Bilingual_Bicultural_Education
## 49      Cooperation_and_Conflict_Resolution
## 50                Education_Policy
## 51                Creative_Technologies
## 52                Inclusive_Education
## 53                Health_Education
## 54      Developmental_Psychology
## 55                School_Principals
## 56                Art_Education
## 57      Spirituality_Mind_Body
## 58                Cognitive_Science
## 59      Psychological_Counseling
## 60                Reading
## 61      Sexuality__Women_and_Gender_in_Psychology
## 62                cluster
## 63                Change_Leadership
## 64                Literacy
## 65                College_Advising
## 66      Early_Childhood_Special_Education
## 67                Gifted_Education
## 68                English_Education
##                PC58
## 1                Linguistics
## 2      Higher_and_Postsecondary_Education
## 3                Science_Education
## 4                College_Advising
## 5      Communication_Sciences_and_Disorders
## 6                Social_Studies
## 7                Curriculum_and_Teaching
## 8                Learning_Analytics
## 9                School_Psychology
## 10     Bilingual_Bicultural_Education
## 11                Anthropology
## 12                Leadership
## 13                Literacy
## 14     Psychological_Counseling
## 15                Reading
## 16                Kinesiology
## 17                Cognitive_Science
## 18     Developmental_Psychology
## 19     Inclusive_Education
## 20     Deaf_and_Hard_of_Hearing
## 21     Counseling_Psychology
## 22     Economics_and_Education
## 23     Education_Leadership

```

```

## 24          English_Education
## 25          Change_Leadership
## 26          School_Principals
## 27      Private_School_Leadership
## 28          Physical_Education
## 29          Movement_Science
## 30      Social_Organizational_Psychology
## 31          cluster
## 32          Gifted_Education
## 33          Education_Technology
## 34          Music
## 35          Physiology
## 36          Sociology
## 37          Mathematics
## 38          Politics
## 39          Nutrition
## 40          Neuroscience
## 41          Spirituality_Mind_Body
## 42          Adult_Education
## 43      International_and_Comparative_Education
## 44          History
## 45          Health_Education
## 46      Cooperation_and_Conflict_Resolution
## 47      Early_Childhood_Special_Education
## 48          Nursing
## 49          Clinical_Psychology
## 50          Education_Policy
## 51          Teaching_English
## 52          Dance_Education
## 53      Early_Childhood_Education
## 54          Philosophy
## 55          Psychology
## 56      Measurement__Evaluation_and_Statistics
## 57          Art_Education
## 58      Communication_Media_and_Learning_Technologies
## 59          Arts_Administration
## 60      Sexuality__Women_and_Gender_in_Psychology
## 61      Design_and_Development_of_Digital_Games
## 62          Motor_Learning_and_Control
## 63          Creative_Technologies
## 64      Instructional_Technology_and_Media
## 65          Intellectual_Disability_Autism
## 66          Behavior_Analysis
## 67          Urban_Education
## 68          Diabetes_Education
##          PC59
## 1          Cognitive_Science
## 2          Change_Leadership
## 3          Economics_and_Education
## 4          College_Advising
## 5          Linguistics
## 6          cluster
## 7          Deaf_and_Hard_of_Hearing
## 8          Counseling_Psychology

```

```

## 9 Psychology
## 10 Gifted_Education
## 11 Bilingual_Bicultural_Education
## 12 School_Principals
## 13 Communication_Media_and_Learning_Technologies
## 14 Clinical_Psychology
## 15 Communication_Sciences_and_Disorders
## 16 Intellectual_Disability_Autism
## 17 Higher_and_Postsecondary_Education
## 18 Urban_Education
## 19 Reading
## 20 Kinesiology
## 21 Private_School_Leadership
## 22 Health_Education
## 23 Cooperation_and_Conflict_Resolution
## 24 English_Education
## 25 International_and_Comparative_Education
## 26 Music
## 27 Literacy
## 28 Design_and_Development_of_Digital_Games
## 29 Leadership
## 30 Physiology
## 31 Instructional_Technology_and_Media
## 32 Arts_Administration
## 33 Behavior_Analysis
## 34 Nutrition
## 35 Sexuality__Women_and_Gender_in_Psychology
## 36 Philosophy
## 37 Education_Policy
## 38 Social_Studies
## 39 Mathematics
## 40 Sociology
## 41 Social_Organizational_Psychology
## 42 Spirituality_Mind_Body
## 43 Science_Education
## 44 Politics
## 45 Inclusive_Education
## 46 Education_Technology
## 47 Education_Leadership
## 48 Early_Childhood_Education
## 49 School_Psychology
## 50 History
## 51 Early_Childhood_Special_Education
## 52 Adult_Education
## 53 Dance_Education
## 54 Developmental_Psychology
## 55 Learning_Analytics
## 56 Teaching_English
## 57 Movement_Science
## 58 Curriculum_and_Teaching
## 59 Art_Education
## 60 Nursing
## 61 Measurement__Evaluation_and_Statistics
## 62 Creative_Technologies

```

```

## 63 Neuroscience
## 64 Diabetes_Education
## 65 Physical_Education
## 66 Motor_Learning_and_Control
## 67 Psychological_Counseling
## 68 Anthropology
## PC60
## 1 Cooperation_and_Conflict_Resolution
## 2 International_and_Comparative_Education
## 3 Kinesiology
## 4 Social_Organizational_Psychology
## 5 Communication_Media_and_Learning_Technologies
## 6 Politics
## 7 Design_and_Development_of_Digital_Games
## 8 Movement_Science
## 9 Social_Studies
## 10 Counseling_Psychology
## 11 Spirituality_Mind_Body
## 12 Health_Education
## 13 Intellectual_Disability_Autism
## 14 Sexuality__Women_and_Gender_in_Psychology
## 15 Private_School_Leadership
## 16 Psychology
## 17 Leadership
## 18 Measurement__Evaluation_and_Statistics
## 19 Learning_Analytics
## 20 Communication_Sciences_and_Disorders
## 21 Creative_Technologies
## 22 Curriculum_and_Teaching
## 23 Behavior_Analysis
## 24 Economics_and_Education
## 25 Clinical_Psychology
## 26 Physiology
## 27 Higher_and_Postsecondary_Education
## 28 Education_Leadership
## 29 College_Advising
## 30 Mathematics
## 31 Psychological_Counseling
## 32 Art_Education
## 33 Music
## 34 Gifted_Education
## 35 Dance_Education
## 36 Urban_Education
## 37 Science_Education
## 38 Anthropology
## 39 Motor_Learning_and_Control
## 40 Deaf_and_Hard_of_Hearing
## 41 Linguistics
## 42 Education_Policy
## 43 Reading
## 44 Nutrition
## 45 Early_Childhood_Special_Education
## 46 Inclusive_Education
## 47 School_Psychology

```

```

## 48 Neuroscience
## 49 cluster
## 50 Change_Leadership
## 51 Cognitive_Science
## 52 Literacy
## 53 English_Education
## 54 Nursing
## 55 Developmental_Psychology
## 56 Instructional_Technology_and_Media
## 57 Diabetes_Education
## 58 Bilingual_Bicultural_Education
## 59 School_Principals
## 60 Education_Technology
## 61 Early_Childhood_Education
## 62 Physical_Education
## 63 Teaching_English
## 64 Philosophy
## 65 Arts_Administration
## 66 Sociology
## 67 History
## 68 Adult_Education
## PC61
## 1 Nutrition
## 2 Health_Education
## 3 Early_Childhood_Education
## 4 Education_Technology
## 5 Education_Leadership
## 6 School_Principals
## 7 Intellectual_Disability_Autism
## 8 Higher_and_Postsecondary_Education
## 9 Developmental_Psychology
## 10 Movement_Science
## 11 Kinesiology
## 12 Adult_Education
## 13 Communication_Media_and_Learning_Technologies
## 14 Design_and_Development_of_Digital_Games
## 15 Dance_Education
## 16 Spirituality_Mind_Body
## 17 Arts_Administration
## 18 English_Education
## 19 Education_Policy
## 20 Literacy
## 21 cluster
## 22 Physical_Education
## 23 History
## 24 Physiology
## 25 Change_Leadership
## 26 Mathematics
## 27 Gifted_Education
## 28 Creative_Technologies
## 29 Psychological_Counseling
## 30 Linguistics
## 31 Politics
## 32 Teaching_English

```



```

## 33      Cooperation_and_Conflict_Resolution
## 34      Sexuality__Women_and_Gender_in_Psychology
## 35              Behavior_Analysis
## 36              Private_School_Leadership
## 37              Reading
## 38              Counseling_Psychology
## 39              Leadership
## 40      Communication_Sciences_and_Disorders
## 41              Science_Education
## 42              Psychology
## 43              Urban_Education
## 44              Economics_and_Education
## 45              College_Advising
## 46      International_and_Comparative_Education
## 47              Sociology
## 48      Instructional_Technology_and_Media
## 49      Bilingual_Bicultural_Education
## 50      Deaf_and_Hard_of_Hearing
## 51              Nursing
## 52              Learning_Analytics
## 53              Cognitive_Science
## 54              Anthropology
## 55      Social_Organizational_Psychology
## 56              Philosophy
## 57      Early_Childhood_Special_Education
## 58              Social_Studies
## 59      Measurement__Evaluation_and_Statistics
## 60              Motor_Learning_and_Control
## 61              Neuroscience
## 62              Clinical_Psychology
## 63              Music
## 64              School_Psychology
## 65              Inclusive_Education
## 66      Curriculum_and_Teaching
## 67              Art_Education
## 68      Diabetes_Education
##              PC62
## 1              Psychology
## 2              Literacy
## 3              Change_Leadership
## 4      Instructional_Technology_and_Media
## 5              History
## 6              Mathematics
## 7              Clinical_Psychology
## 8              Inclusive_Education
## 9              Neuroscience
## 10             Physiology
## 11             Physical_Education
## 12             Deaf_and_Hard_of_Hearing
## 13      Social_Organizational_Psychology
## 14              cluster
## 15              Reading
## 16      Cooperation_and_Conflict_Resolution
## 17      Education_Policy

```

```

## 18 Teaching_English
## 19 Early_Childhood_Special_Education
## 20 Nutrition
## 21 Behavior_Analysis
## 22 Design_and_Development_of_Digital_Games
## 23 English_Education
## 24 International_and_Comparative_Education
## 25 Nursing
## 26 Bilingual_Bicultural_Education
## 27 Movement_Science
## 28 Learning_Analytics
## 29 Linguistics
## 30 Science_Education
## 31 Urban_Education
## 32 Creative_Technologies
## 33 Anthropology
## 34 Art_Education
## 35 Social_Studies
## 36 Measurement__Evaluation_and_Statistics
## 37 Counseling_Psychology
## 38 Motor_Learning_and_Control
## 39 Communication_Media_and_Learning_Technologies
## 40 Developmental_Psychology
## 41 Communication_Sciences_and_Disorders
## 42 School_Principals
## 43 Gifted_Education
## 44 College_Advising
## 45 Intellectual_Disability_Autism
## 46 Politics
## 47 Spirituality_Mind_Body
## 48 Psychological_Counseling
## 49 Cognitive_Science
## 50 Education_Technology
## 51 Kinesiology
## 52 Health_Education
## 53 Adult_Education
## 54 Leadership
## 55 Curriculum_and_Teaching
## 56 Arts_Administration
## 57 Dance_Education
## 58 Early_Childhood_Education
## 59 Sexuality__Women_and_Gender_in_Psychology
## 60 Diabetes_Education
## 61 School_Psychology
## 62 Higher_and_Postsecondary_Education
## 63 Philosophy
## 64 Sociology
## 65 Music
## 66 Education_Leadership
## 67 Economics_and_Education
## 68 Private_School_Leadership
## PC63
## 1 Sexuality__Women_and_Gender_in_Psychology
## 2 Private_School_Leadership

```

```

## 3             Education_Leadership
## 4             cluster
## 5             Intellectual_Disability_Autism
## 6             Economics_and_Education
## 7             Change_Leadership
## 8             International_and_Comparative_Education
## 9             Reading
## 10            College_Advising
## 11            Early_Childhood_Special_Education
## 12            Adult_Education
## 13            Neuroscience
## 14            Curriculum_and_Teaching
## 15            Physiology
## 16            Social_Studies
## 17            Music
## 18            Philosophy
## 19            Anthropology
## 20            Gifted_Education
## 21            Cognitive_Science
## 22            Psychological_Counseling
## 23            Diabetes_Education
## 24            Kinesiology
## 25            Early_Childhood_Education
## 26 Communication_Media_and_Learning_Technologies
## 27            Education_Technology
## 28            Higher_and_Postsecondary_Education
## 29            Social_Organizational_Psychology
## 30            Bilingual_Bicultural_Education
## 31            Motor_Learning_and_Control
## 32            School_Psychology
## 33            Physical_Education
## 34            Dance_Education
## 35            Instructional_Technology_and_Media
## 36            Politics
## 37            English_Education
## 38            Mathematics
## 39            Arts_Administration
## 40            History
## 41            Spirituality_Mind_Body
## 42            Behavior_Analysis
## 43            Movement_Science
## 44            Psychology
## 45            Nutrition
## 46            Linguistics
## 47            Developmental_Psychology
## 48            Sociology
## 49            Learning_Analytics
## 50            Urban_Education
## 51            Literacy
## 52            Teaching_English
## 53            School_Principals
## 54            Creative_Technologies
## 55            Communication_Sciences_and_Disorders
## 56            Leadership

```

```

## 57          Science_Education
## 58          Art_Education
## 59          Education_Policy
## 60          Clinical_Psychology
## 61          Deaf_and_Hard_of_Hearing
## 62          Cooperation_and_Conflict_Resolution
## 63          Counseling_Psychology
## 64          Health_Education
## 65          Nursing
## 66          Measurement__Evaluation_and_Statistics
## 67          Design_and_Development_of_Digital_Games
## 68          Inclusive_Education
##          PC64
## 1          Psychology
## 2          Learning_Analytics
## 3          cluster
## 4          Literacy
## 5          Clinical_Psychology
## 6          History
## 7          Linguistics
## 8          Communication_Sciences_and_Disorders
## 9          Behavior_Analysis
## 10         Anthropology
## 11         English_Education
## 12         Social_Organizational_Psychology
## 13         Neuroscience
## 14         Spirituality_Mind_Body
## 15         International_and_Comparative_Education
## 16         Counseling_Psychology
## 17         Creative_Technologies
## 18         Leadership
## 19         Physical_Education
## 20         Adult_Education
## 21         Sexuality__Women_and_Gender_in_Psychology
## 22         Sociology
## 23         Communication_Media_and_Learning_Technologies
## 24         Instructional_Technology_and_Media
## 25         Developmental_Psychology
## 26         School_Psychology
## 27         Curriculum_and_Teaching
## 28         Teaching_English
## 29         Kinesiology
## 30         Mathematics
## 31         Music
## 32         Education_Leadership
## 33         School_Principals
## 34         Art_Education
## 35         Science_Education
## 36         Politics
## 37         Design_and_Development_of_Digital_Games
## 38         Measurement__Evaluation_and_Statistics
## 39         Private_School_Leadership
## 40         Nutrition
## 41         Philosophy

```

```

## 42             Education_Policy
## 43     Early_Childhood_Special_Education
## 44             Arts_Administration
## 45             Urban_Education
## 46             Education_Technology
## 47             Health_Education
## 48             Deaf_and_Hard_of_Hearing
## 49             Nursing
## 50             Gifted_Education
## 51             Diabetes_Education
## 52             Social_Studies
## 53             Physiology
## 54             Inclusive_Education
## 55             Psychological_Counseling
## 56     Higher_and_Postsecondary_Education
## 57             Motor_Learning_and_Control
## 58             Bilingual_Bicultural_Education
## 59             College_Advising
## 60             Movement_Science
## 61             Intellectual_Disability_Autism
## 62             Economics_and_Education
## 63             Change_Leadership
## 64             Dance_Education
## 65             Reading
## 66             Early_Childhood_Education
## 67             Cognitive_Science
## 68     Cooperation_and_Conflict_Resolution
##             PC65
## 1             cluster
## 2             Deaf_and_Hard_of_Hearing
## 3             Bilingual_Bicultural_Education
## 4             Neuroscience
## 5             Counseling_Psychology
## 6             Movement_Science
## 7             Music
## 8             Art_Education
## 9             Creative_Technologies
## 10            Social_Organizational_Psychology
## 11            Spirituality_Mind_Body
## 12            International_and_Comparative_Education
## 13            Private_School_Leadership
## 14            Intellectual_Disability_Autism
## 15            Higher_and_Postsecondary_Education
## 16    Communication_Media_and_Learning_Technologies
## 17            Sexuality__Women_and_Gender_in_Psychology
## 18            Behavior_Analysis
## 19            Curriculum_and_Teaching
## 20            Clinical_Psychology
## 21            Inclusive_Education
## 22            School_Psychology
## 23            Learning_Analytics
## 24            Early_Childhood_Special_Education
## 25            Anthropology
## 26            Motor_Learning_and_Control

```

```

## 27             Health_Education
## 28             Psychological_Counseling
## 29             History
## 30             Measurement__Evaluation_and_Statistics
## 31             Education_Technology
## 32             Politics
## 33             Nursing
## 34             Teaching_English
## 35             Economics_and_Education
## 36             Design_and_Development_of_Digital_Games
## 37             Sociology
## 38             Instructional_Technology_and_Media
## 39             Psychology
## 40             Education_Leadership
## 41             Reading
## 42             Nutrition
## 43             Dance_Education
## 44             Leadership
## 45             Kinesiology
## 46             Urban_Education
## 47             Science_Education
## 48             Adult_Education
## 49             Linguistics
## 50             Social_Studies
## 51             Education_Policy
## 52             Mathematics
## 53             Communication_Sciences_and_Disorders
## 54             Diabetes_Education
## 55             Developmental_Psychology
## 56             Physiology
## 57             College_Advising
## 58             Philosophy
## 59             Physical_Education
## 60             English_Education
## 61             Gifted_Education
## 62             Arts_Administration
## 63             Change_Leadership
## 64             Cognitive_Science
## 65             Cooperation_and_Conflict_Resolution
## 66             School_Principals
## 67             Literacy
## 68             Early_Childhood_Education
##             PC66
## 1             Education_Technology
## 2             Economics_and_Education
## 3             Social_Organizational_Psychology
## 4             Sociology
## 5             Clinical_Psychology
## 6             Education_Policy
## 7             Bilingual_Bicultural_Education
## 8             Urban_Education
## 9             Gifted_Education
## 10            Arts_Administration
## 11            Science_Education

```

```

## 12             Counseling_Psychology
## 13             Cognitive_Science
## 14      Cooperation_and_Conflict_Resolution
## 15                      cluster
## 16                      Adult_Education
## 17                      Psychology
## 18      Early_Childhood_Education
## 19      Curriculum_and_Teaching
## 20                      Politics
## 21                      History
## 22      Inclusive_Education
## 23      College_Advising
## 24      Spirituality_Mind_Body
## 25      Teaching_English
## 26      Health_Education
## 27      Physiology
## 28      Learning_Analytics
## 29      Behavior_Analysis
## 30      Sexuality__Women_and_Gender_in_Psychology
## 31      English_Education
## 32      Intellectual_Disability_Autism
## 33      International_and_Comparative_Education
## 34      Neuroscience
## 35      Nutrition
## 36      Literacy
## 37      Anthropology
## 38      Creative_Technologies
## 39      Communication_Sciences_and_Disorders
## 40      Linguistics
## 41      Leadership
## 42      Kinesiology
## 43      Social_Studies
## 44      Measurement__Evaluation_and_Statistics
## 45      Motor_Learning_and_Control
## 46      Art_Education
## 47      Psychological_Counseling
## 48      Movement_Science
## 49      Change_Leadership
## 50      School_Principals
## 51      Early_Childhood_Special_Education
## 52      Private_School_Leadership
## 53      Mathematics
## 54      Nursing
## 55      Communication_Media_and_Learning_Technologies
## 56      Design_and_Development_of_Digital_Games
## 57      Philosophy
## 58      Physical_Education
## 59      Higher_and_Postsecondary_Education
## 60      Dance_Education
## 61      Instructional_Technology_and_Media
## 62      Reading
## 63      Music
## 64      Deaf_and_Hard_of_Hearing
## 65      Education_Leadership

```

```

## 66          Diabetes_Education
## 67          School_Psychology
## 68      Developmental_Psychology
##          PC67
## 1          Mathematics
## 2          cluster
## 3          Neuroscience
## 4      Measurement__Evaluation_and_Statistics
## 5          Health_Education
## 6          Physiology
## 7      Developmental_Psychology
## 8          Kinesiology
## 9          Urban_Education
## 10         Spirituality_Mind_Body
## 11      Instructional_Technology_and_Media
## 12         Cognitive_Science
## 13      Sexuality__Women_and_Gender_in_Psychology
## 14         Counseling_Psychology
## 15         Curriculum_and_Teaching
## 16         Politics
## 17         Clinical_Psychology
## 18         Education_Technology
## 19         Change_Leadership
## 20         Reading
## 21      Communication_Media_and_Learning_Technologies
## 22         Science_Education
## 23         Diabetes_Education
## 24      Design_and_Development_of_Digital_Games
## 25         Learning_Analytics
## 26         School_Principals
## 27         School_Psychology
## 28         Leadership
## 29         Adult_Education
## 30         History
## 31         Private_School_Leadership
## 32      Cooperation_and_Conflict_Resolution
## 33         Anthropology
## 34         English_Education
## 35         Social_Organizational_Psychology
## 36         Psychology
## 37         Literacy
## 38         Linguistics
## 39         Movement_Science
## 40      Communication_Sciences_and_Disorders
## 41         Early_Childhood_Special_Education
## 42         Art_Education
## 43         Nursing
## 44         Philosophy
## 45      International_and_Comparative_Education
## 46         Intellectual_Disability_Autism
## 47         Bilingual_Bicultural_Education
## 48         Deaf_and_Hard_of_Hearing
## 49         Inclusive_Education
## 50         Early_Childhood_Education

```


## 51	Teaching_English
## 52	Behavior_Analysis
## 53	Education_Leadership
## 54	Music
## 55	Social_Studies
## 56	Arts_Administration
## 57	College_Advising
## 58	Sociology
## 59	Gifted_Education
## 60	Motor_Learning_and_Control
## 61	Nutrition
## 62	Education_Policy
## 63	Psychological_Counseling
## 64	Creative_Technologies
## 65	Dance_Education
## 66	Physical_Education
## 67	Higher_and_Postsecondary_Education
## 68	Economics_and_Education
##	PC68
## 1	Change_Leadership
## 2	Creative_Technologies
## 3	Communication_Media_and_Learning_Technologies
## 4	Spirituality_Mind_Body
## 5	Psychology
## 6	Movement_Science
## 7	Learning_Analytics
## 8	English_Education
## 9	College_Advising
## 10	Leadership
## 11	Health_Education
## 12	Linguistics
## 13	Sociology
## 14	Physiology
## 15	Inclusive_Education
## 16	Reading
## 17	Politics
## 18	Design_and_Development_of_Digital_Games
## 19	Economics_and_Education
## 20	Nursing
## 21	Early_Childhood_Education
## 22	Clinical_Psychology
## 23	Kinesiology
## 24	Social_Organizational_Psychology
## 25	History
## 26	cluster
## 27	Literacy
## 28	Arts_Administration
## 29	Curriculum_and_Teaching
## 30	Developmental_Psychology
## 31	Urban_Education
## 32	Diabetes_Education
## 33	Dance_Education
## 34	Measurement__Evaluation_and_Statistics
## 35	Cooperation_and_Conflict_Resolution

```

## 36                Gifted_Education
## 37                Education_Policy
## 38      Communication_Sciences_and_Disorders
## 39                        Anthropology
## 40      Higher_and_Postsecondary_Education
## 41      Intellectual_Disability_Autism
## 42                        Physical_Education
## 43                        Nutrition
## 44                        Art_Education
## 45      Motor_Learning_and_Control
## 46                        Neuroscience
## 47      Bilingual_Bicultural_Education
## 48                        Science_Education
## 49                        School_Principals
## 50                        Cognitive_Science
## 51      Instructional_Technology_and_Media
## 52      Private_School_Leadership
## 53      Teaching_English
## 54      Early_Childhood_Special_Education
## 55      Psychological_Counseling
## 56      Sexuality__Women_and_Gender_in_Psychology
## 57      Behavior_Analysis
## 58      Counseling_Psychology
## 59      School_Psychology
## 60                        Music
## 61                        Social_Studies
## 62      Deaf_and_Hard_of_Hearing
## 63      International_and_Comparative_Education
## 64      Education_Leadership
## 65                        Philosophy
## 66                        Mathematics
## 67      Education_Technology
## 68      Adult_Education

```

Just looking at the highest loading programs in the first few PCs, a few suggestions on why the most loaded factors are together:

- PC1 - Economics, Policy, Principals, Politics, Org Psych are people, disciplines, or processes related to CHANGE.
- PC2 - Body/Physical/Medical things.
- PC3 - HUD things. Math is up there because analytics (HUDK) and stats (HUDM) are mathy. Lower down the list are MSTU stuff and Neuroscience which relate to the CogSci program. Clearest signal here, probably because these are the programs people are familiar with.
- PC4 - Language things.
- PC5 - ???
- PC6 - ???

Looks like things get pretty iffy after 4.

Looking at the lowest loading programs in the first few PCs, a few suggestions on why the least loaded factors are together:

- PC1 - Small picture things relating to concrete subject studies, or specialised instruction. Opposed to 'big picture' of the highest loadings in this component.

- PC2 - Abstract things like dance, reading, gifted education, as opposed to concrete body physical things of the highest loadings in this component. Though this pattern is far from clean - motor learning and control has the 2nd lowest loading, and dance arguably has a physical aspect.
- PC3 - Qualitative disciplines. Some people may have viewed these disciplines as qualitative fields (history, sociology, spirituality, sociology, linguistics) and the highest loadings as quantitative fields (stats, math, analytics).
- PC4 - Applied psychology and behaviour. Somehow seen to be very different from language things.
- PC5 - ???
- PC6 - ???