Principal 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

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

```r
#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.

```r
#You can install the corrplot package to plot some pretty correlation matrices (sometimes called correl
library(corrplot)
```

```
## corrplot 0.84 loaded
```

```r
#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")
```
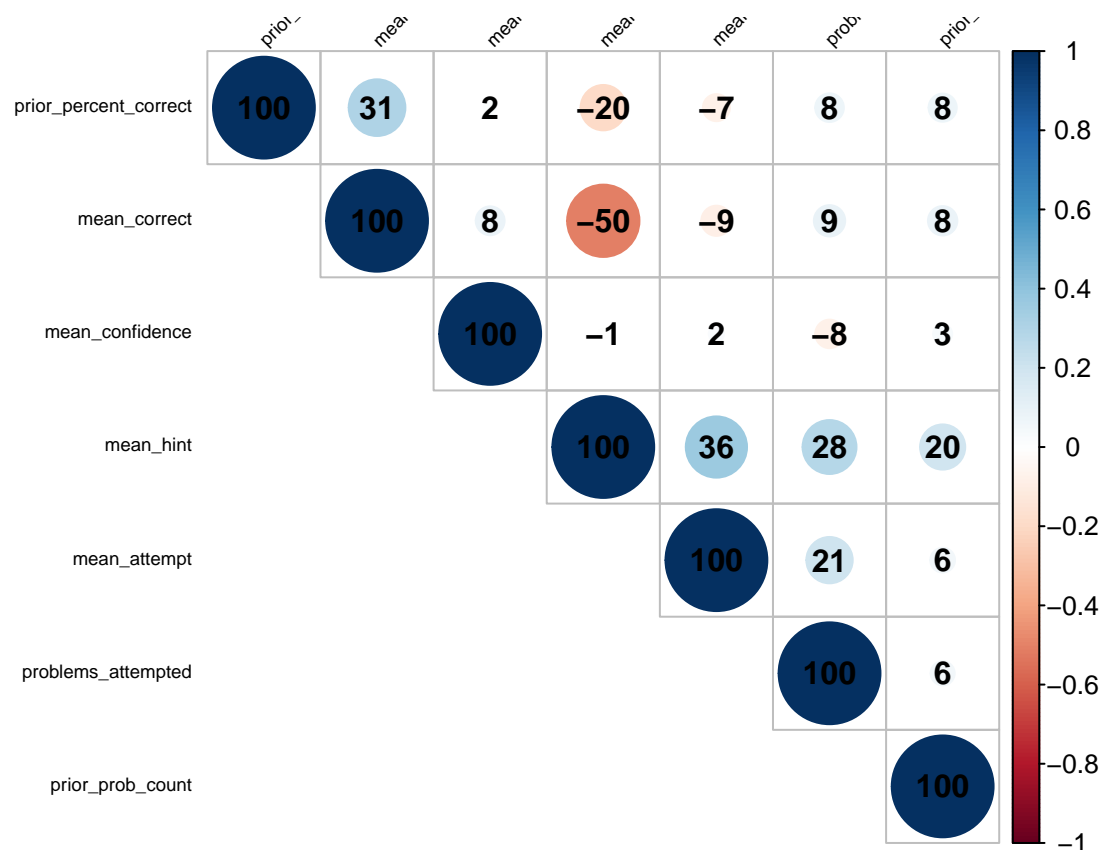


```
#Study your correlogram image and save it, you will need it later
```

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

```r
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.

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

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

```r
#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
```

```r
#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
```

```r
#We can look at this to get an idea of which components we should keep and which we should drop
plot(pca, type = "lines")
```

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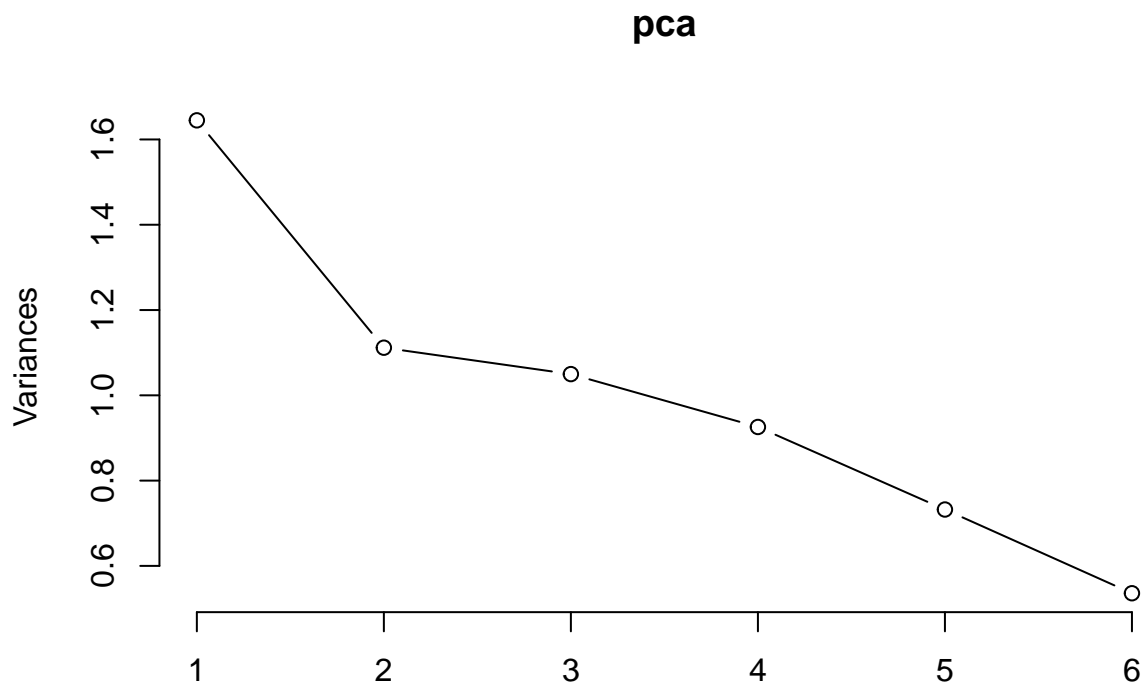
Decide which components you would drop and remove them from your data set.

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")
```
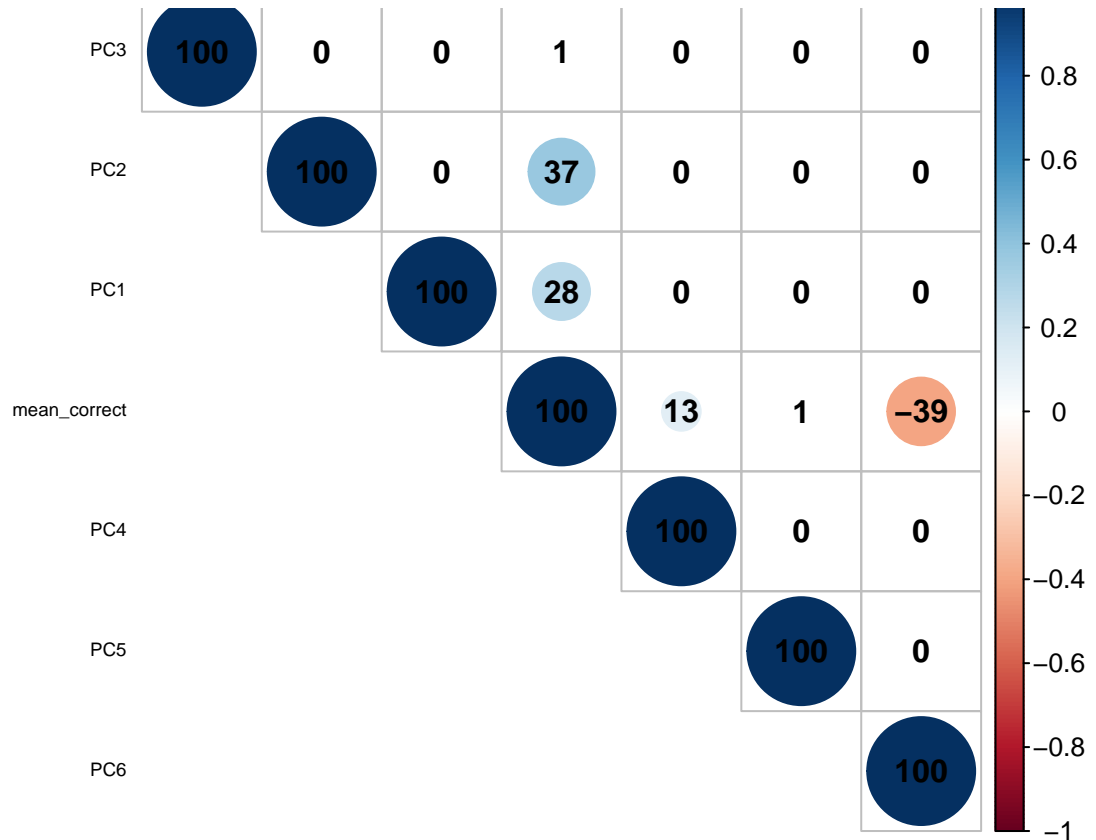

Now print out the eigenvectors (often called loadings) for the components you generated:

```
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
```

5

```r
#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
```

```r
#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)
```
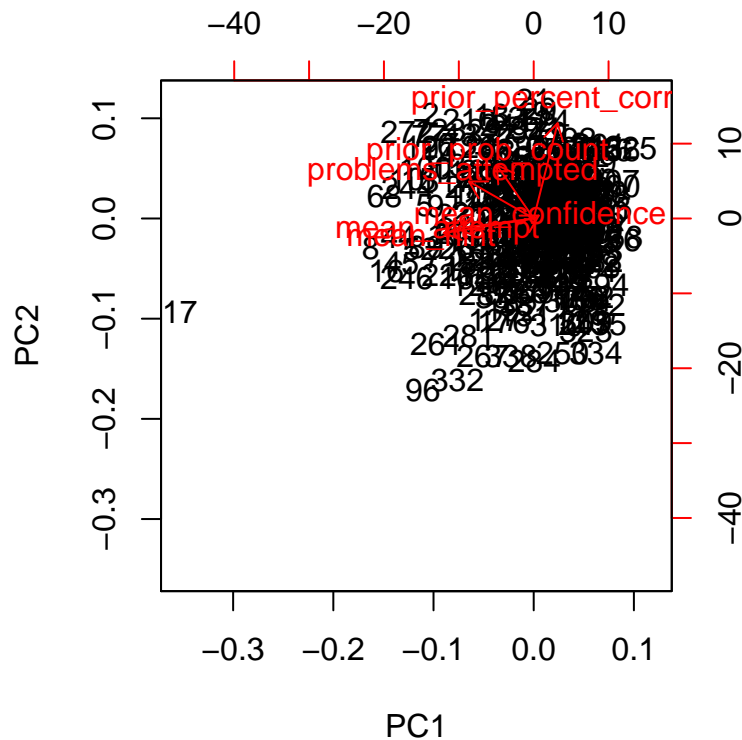
```r
#Calculate values for each student that represent these your composite variables and then create a new

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")
```
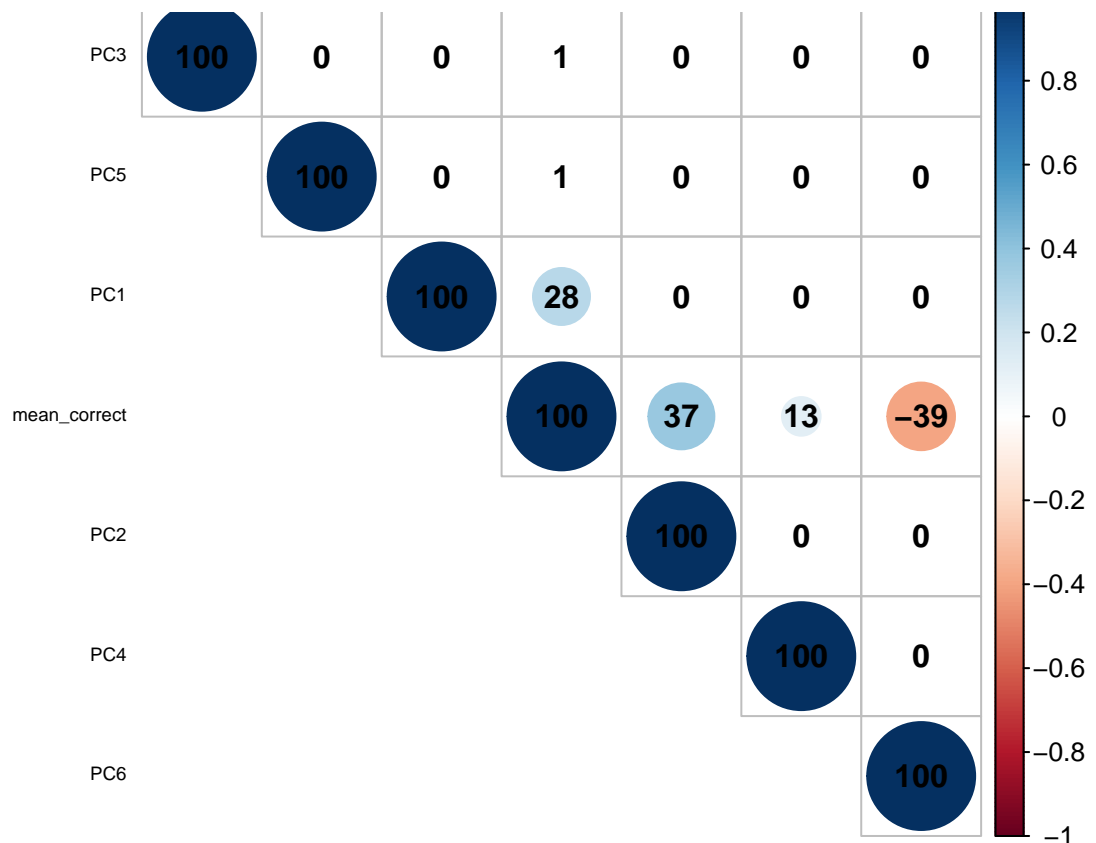
Part III

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")
```

```
programs_numbers_only <- select(programs_only, -program)

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

```
#Generate pairwise correlations
COR_programs <- cor(programs_numbers_only)

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
         )
```



```
#Then, scale and center your data for easier interpretation
programs_scaled <- scale(programs_numbers_only, center = TRUE)
```
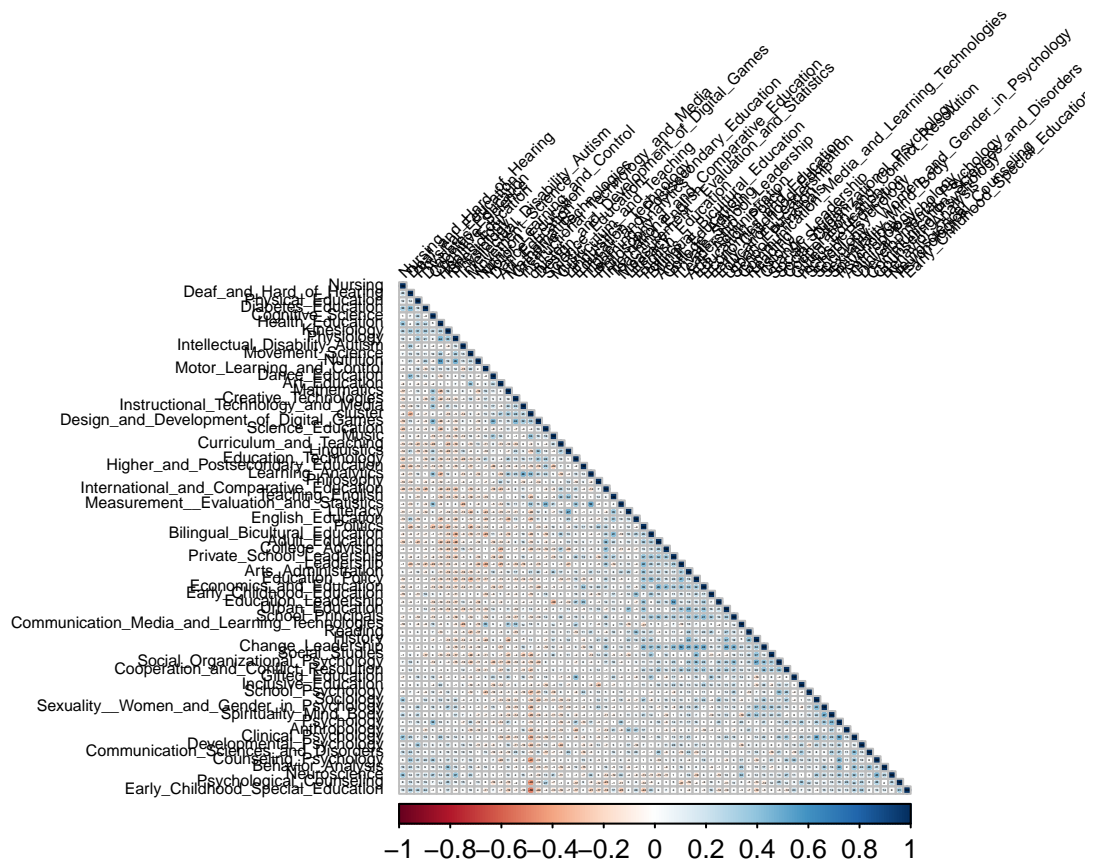
```
#Fix diagonals to 1, because there should be full correspondence between something and itself. This is
#well in the data because not everyone got an option to select something on the diagonal.
diag(programs_scaled) <- 1

#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
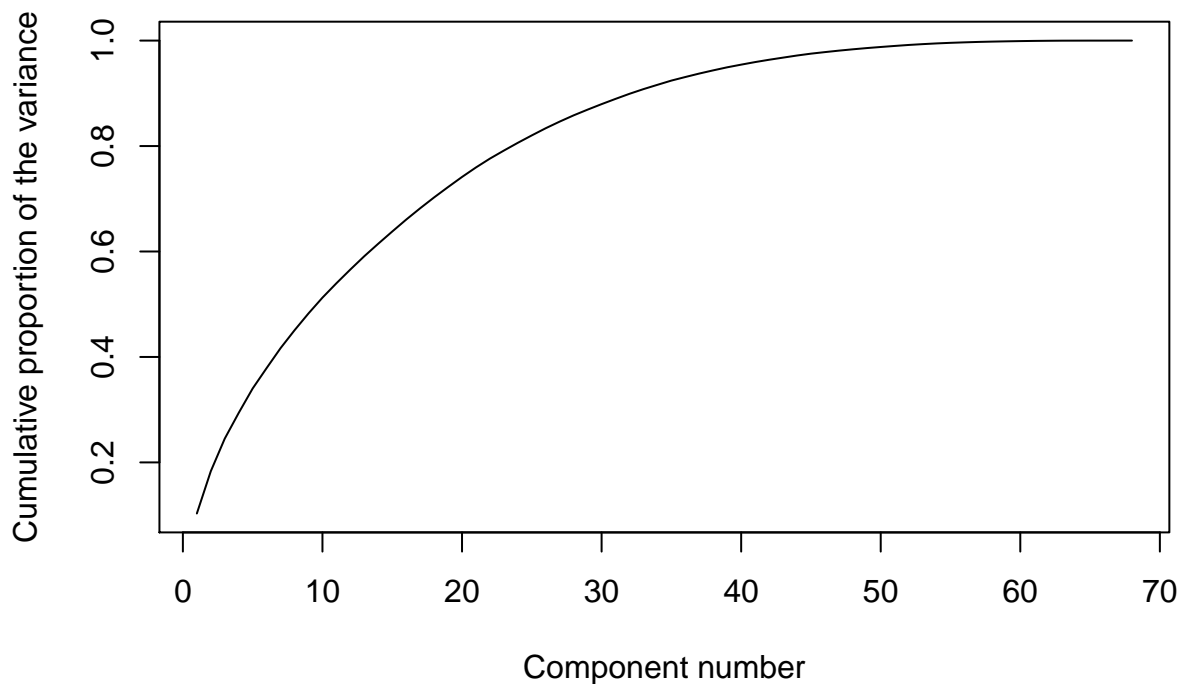

```
#Now, create a data frame of the transformed data from your pca.
pca_programs_df <- data.frame(pca_programs$x)
```

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'

```r
#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, string
}

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

```r
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
```

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```
## 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
```

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```
## 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
```

```
## 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
```
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```
## 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
## 69                                     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
```

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```
## 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
```

```
## 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
```

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## 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
```

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## 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
## 57                                          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
```

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```
## 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
```

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## 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
```

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```
## 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
```

```
## 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
```

```
## 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
```

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```
## 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
```

```
##                                              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
```

```
## 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
```

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## 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
```

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```
## 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 - ???