

Multivariate exploration of the questionnaire and typology of the surveyed people

The results are provided by the
EnQuireR package

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1 Quick overview of the questionnaire

The analysis was performed on 100 individuals described by 38 variables:

- Extra.campus.activity (No , Yes)
- Member.of.BDE.association (No , Yes)
- Member.of.La.Ruee.vers.Orge.association (No , Yes)
- Member.of.Solinsfa.association (No , Yes)
- Member.of.Isogone.association (No , Yes)
- Member.of.Fest.No.association (No , Yes)
- Member.of.other.association (No , Yes)
- Member.of.no.association (No , Yes)
- Studies.as.expected (Not at all , Not really , Yes quite , Yes totally)
- Feel.fulfilled.by.studies (Neither , Not at all , Not really , Yes quite , Yes totally)
- Quality.of.taught.courses (Acceptable , Correct , Quite satisfying , satisfying , Very satisfying)
- Interest.of.taught.courses (Acceptable , Correct , Excellent , Quite satisfying , Quite unsatisfying , satisfying , Unsatisfying , Very satisfying , Very unsatisfying)
- Trainig.course.in.farm (Acceptable , Correct , Excellent , Quite satisfying , Quite unsatisfying , Quite unsatisfying , satisfying , Unsatisfying , Very satisfying , Very unsatisfying)
- Linguistic.training.course (Acceptable , Correct , Excellent , Quite satisfying , Quite unsatisfying , satisfying , Unsatisfying , Very satisfying , Very unsatisfying)
- Training.course.in.a.French.food.industry (Acceptable , Correct , Excellent , Quite satisfying , satisfying , Very satisfying)
- Master.project.abroad (Correct , Excellent , Quite satisfying , satisfying , Unsatisfying , Very satisfying)
- Personal.investment.for.projects (Acceptable , Correct , Excellent , Quite satisfying , Quite unsatisfying , satisfying , Very satisfying , Very unsatisfying)
- Feel.under.pressure (Always , Never , Often , Sometimes)
- Need.more.time.for.working (No , Yes)
- Need.more.time.for.the.personal.life (No , Yes)
- Need.more.time.for.sleep (No , Yes)
- Everyday.life.festive (No , Yes)
- Everyday.life.awesome (No , Yes)
- Everyday.life.pleasant (No , Yes)
- Everyday.life.lots.of.support (No , Yes)
- Everyday.life.studious (No , Yes)

- Everyday.life.oppressive (No , Yes)
- Everyday.life.routine (No , Yes)
- Everyday.life.boring (No , Yes)
- Everyday.life.endless (No , Yes)
- Everyday.life.tiring (No , Yes)
- Future.work.in.food.processing.company (No , Yes)
- Future.job.in.connection.with.food (No , Yes)
- Future.not.specially.work.in.food.processing.industry (No , Yes)
- Future.go.abroad (No , Yes)
- Future.continue.studies (No , Yes)
- Future.change.counseling (No , Yes)
- Future.no.idea (No , Yes)

Moreover, the dataset contained 0% of missing values.

2 Multivariate exploration of the questionnaire

2.1 Graphical representations of the questionnaire

The following results are obtained by performing a Multiple Correspondence Analysis (MCA) on the previous 38 variables. This method provides two important graphical displays, a representation of the individuals (surveyed people) and a representation of the categories (answers given by the surveyed people). The first two main axes of variability explain 10.46% of the information contained in the dataset (5.49% for the first factorial axis and 4.96% for the second one). In some cases the analyst may want to introduce supplementary quantitative variables.

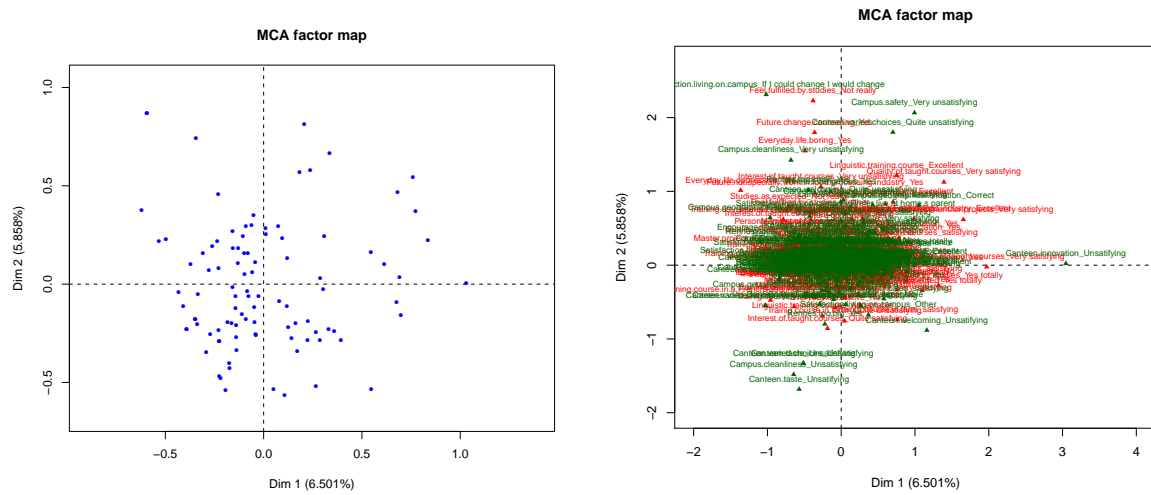


Figure 1: Representations of the individuals and of the categories on axes 1 and 2

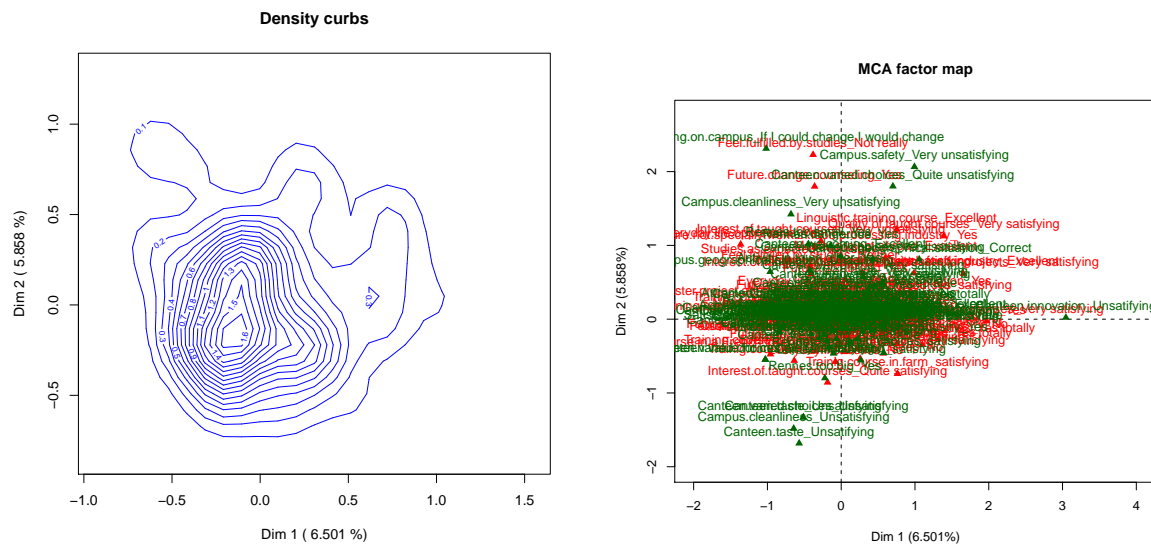


Figure 2: Representation of the individuals using density curbs and enhanced representation of the categories

2.2 Highlights on the two principal axes of variability

2.2.1 Characterization of the first factorial axis

The most meaningful variables characterizing the first factorial axis are:

- Feel.fulfilled.by.studies
- Studies.as.expected
- Training.course.in.a.French.food.industry
- Everyday.life.lots.of.support
- Interest.of.taught.courses
- Personal.investment.for.projects
- Member.of.BDE.association
- Future.work.in.food.processing.company
- Master.project.abroad
- Trainig.course.in.farm
- Everyday.life.routine
- Everyday.life.awesome
- Everyday.life.oppressive
- Extra.campus.activity
- Need.more.time.for.the.personal.life
- Future.not.specially.work.in.food.processing.industry
- Quality.of.taught.courses
- Future.change.counseling
- Linguistic.training.course
- Everyday.life.studious
- Need.more.time.for.sleep

The most meaningful categories characterizing the positive side of the first axis are:

- Everyday.life.lots.of.support_No
 - Contribution: 2.13
 - V-Test: 4.99
 - Frequency in the population: 61 %
- Member.of.BDE.association_No
 - Contribution: 1.05
 - V-Test: 4.3
 - Frequency in the population: 74 %
- Feel.fulfilled.by.studies_Not at all
 - Contribution: 2.09

- V-Test: 3.11
- Frequency in the population: 1 %
- **Studies.as.expected_Not at all**
 - Contribution: 2.09
 - V-Test: 3.11
 - Frequency in the population: 1 %
- **Future.work.in.food.processing.company_No**
 - Contribution: 0.72
 - V-Test: 4.05
 - Frequency in the population: 80 %
- **Personal.investment.for.projects_Correct**
 - Contribution: 1.95
 - V-Test: 3.3
 - Frequency in the population: 18 %
- **Everyday.life.routine_Yes**
 - Contribution: 2.04
 - V-Test: 3.65
 - Frequency in the population: 30 %
- **Everyday.life.awesome_No**
 - Contribution: 0.47
 - V-Test: 3.54
 - Frequency in the population: 83 %
- **Trainig.course.in.farm_Unsatisfying**
 - Contribution: 1.72
 - V-Test: 2.97
 - Frequency in the population: 11 %
- **Interest.of.taught.courses_Acceptable**
 - Contribution: 0.98
 - V-Test: 2.34
 - Frequency in the population: 18 %

The most meaningful categories characterizing the negative side of the first axis are:

- **Feel.fulfilled.by.studies_Yes totally**
 - Contribution: 8.33
 - V-Test: -7.03
 - Frequency in the population: 23 %
- **Studies.as.expected_Yes totally**
 - Contribution: 6.55
 - V-Test: -6.36
 - Frequency in the population: 26 %

- `Training.course.in.a.French.food.industry_Excellent`
 - Contribution: 4.04
 - V-Test: -4.93
 - Frequency in the population: 24 %
- `Everyday.life.lots.of.support_Yes`
 - Contribution: 3.33
 - V-Test: -4.99
 - Frequency in the population: 39 %
- `Member.of.BDE.association_Yes`
 - Contribution: 2.99
 - V-Test: -4.3
 - Frequency in the population: 26 %
- `Interest.of.taught.courses_Very satisfying`
 - Contribution: 3.77
 - V-Test: -4.26
 - Frequency in the population: 5 %
- `Future.work.in.food.processing.company_Yes`
 - Contribution: 2.88
 - V-Test: -4.05
 - Frequency in the population: 20 %
- `Everyday.life.routine_No`
 - Contribution: 0.87
 - V-Test: -3.65
 - Frequency in the population: 70 %
- `Everyday.life.awesome_Yes`
 - Contribution: 2.27
 - V-Test: -3.54
 - Frequency in the population: 17 %
- `Quality.of.taught.courses_Very satisfying`
 - Contribution: 1.75
 - V-Test: -2.91
 - Frequency in the population: 6 %

2.2.2 Characterization on the second factorial axis

The most meaningful variables characterizing the second factorial axis are:

- `Interest.of.taught.courses`
- `Master.project.abroad`
- `Feel.fulfilled.by.studies`
- `Trainig.course.in.farm`

- Future.change.counseling
- Future.not.specially.work.in.food.processing.industry
- Linguistic.training.course
- Future.go.abroad
- Future.job.in.connection.with.food
- Need.more.time.for.sleep
- Training.course.in.a.French.food.industry
- Everyday.life.festive
- Member.of.BDE.association
- Everyday.life.studious
- Quality.of.taught.courses
- Studies.as.expected
- Everyday.life.routine
- Member.of.La.Ruee.vers.Orge.association
- Member.of.Solinsfa.association
- Personal.investment.for.projects
- Extra.campus.activity

The most meaningful categories characterizing the positive side of the second axis are:

- Future.change.counseling_Yes
 - Contribution: 5.36
 - V-Test: 4.93
 - Frequency in the population: 9 %
- Future.not.specially.work.in.food.processing.industry_Yes
 - Contribution: 4.25
 - V-Test: 4.65
 - Frequency in the population: 19 %
- Linguistic.training.course_Excellent
 - Contribution: 3.93
 - V-Test: 4.25
 - Frequency in the population: 10 %
- Future.go.abroad_Yes
 - Contribution: 2.35
 - V-Test: 3.89
 - Frequency in the population: 36 %
- Trainig.course.in.farm_Quite satisfying
 - Contribution: 2.06

- V-Test: 3.3
- Frequency in the population: 22 %
- **Feel.fulfilled.by.studies_Not really**
 - Contribution: 5.13
 - V-Test: 4.75
 - Frequency in the population: 6 %
- **Trainig.course.in.farm_Very unsatisfying**
 - Contribution: 1.62
 - V-Test: 2.66
 - Frequency in the population: 5 %
- **Future.job.in.connection.with.food_No**
 - Contribution: 1.38
 - V-Test: 3.55
 - Frequency in the population: 55 %
- **Need.more.time.for.sleep_Yes**
 - Contribution: 1.01
 - V-Test: 3.55
 - Frequency in the population: 67 %
- **Everyday.life.festive_Yes**
 - Contribution: 0.7
 - V-Test: 3.27
 - Frequency in the population: 73 %

The most meaningful categories characterizing the negative side of the second axis are:

- **Interest.of.taught.courses_Quite satisfying**
 - Contribution: 6.13
 - V-Test: -6.1
 - Frequency in the population: 32 %
- **Future.change.counseling_No**
 - Contribution: 0.53
 - V-Test: -4.93
 - Frequency in the population: 91 %
- **Future.not.specially.work.in.food.processing.industry_No**
 - Contribution: 1
 - V-Test: -4.65
 - Frequency in the population: 81 %
- **Feel.fulfilled.by.studies_Yes quite**
 - Contribution: 1.63
 - V-Test: -4.01

- Frequency in the population: 58 %
- **Master.project.abroad_satisfying**
 - Contribution: 1.92
 - V-Test: -3.39
 - Frequency in the population: 31 %
- **Future.go.abroad_No**
 - Contribution: 1.32
 - V-Test: -3.89
 - Frequency in the population: 64 %
- **Future.job.in.connection.with.food_Yes**
 - Contribution: 1.68
 - V-Test: -3.55
 - Frequency in the population: 45 %
- **Need.more.time.for.sleep_No**
 - Contribution: 2.04
 - V-Test: -3.55
 - Frequency in the population: 33 %
- **Everyday.life.festive_No**
 - Contribution: 1.9
 - V-Test: -3.27
 - Frequency in the population: 27 %
- **Member.of.BDE.association_No**
 - Contribution: 0.6
 - V-Test: -3.1
 - Frequency in the population: 74 %

3 Typology on the individuals

3.1 Choice of the number of clusters

The ascendant hierarchical clustering (AHC) lead to a partition made of 3 clusters. Those clusters are displayed in the following representations: a graphical representation of the individuals according to the cluster they belong to, a representation of the center of gravity of each group enhanced by a confidence ellipse, a representation of the individuals according to the cluster they belong to by the use of density curbs.

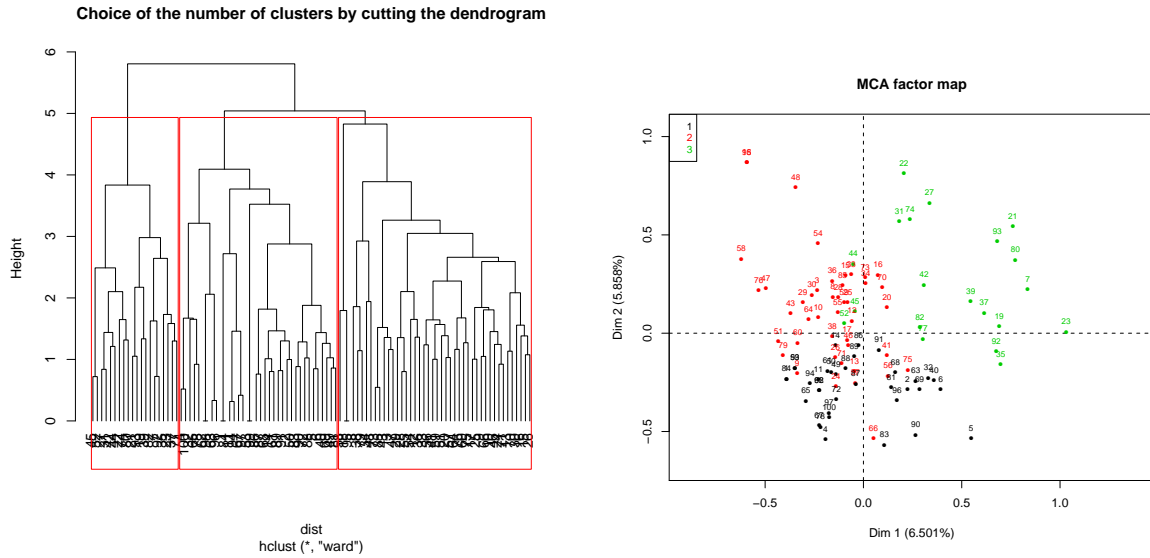


Figure 3: Number of clusters chosen by the analyst; representation of the individuals according to their cluster

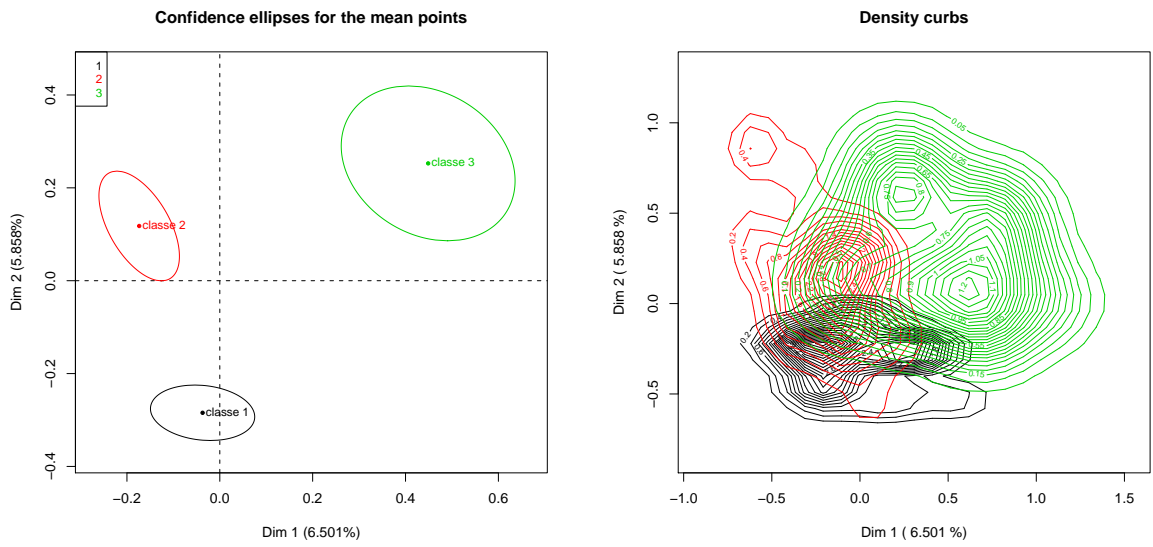


Figure 4: Centers of gravity with confidence ellipses; representation of the individuals according to their cluster with density curbs

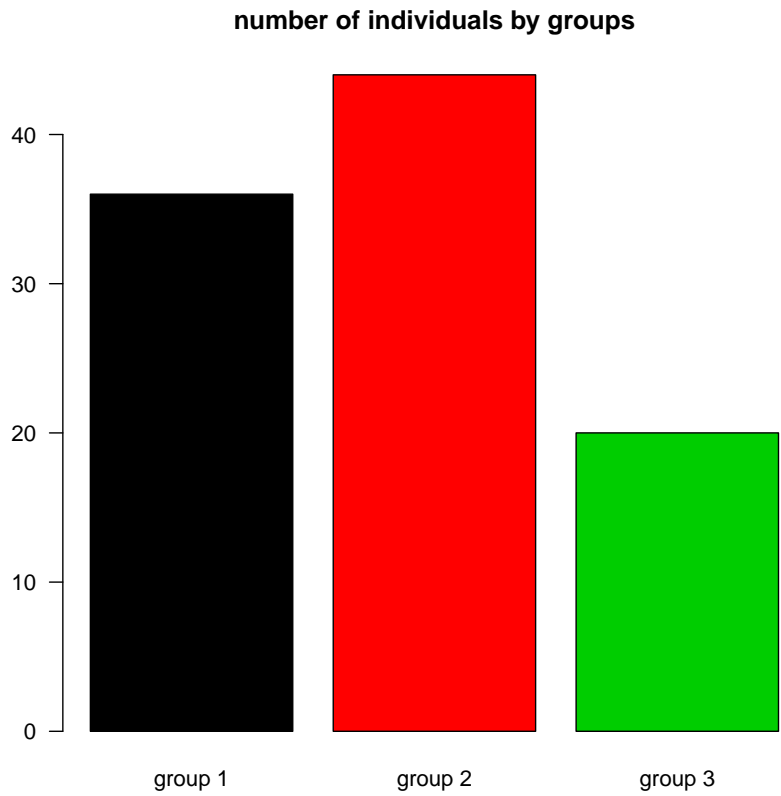


Figure 5: Number of individuals per cluster

3.2 Simultaneous comparison of the clusters with respect with the most relevant variables

3.2.1 Number of individuals by cluster for the variable Interest.of.taught.courses

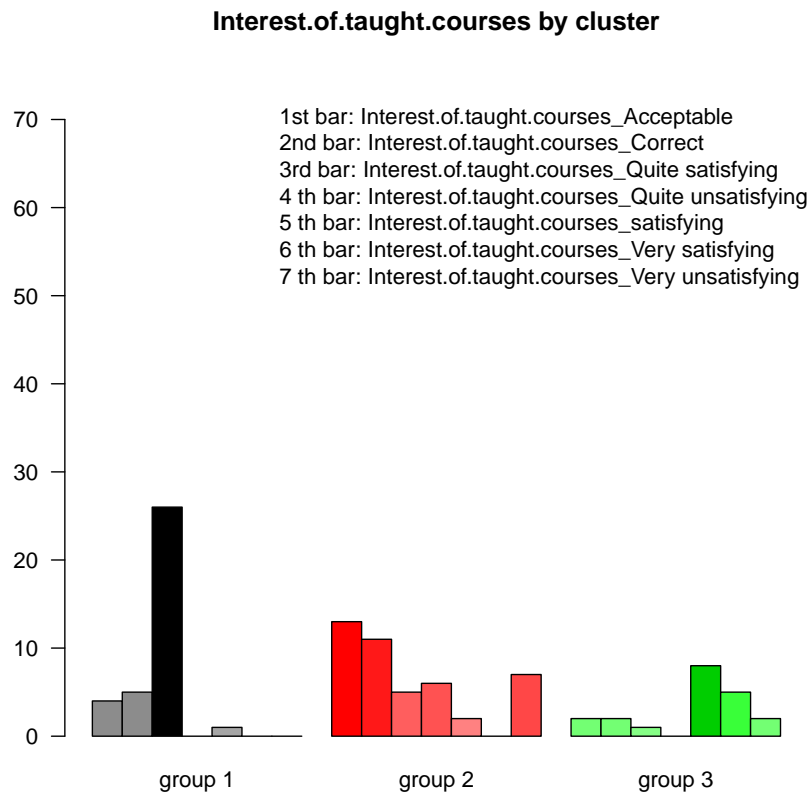


Figure 6: Variable Interest.of.taught.courses

3.2.2 Number of individuals by cluster for the variable Trainig.course.in.farm

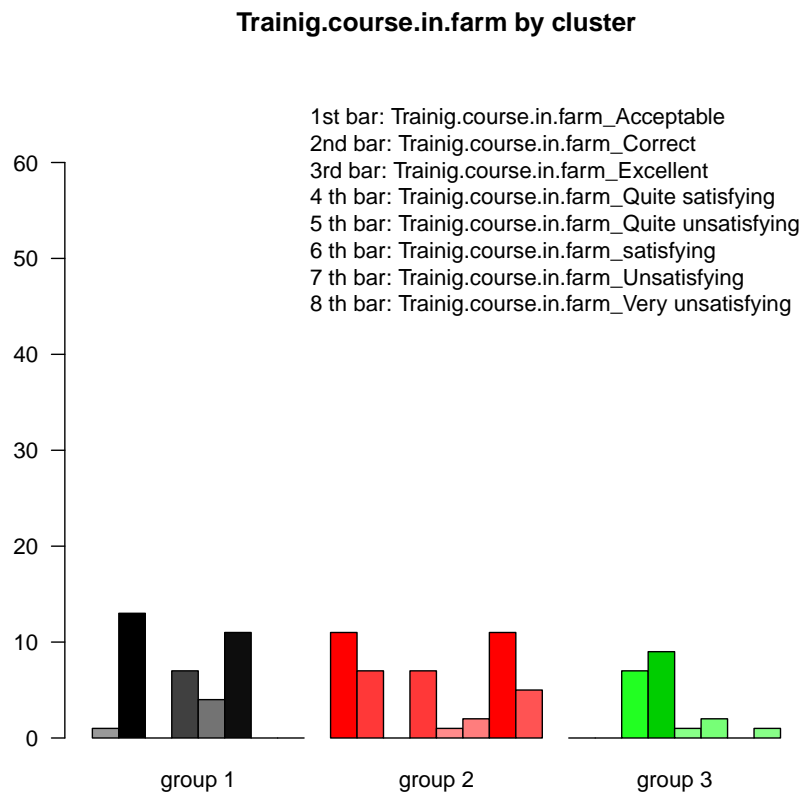


Figure 7: Variable Trainig.course.in.farm

3.2.3 Number of individuals by cluster for the variable Training.course.in.a.French.food.industry

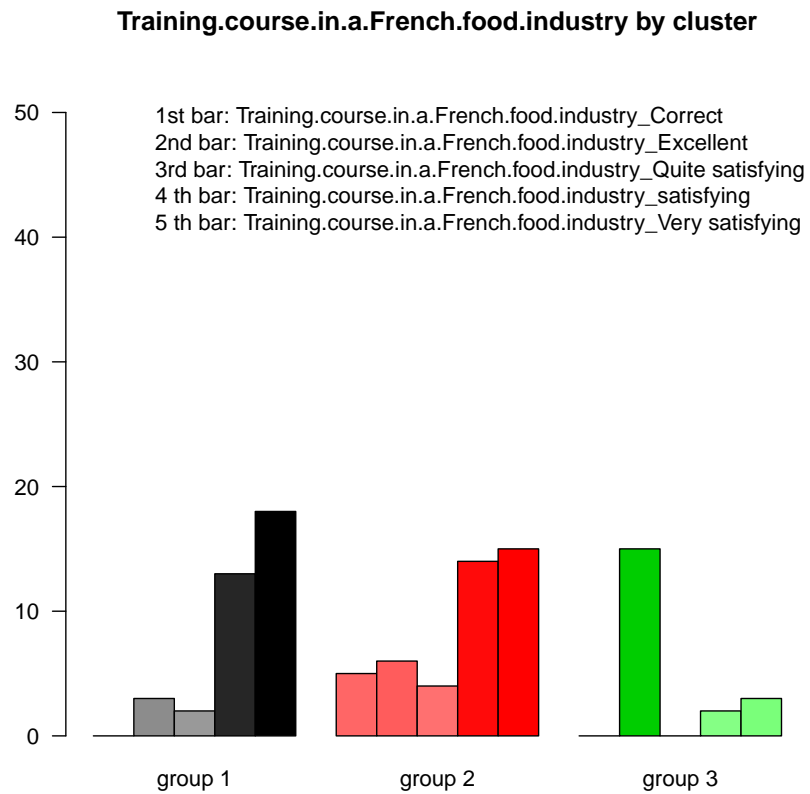


Figure 8: Variable Training.course.in.a.French.food.industry

3.2.4 Number of individuals by cluster for the variable Feel.fulfilled.by.studies

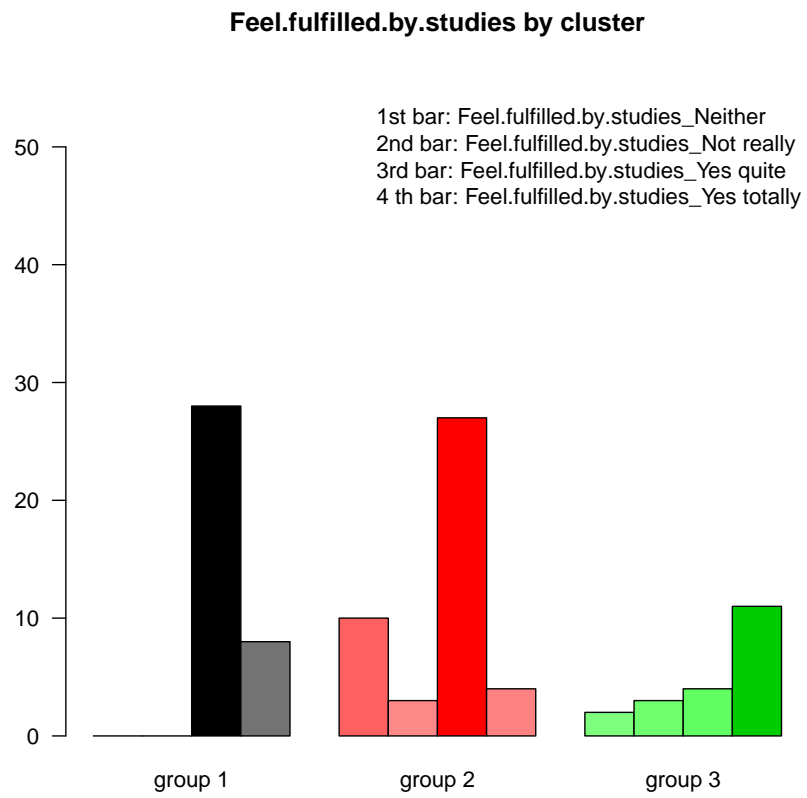


Figure 9: Variable Feel.fulfilled.by.studies

3.2.5 Number of individuals by cluster for the variable Master.project.abroad

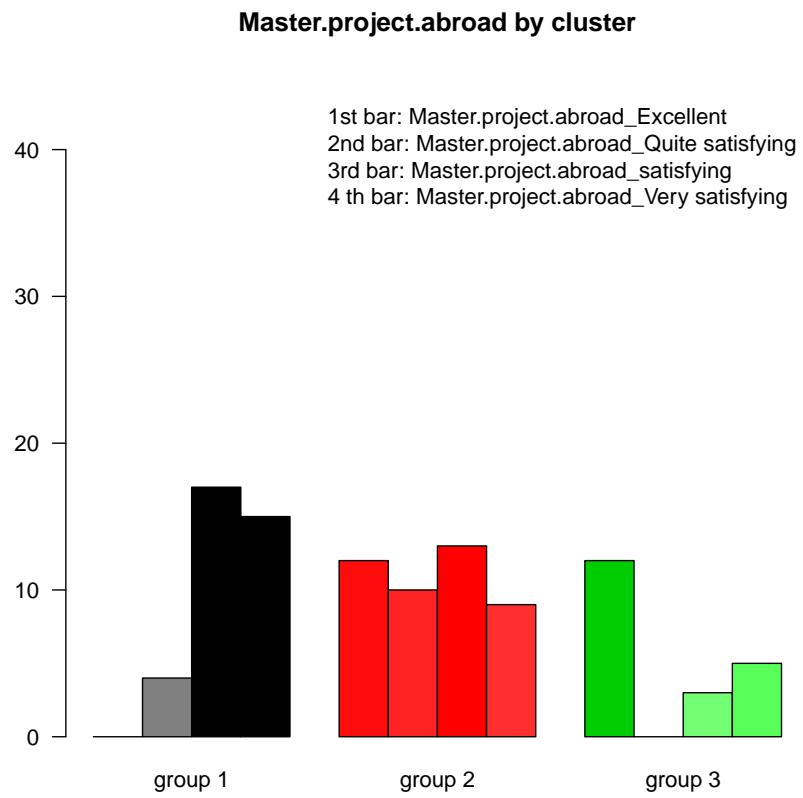


Figure 10: Variable Master.project.abroad

3.2.6 Number of individuals by cluster for the variable Linguistic.training.course

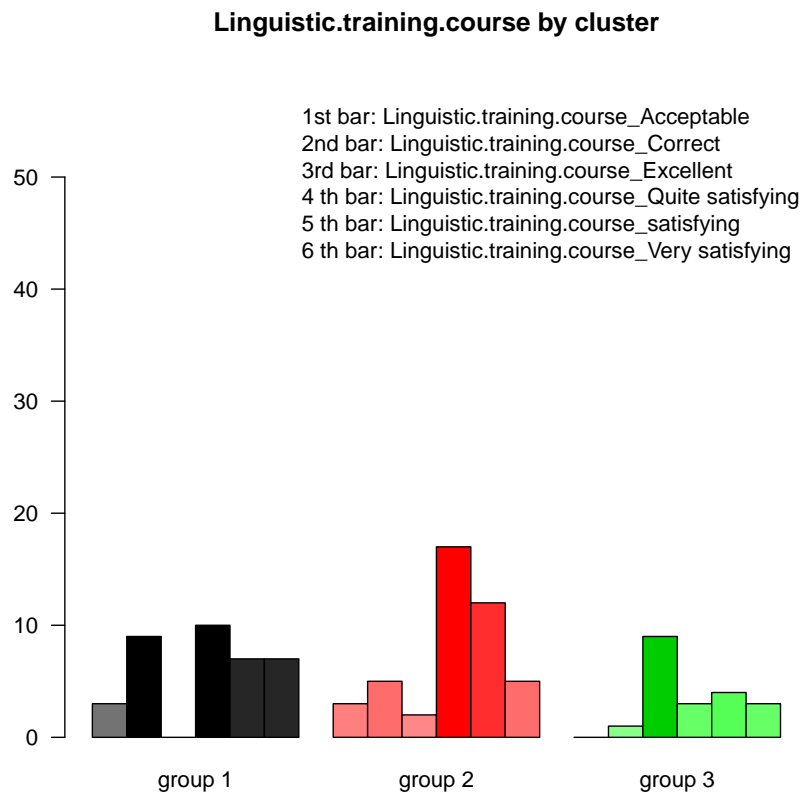


Figure 11: Variable Linguistic.training.course

3.2.7 Number of individuals by cluster for the variable Quality.of.taught.courses

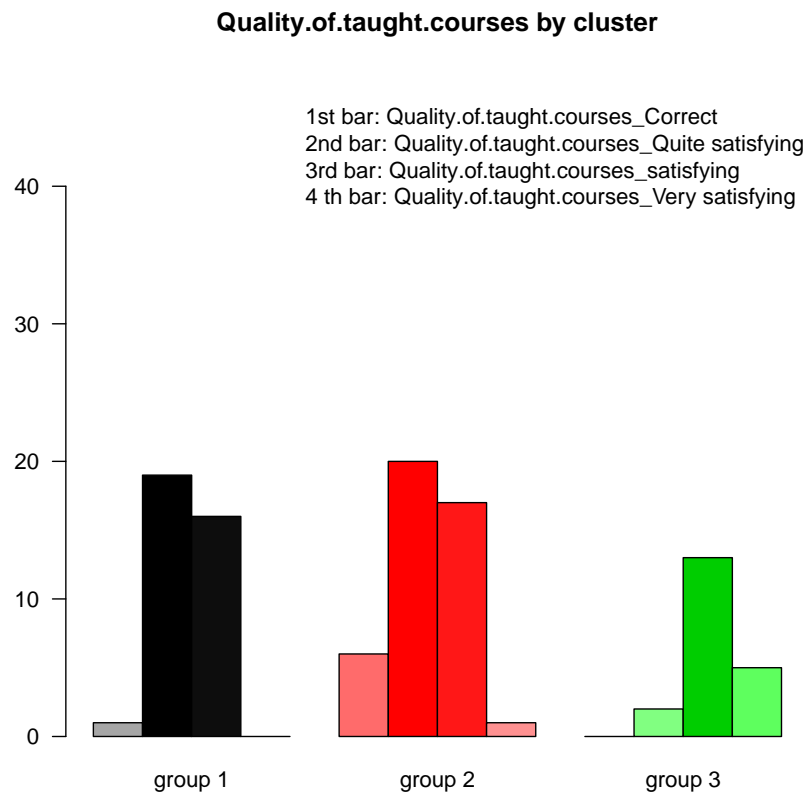


Figure 12: Variable Quality.of.taught.courses

3.2.8 Number of individuals by cluster for the variable Studies.as.expected

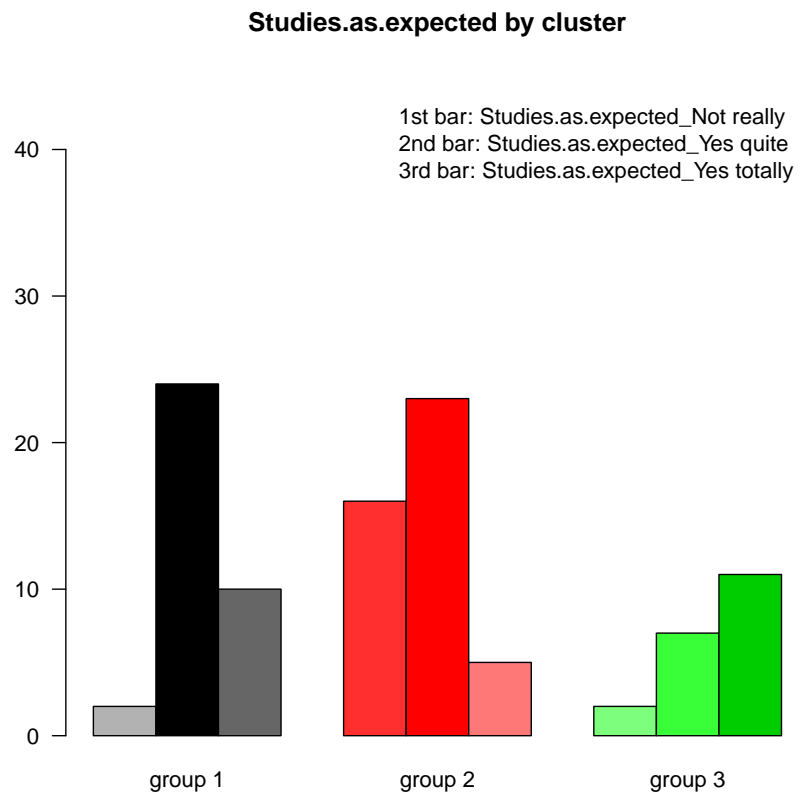


Figure 13: Variable Studies.as.expected

3.2.9 Number of individuals by cluster for the variable Campus.geographical.situation

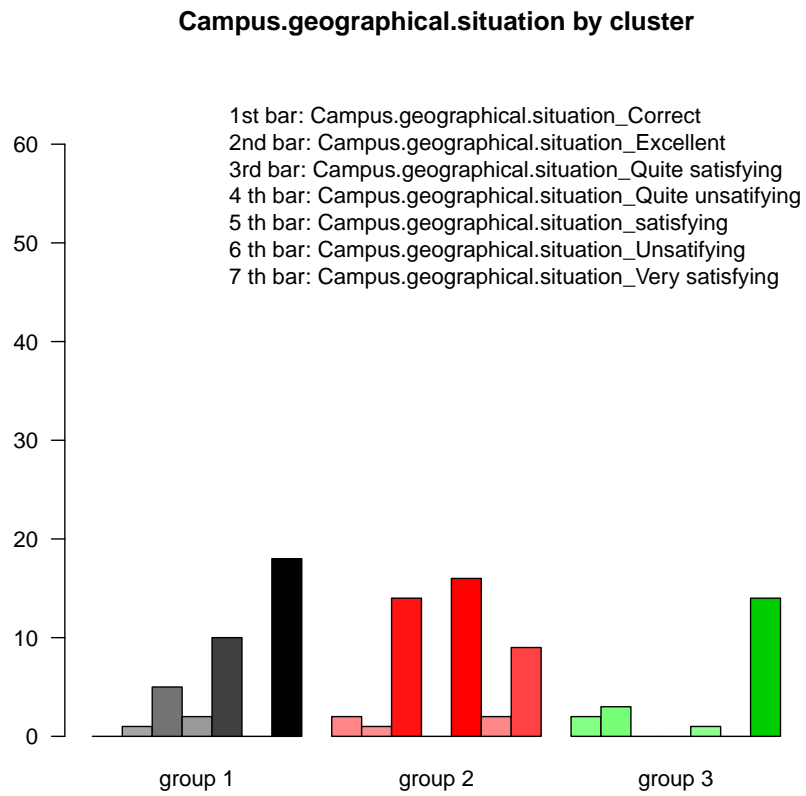


Figure 14: Variable Campus.geographical.situation

3.2.10 Number of individuals by cluster for the variable Everyday.life.festive

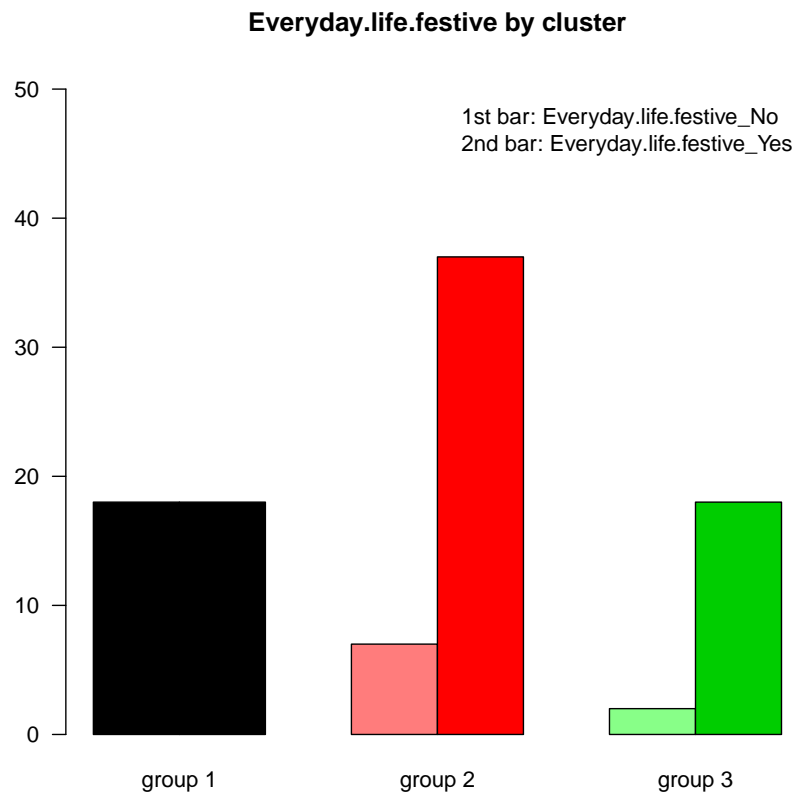


Figure 15: Variable Everyday.life.festive

3.3 Automatic description of each cluster

The cluster 1 (36 individuals) includes the individuals possessing the following categories:

- **Interest.of.taught.courses=Interest.of.taught.courses_Quite satisfying**
32 % of the individuals possess this category in the global population versus 72.22 % in the cluster 1 .
Moreover, 81.25 % of the individuals possessing this category belong to the cluster 1 .
- **Everyday.life.festive=Everyday.life.festive_No**
27 % of the individuals possess this category in the global population versus 50 % in the cluster 1 .
Moreover, 66.67 % of the individuals possessing this category belong to the cluster 1 .
- **Fu-
ture.not.specially.work.in.food.processing.industry=Future.not.specially.work.in.food.processing.industry**
81 % of the individuals possess this category in the global population versus 97.22 % in the cluster 1 .
Moreover, 43.21 % of the individuals possessing this category belong to the cluster 1 .
- **Trainig.course.in.farm=Trainig.course.in.farm_satisfying**
15 % of the individuals possess this category in the global population versus 30.56 % in the cluster 1 .
Moreover, 73.33 % of the individuals possessing this category belong to the cluster 1 .
- **Trainig.course.in.farm=Trainig.course.in.farm_Correct**
20 % of the individuals possess this category in the global population versus 36.11 % in the cluster 1 .
Moreover, 65 % of the individuals possessing this category belong to the cluster 1 .
- **Feel.fulfilled.by.studies=Feel.fulfilled.by.studies_Yes quite**
59 % of the individuals possess this category in the global population versus 77.78 % in the cluster 1 .
Moreover, 47.46 % of the individuals possessing this category belong to the cluster 1 .
- **Canteen.innovation=Canteen.innovation_Quite satisfying**
32 % of the individuals possess this category in the global population versus 50 % in the cluster 1 .
Moreover, 56.25 % of the individuals possessing this category belong to the cluster 1 .
- **Activity.in.town.shopping=Activity.in.town.shopping_No**
23 % of the individuals possess this category in the global population versus 38.89 % in the cluster 1 .
Moreover, 60.87 % of the individuals possessing this category belong to the cluster 1 .
- **Everyday.life.awesome=Everyday.life.awesome_Yes**
17 % of the individuals possess this category in the global population versus 30.56 % in the cluster 1 .
Moreover, 64.71 % of the individuals possessing this category belong to the cluster 1 .
- **Member.of.BDE.association=Member.of.BDE.association_No**
74 % of the individuals possess this category in the global population versus 88.89 % in the cluster 1 .
Moreover, 43.24 % of the individuals possessing this category belong to the cluster 1 .

The cluster 2 (44 individuals) includes the individuals possessing the following categories:

- **Trainig.course.in.farm=Trainig.course.in.farm_Unsatisfying**
11 % of the individuals possess this category in the global population versus 25 % in the cluster 2 .
Moreover, 100 % of the individuals possessing this category belong to the cluster 2 .
- **Everyday.life.lots.of.support=Everyday.life.lots.of.support_No**
61 % of the individuals possess this category in the global population versus 81.82 % in the cluster 2 .
Moreover, 59.02 % of the individuals possessing this category belong to the cluster 2 .
- **Canteen.innovation=Canteen.innovation_Acceptable**
18 % of the individuals possess this category in the global population versus 34.09 % in the cluster 2 .
Moreover, 83.33 % of the individuals possessing this category belong to the cluster 2 .
- **Everyday.life.awesome=Everyday.life.awesome_No**
83 % of the individuals possess this category in the global population versus 97.73 % in the cluster 2 .
Moreover, 51.81 % of the individuals possessing this category belong to the cluster 2 .
- **Studies.as.expected=Studies.as.expected_Not really**
20 % of the individuals possess this category in the global population versus 36.36 % in the cluster 2 .
Moreover, 80 % of the individuals possessing this category belong to the cluster 2 .
- **Trainig.course.in.farm=Trainig.course.in.farm_Acceptable**
12 % of the individuals possess this category in the global population versus 25 % in the cluster 2 .
Moreover, 91.67 % of the individuals possessing this category belong to the cluster 2 .
- **Fu-
ture.not.specially.work.in.food.processing.industry=Future.not.specially.work.in.food.process**
19 % of the individuals possess this category in the global population versus 34.09 % in the cluster 2 .
Moreover, 78.95 % of the individuals possessing this category belong to the cluster 2 .
- **Eat.at.canteen=Eat.at.canteen_No**
37 % of the individuals possess this category in the global population versus 54.55 % in the cluster 2 .
Moreover, 64.86 % of the individuals possessing this category belong to the cluster 2 .
- **At-
tracted.by.the.food.processing.industry=Attracted.by.the.food.processing.industry_No**
58 % of the individuals possess this category in the global population versus 75 % in the cluster 2 .
Moreover, 56.9 % of the individuals possessing this category belong to the cluster 2 .
- **Year=IN18**
38 % of the individuals possess this category in the global population versus 54.55 % in the cluster 2 .
Moreover, 63.16 % of the individuals possessing this category belong to the cluster 2 .

The cluster 3 (20 individuals) includes the individuals possessing the following categories:

- **Train-
ing.course.in.a.French.food.industry=Training.course.in.a.French.food.industry_Excellent**
24 % of the individuals possess this category in the global population versus 75 % in the cluster 3 .
Moreover, 62.5 % of the individuals possessing this category belong to the cluster 3 .
- **Linguistic.training.course=Linguistic.training.course_Excellent**
11 % of the individuals possess this category in the global population versus 45 % in the cluster 3 .
Moreover, 81.82 % of the individuals possessing this category belong to the cluster 3 .
- **Trainig.course.in.farm=Trainig.course.in.farm_Excellent**
7 % of the individuals possess this category in the global population versus 35 % in the cluster 3 .
Moreover, 100 % of the individuals possessing this category belong to the cluster 3 .
- **Interest.of.taught.courses=Interest.of.taught.courses_satisfying**
11 % of the individuals possess this category in the global population versus 40 % in the cluster 3 .
Moreover, 72.73 % of the individuals possessing this category belong to the cluster 3 .
- **Master.project.abroad=Master.project.abroad_Excellent**
24 % of the individuals possess this category in the global population versus 60 % in the cluster 3 .
Moreover, 50 % of the individuals possessing this category belong to the cluster 3 .
- **Interest.of.taught.courses=Interest.of.taught.courses_Very satisfying**
5 % of the individuals possess this category in the global population versus 25 % in the cluster 3 .
Moreover, 100 % of the individuals possessing this category belong to the cluster 3 .
- **Feel.fulfilled.by.studies=Feel.fulfilled.by.studies_Yes totally**
23 % of the individuals possess this category in the global population versus 55 % in the cluster 3 .
Moreover, 47.83 % of the individuals possessing this category belong to the cluster 3 .
- **Quality.of.taught.courses=Quality.of.taught.courses_Very satisfying**
6 % of the individuals possess this category in the global population versus 25 % in the cluster 3 .
Moreover, 83.33 % of the individuals possessing this category belong to the cluster 3 .
- **Studies.as.expected=Studies.as.expected_Yes totally**
26 % of the individuals possess this category in the global population versus 55 % in the cluster 3 .
Moreover, 42.31 % of the individuals possessing this category belong to the cluster 3 .
- **Canteen.value.for.money=Canteen.value.for.money_Very satisfying**
23 % of the individuals possess this category in the global population versus 50 % in the cluster 3 .
Moreover, 43.48 % of the individuals possessing this category belong to the cluster 3 .