

## **Anexo B**

### **Entrenamiento de algoritmos**

## Entrenamiento con el Dataset completo

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: DatasetCompletoCvACOrdenadoGrades-weka.filters.unsupervised.attribute.Remove-R1  
Instances: 251  
Attributes: 47  
Gender  
PreTest  
TaT1  
TbT1  
TcT1  
TdT1  
TeT1  
TxT1  
P1  
TaT2  
TbT2  
TcT2  
TdT2  
TeT2  
TaT3  
P2  
TbT3  
TcT3  
TSim  
Tfin  
P3  
Grade  
Learning.Gain.P1  
Learning.Gain.P2  
Learning.Gain.P3  
Learning.Gain.Tfin  
Learning.Difference.Average  
Layer  
Age  
Semester  
Average  
Priority  
School  
Entry.Score  
Access  
Submitted.Exams  
Slides  
Page.Teacher  
Play.Video  
Stop.Video  
Completed.Videos  
Page.Web  
Practices  
Forums.Read  
Forums.Created  
Page.Support  
class

Test mode: 11-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

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```
Submitted.Exams <= 11
| TbT2 <= 0: Converger (3.0)
| TbT2 > 0: Assimilator (4.0)
Submitted.Exams > 11
| TSim <= 0.87
| | TdT2 <= 0.5
| | | TcT3 <= 0.83
| | | | TaT2 <= 0.9
| | | | | TbT2 <= 0.7
| | | | | Semester <= 2
| | | | | | PreTest <= 0.36: Accomodator (4.0)
| | | | | | PreTest > 0.36: Converger (2.0)
| | | | | Semester > 2
| | | | | | P2 <= 0.65
| | | | | | Completed.Videos <= 2: Accomodator (7.0/1.0)
| | | | | | Completed.Videos > 2
| | | | | | | TcT3 <= 0.33: Accomodator (2.0)
| | | | | | | TcT3 > 0.33
| | | | | | | | P3 <= 0.66: Diverger (11.0)
| | | | | | | | P3 > 0.66: Accomodator (3.0/1.0)
| | | | | | P2 > 0.65
| | | | | | | Average <= 0.73
| | | | | | | | TbT2 <= 0.6: Accomodator (4.0)
| | | | | | | | TbT2 > 0.6
| | | | | | | | | TeT1 <= 0.5: Accomodator (2.0)
| | | | | | | | | TeT1 > 0.5: Diverger (2.0)
| | | | | | | Average > 0.73
| | | | | | | | TbT2 <= 0.4
| | | | | | | | | PreTest <= 0.33: Converger (2.0)
| | | | | | | | | PreTest > 0.33: Accomodator (2.0)
| | | | | | | | TbT2 > 0.4: Assimilator (3.0)
| | | | | | TbT2 > 0.7
| | | | | | | Grade <= 0.69: Converger (4.0)
| | | | | | | Grade > 0.69: Accomodator (3.0)
| | | | | | TaT2 > 0.9: Diverger (4.0/1.0)
| | | | | TcT3 > 0.83: Diverger (4.0)
| | TdT2 > 0.5
| | | Layer <= 3
| | | | TdT1 <= 0.36
| | | | | TcT3 <= 0.58: Assimilator (2.0)
| | | | | TcT3 > 0.58: Converger (5.0/1.0)
| | | | TdT1 > 0.36
| | | | | TeT2 <= 0.58
| | | | | | TcT3 <= 0.5
| | | | | | | TdT1 <= 0.82: Accomodator (2.0/1.0)
| | | | | | | TdT1 > 0.82: Diverger (2.0)
| | | | | | TcT3 > 0.5
| | | | | | | Grade <= 0.66: Assimilator (3.0)
| | | | | | | Grade > 0.66
```

```

| | | | P2 <= 0.86: Accomodator (16.0)
| | | | P2 > 0.86: Assimilator (2.0)
TeT2 > 0.58
| TcT1 <= 0.45
| | TeT1 <= 0.5: Accomodator (2.0)
| | TeT1 > 0.5
| | | Layer <= 1
| | | | TaT1 <= 0.67: Converger (2.0)
| | | | TaT1 > 0.67: Diverger (2.0)
| | | Layer > 1: Diverger (5.0)
TcT1 > 0.45
| TSim <= 0.73
| | Entry.Score <= 62.8
| | | Grade <= 0.72
| | | | TdT2 <= 0.6: Diverger (5.0/1.0)
| | | | TdT2 > 0.6
| | | | | Completed.Videos <= 2: Converger (8.0/1.0)
| | | | | Completed.Videos > 2
| | | | | | TbT3 <= 0.58: Converger (3.0/1.0)
| | | | | | TbT3 > 0.58
| | | | | | TcT3 <= 0.5: Diverger (4.0/1.0)
| | | | | | TcT3 > 0.5: Accomodator (7.0)
| | | Grade > 0.72
| | | | School <= 1
| | | | | Page.Web <= 6: Converger (4.0/1.0)
| | | | | Page.Web > 6
| | | | | | TcT1 <= 0.73: Converger (3.0/1.0)
| | | | | | TcT1 > 0.73: Accomodator (5.0)
| | | | School > 1
| | | | | TeT2 <= 0.67
| | | | | | Page.Support <= 21
| | | | | | | TaT2 <= 0.9: Accomodator (9.0/1.0)
| | | | | | | TaT2 > 0.9: Diverger (3.0/1.0)
| | | | | | Page.Support > 21: Diverger (3.0)
TeT2 > 0.67
| Priority <= 2
| | TeT2 <= 0.83
| | | Page.Teacher <= 9
| | | | TdT2 <= 0.8: Diverger (3.0)
| | | | TdT2 > 0.8: Accomodator (3.0/1.0)
| | | | Page.Teacher > 9
| | | | | P2 <= 0.92
| | | | | | TcT1 <= 0.6: Converger (4.0)
| | | | | | TcT1 > 0.6
| | | | | | | Learning.Difference.Average <= -0.04
| | | | | | | | Access <= 45: Assimilator (5.0)
| | | | | | | | Access > 45: Accomodator (8.0/1.0)
| | | | | | | Learning.Difference.Average > -0.04
| | | | | | | | TaT1 <= 0.67: Assimilator (4.0/1.0)
| | | | | | | | TaT1 > 0.67: Converger (5.0)
| | | | | | P2 > 0.92: Accomodator (6.0)
| | | | | TeT2 > 0.83: Assimilator (3.0)
| | | | Priority > 2
| | | | | TaT2 <= 0.9: Assimilator (3.0)
| | | | | TaT2 > 0.9: Diverger (2.0)
Entry.Score > 62.8

```

```

| | | | | | | | | Priority <= 1
| | | | | | | | |   Learning.Gain.P1 <= 0.37: Assimilator (3.0/1.0)
| | | | | | | | |   Learning.Gain.P1 > 0.37: Diverger (5.0)
| | | | | | | | | Priority > 1: Assimilator (2.0)
| | | | | | | | |   TSim > 0.73
| | | | | | | | |   Page.Web <= 26
| | | | | | | | |     Age <= 22: Accomodator (7.0)
| | | | | | | | |     Age > 22
| | | | | | | | |       TbT1 <= 0.82: Converger (2.0)
| | | | | | | | |       TbT1 > 0.82: Accomodator (4.0/1.0)
| | | | | | | | |   Page.Web > 26: Converger (4.0/1.0)
| | | | | | | | | Layer > 3
| | | | | | | | |   TcT1 <= 0.6: Assimilator (3.0)
| | | | | | | | |   TcT1 > 0.6: Converger (2.0)
| | | | | | | | | TSim > 0.87
| | | | | | | | |   PreTest <= 0.33: Accomodator (5.0/1.0)
| | | | | | | | |   PreTest > 0.33: Assimilator (5.0)

```

Number of Leaves : 62

Size of the tree : 123

Time taken to build model: 0.03 seconds

=== Stratified cross-validation ===  
 === Summary ===

Correctly Classified Instances	80	31.8725 %
Incorrectly Classified Instances	171	68.1275 %
Kappa statistic	0.0487	
Mean absolute error	0.345	
Root mean squared error	0.5609	
Relative absolute error	95.7921 %	
Root relative squared error	132.225 %	
Total Number of Instances	251	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,440	0,397	0,423	0,440	0,431	0,042	0,501	0,402	Accomodator
	0,222	0,141	0,256	0,222	0,238	0,086	0,535	0,198	Assimilator
	0,200	0,214	0,189	0,200	0,194	-0,014	0,503	0,203	Converger
	0,286	0,200	0,291	0,286	0,288	0,086	0,539	0,259	Diverger
Weighted Avg.	0,319	0,271	0,317	0,319	0,318	0,049	0,516	0,294	

=== Confusion Matrix ===

```

a b c d <-- classified as
44 14 22 20 | a = Accomodator
15 10 10 10 | b = Assimilator
23 8 10 9 | c = Converger
22 7 11 16 | d = Diverger

```

## Selección de los criterios para la definición de las instancias del Dataset de Entrenamiento

DatasetKolbBasicosCvAc36MejoresNotasOrdenadoPorPlayVideo

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: KolbBasicos36MejoresNotasOrdenadosPorPlayVideo-  
weka.filters.unsupervised.attribute.Remove-R1-22,24-35  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Page.Web <= 6: Assimilator (4.0/1.0)
| | | | Page.Web > 6: Converger (3.0)
| | | | Forums.Created > 4: Assimilator (3.0)
| | | Grade > 0.67
| | | | Grade <= 0.72
| | | | | Submitted.Exams <= 25
| | | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | | Grade > 0.69
| | | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | | Submitted.Exams > 25: Assimilator (2.0)
| | | | Grade > 0.72
| | | | | Forums.Created <= 7
| | | | | | Access <= 40
| | | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | | | Access > 40
| | | | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | | | Forums.Read > 6: Converger (6.0)
| | | | | Forums.Created > 7
```

```

| | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | Forums.Created > 12: Diverger (2.0)
| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Play.Video <= 86
| | | Forums.Created <= 5
| | | | Stop.Video <= 11
| | | | | Grade <= 0.8: Assimilator (4.0/1.0)
| | | | | Grade > 0.8
| | | | | | Forums.Read <= 12: Accomodator (3.0)
| | | | | | Forums.Read > 12: Diverger (2.0)
| | | | | Stop.Video > 11
| | | | | | Completed.Videos <= 7
| | | | | | | Slides <= 18
| | | | | | | | Slides <= 9: Accomodator (2.0)
| | | | | | | | Slides > 9
| | | | | | | | | Access <= 41: Accomodator (2.0)
| | | | | | | | | Access > 41: Diverger (5.0)
| | | | | | | | Slides > 18: Converger (4.0/1.0)
| | | | | | Completed.Videos > 7
| | | | | | | Forums.Created <= 2: Accomodator (3.0)
| | | | | | | Forums.Created > 2
| | | | | | | | Page.Teacher <= 21: Accomodator (2.0)
| | | | | | | | Page.Teacher > 21: Converger (4.0)
| | | | | Forums.Created > 5
| | | | | Page.Web <= 20
| | | | | | Page.Web <= 2: Assimilator (3.0/1.0)
| | | | | | Page.Web > 2
| | | | | | | Submitted.Exams <= 22: Accomodator (12.0)
| | | | | | | Submitted.Exams > 22
| | | | | | | | Page.Teacher <= 17: Assimilator (2.0)
| | | | | | | | Page.Teacher > 17: Accomodator (4.0/1.0)
| | | | | Page.Web > 20: Diverger (3.0)
| | | | | Play.Video > 86
| | | | | | Completed.Videos <= 13: Assimilator (7.0/1.0)
| | | | | | Completed.Videos > 13: Accomodator (5.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 35

Size of the tree : 69

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	49	34.0278 %
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Incorrectly Classified Instances 95 65.9722 %  
 Kappa statistic 0.1204  
 Mean absolute error 0.3328  
 Root mean squared error 0.5422  
 Relative absolute error 88.693 %  
 Root relative squared error 125.1355 %  
 Total Number of Instances 144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,556	0,167	0,526	0,556	0,541	0,382	0,729	0,431	Accomodator
	0,222	0,231	0,242	0,222	0,232	-0,010	0,482	0,271	Assimilator
	0,167	0,278	0,167	0,167	0,167	-0,111	0,453	0,232	Converger
	0,417	0,204	0,405	0,417	0,411	0,211	0,594	0,315	Diverger
Weighted Avg.	0,340	0,220	0,335	0,340	0,338	0,118	0,565	0,312	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
20	6	6	4	a = Accomodator
8	8	12	8	b = Assimilator
5	15	6	10	c = Converger
5	4	12	15	d = Diverger



DatasetKolbBasicosCvAcMejoresCalificacionesOrdenadosPorExamenFinal

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: CvAc36MejoresNOtasOrdenadasporTfin-weka.filters.unsupervised.attribute.Remove-R1-6,8-16  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Page.Web <= 6: Assimilator (4.0/1.0)
| | | | Page.Web > 6: Converger (3.0)
| | | | Forums.Created > 4: Assimilator (3.0)
| | | Grade > 0.67
| | | | Grade <= 0.72
| | | | | Submitted.Exams <= 25
| | | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | | Grade > 0.69
| | | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | | | Submitted.Exams > 25: Assimilator (2.0)
| | | | Grade > 0.72
| | | | | Forums.Created <= 7
| | | | | | Access <= 40
| | | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | | Access > 40
| | | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | | Forums.Read > 6: Converger (6.0)
| | | | | | Forums.Created > 7
| | | | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | | | Forums.Created > 12: Diverger (2.0)
```

```

| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Play.Video <= 86
| | | Forums.Created <= 5
| | | | Stop.Video <= 11
| | | | | Grade <= 0.8: Assimilator (4.0/1.0)
| | | | | Grade > 0.8
| | | | | | Forums.Read <= 12: Accomodator (3.0)
| | | | | | Forums.Read > 12: Diverger (2.0)
| | | | Stop.Video > 11
| | | | | Completed.Videos <= 7
| | | | | | Slides <= 18
| | | | | | | Slides <= 9: Accomodator (2.0)
| | | | | | | Slides > 9
| | | | | | | | Access <= 41: Accomodator (2.0)
| | | | | | | | Access > 41: Diverger (5.0)
| | | | | | | Slides > 18: Converger (4.0/1.0)
| | | | | Completed.Videos > 7
| | | | | | Forums.Created <= 2: Accomodator (3.0)
| | | | | | Forums.Created > 2
| | | | | | | Page.Teacher <= 21: Accomodator (2.0)
| | | | | | | Page.Teacher > 21: Converger (4.0)
| | | Forums.Created > 5
| | | | Page.Web <= 20
| | | | | Page.Web <= 2: Assimilator (3.0/1.0)
| | | | | Page.Web > 2
| | | | | | Submitted.Exams <= 22: Accomodator (12.0)
| | | | | | Submitted.Exams > 22
| | | | | | | Page.Teacher <= 17: Assimilator (2.0)
| | | | | | | Page.Teacher > 17: Accomodator (4.0/1.0)
| | | | Page.Web > 20: Diverger (3.0)
| | Play.Video > 86
| | | Completed.Videos <= 13: Assimilator (7.0/1.0)
| | | Completed.Videos > 13: Accomodator (5.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 35

Size of the tree : 69

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	49	34.0278 %
Incorrectly Classified Instances	95	65.9722 %
Kappa statistic	0.1204	

Mean absolute error            0.3311  
 Root mean squared error        0.5382  
 Relative absolute error        88.2256 %  
 Root relative squared error    124.2036 %  
 Total Number of Instances     144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,472	0,222	0,415	0,472	0,442	0,240	0,665	0,403	Accomodator
	0,250	0,194	0,300	0,250	0,273	0,059	0,538	0,275	Assimilator
	0,333	0,287	0,279	0,333	0,304	0,044	0,550	0,258	Converger
	0,306	0,176	0,367	0,306	0,333	0,138	0,591	0,303	Diverger
Weighted Avg.	0,340	0,220	0,340	0,340	0,338	0,120	0,586	0,310	

=== Confusion Matrix ===

```

a b c d <-- classified as
17 5 6 8 | a = Accomodator
11 9 12 4 | b = Assimilator
6 11 12 7 | c = Converger
7 5 13 11 | d = Divergir
  
```

DatasetKolbBasicosCvAc36MejoresNotasOrdenadoPorTfin

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: CvAc36MejoresNOTasOrdenadasporTfin-weka.filters.unsupervised.attribute.Remove-R1-22,24-35  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class  
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Submitted.Exams <= 19: Assimilator (4.0/1.0)
| | | | Submitted.Exams > 19: Converger (2.0)
| | | Forums.Created > 4: Assimilator (3.0)
| | Grade > 0.67
| | | Grade <= 0.72
| | | | Submitted.Exams <= 25
| | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | Grade > 0.69
| | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | Submitted.Exams > 25: Assimilator (2.0)
| | | Grade > 0.72
| | | | Forums.Created <= 7
| | | | | Access <= 40
| | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | Access > 40
| | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | Forums.Read > 6: Converger (6.0)
| | | | Forums.Created > 7
| | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | Forums.Created > 12: Diverger (2.0)
```

```

| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Forums.Created <= 5
| | | Access <= 29: Diverger (3.0)
| | | Access > 29
| | | | Page.Web <= 15
| | | | Page.Web <= 8
| | | | | Page.Web <= 7
| | | | | Submitted.Exams <= 18
| | | | | | Forums.Created <= 2: Diverger (3.0/1.0)
| | | | | | Forums.Created > 2: Converger (2.0)
| | | | | Submitted.Exams > 18
| | | | | Grade <= 0.84
| | | | | | Play.Video <= 18: Assimilator (4.0/1.0)
| | | | | | Play.Video > 18: Accomodator (4.0)
| | | | | | Grade > 0.84: Assimilator (3.0/1.0)
| | | | | Page.Web > 7: Diverger (4.0/1.0)
| | | | | Page.Web > 8
| | | | | | Forums.Read <= 13: Accomodator (4.0/1.0)
| | | | | | Forums.Read > 13: Converger (3.0)
| | | | | Page.Web > 15: Accomodator (9.0/1.0)
| | | Forums.Created > 5
| | | Page.Web <= 20
| | | | Stop.Video <= 38
| | | | | Submitted.Exams <= 23: Accomodator (15.0/1.0)
| | | | | Submitted.Exams > 23: Assimilator (3.0/1.0)
| | | | Stop.Video > 38: Assimilator (7.0)
| | | Page.Web > 20: Diverger (4.0/1.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 32

Size of the tree : 63

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	44	30.5556 %
Incorrectly Classified Instances	100	69.4444 %
Kappa statistic	0.0741	
Mean absolute error	0.351	
Root mean squared error	0.5616	
Relative absolute error	93.5413 %	
Root relative squared error	129.6031 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,500	0,176	0,486	0,500	0,493	0,321	0,699	0,387	Accomodator
	0,278	0,185	0,333	0,278	0,303	0,099	0,518	0,293	Assimilator
	0,222	0,306	0,195	0,222	0,208	-0,080	0,435	0,230	Converger
	0,222	0,259	0,222	0,222	0,222	-0,037	0,474	0,241	Diverger
Weighted Avg.	0,306	0,231	0,309	0,306	0,307	0,076	0,531	0,288	

=== Confusion Matrix ===

```
a b c d <-- classified as
18 6 7 5 | a = Accomodator
6 10 10 10 | b = Assimilator
7 8 8 13 | c = Converger
6 6 16 8 | d = Divergir
```

DatasetKolbBasicosCvAc36MejoresNotasOrdenadoPorTeacherPages

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: CvAc36MejoresNOTasOrdenadasporTeacherPages-  
weka.filters.unsupervised.attribute.Remove-R1-22,24-35  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Page.Web <= 6: Assimilator (4.0/1.0)
| | | | Page.Web > 6: Converger (3.0)
| | | | Forums.Created > 4: Assimilator (3.0)
| | | Grade > 0.67
| | | | Grade <= 0.72
| | | | | Submitted.Exams <= 25
| | | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | | Grade > 0.69
| | | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | | | Submitted.Exams > 25: Assimilator (2.0)
| | | | Grade > 0.72
| | | | | Forums.Created <= 7
| | | | | | Access <= 40
| | | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | | | Access > 40
| | | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | | Forums.Read > 6: Converger (6.0)
| | | | | | Forums.Created > 7
| | | | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | | | Forums.Created > 12: Diverger (2.0)
```

```

| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Play.Video <= 86
| | | Forums.Created <= 5
| | | | Stop.Video <= 11
| | | | | Grade <= 0.8: Assimilator (4.0/1.0)
| | | | | Grade > 0.8
| | | | | | Forums.Read <= 12: Accomodator (3.0)
| | | | | | Forums.Read > 12: Diverger (2.0)
| | | | Stop.Video > 11
| | | | | Completed.Videos <= 7
| | | | | | Slides <= 18
| | | | | | | Slides <= 9: Accomodator (2.0)
| | | | | | | Slides > 9
| | | | | | | | Access <= 41: Accomodator (2.0)
| | | | | | | | Access > 41: Diverger (5.0)
| | | | | | | Slides > 18: Converger (4.0/1.0)
| | | | | Completed.Videos > 7
| | | | | | Forums.Created <= 2: Accomodator (3.0)
| | | | | | Forums.Created > 2
| | | | | | | Page.Teacher <= 21: Accomodator (2.0)
| | | | | | | Page.Teacher > 21: Converger (4.0)
| | | Forums.Created > 5
| | | | Page.Web <= 20
| | | | | Page.Web <= 2: Assimilator (3.0/1.0)
| | | | | Page.Web > 2
| | | | | | Submitted.Exams <= 22: Accomodator (12.0)
| | | | | | Submitted.Exams > 22
| | | | | | | Page.Teacher <= 17: Assimilator (2.0)
| | | | | | | Page.Teacher > 17: Accomodator (4.0/1.0)
| | | | Page.Web > 20: Diverger (3.0)
| | Play.Video > 86
| | | Completed.Videos <= 13: Assimilator (7.0/1.0)
| | | Completed.Videos > 13: Accomodator (5.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 35

Size of the tree : 69

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	46	31.9444 %
Incorrectly Classified Instances	98	68.0556 %
Kappa statistic	0.0926	



Mean absolute error            0.344  
 Root mean squared error        0.5463  
 Relative absolute error        91.6854 %  
 Root relative squared error    126.0908 %  
 Total Number of Instances     144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,472	0,241	0,395	0,472	0,430	0,219	0,624	0,342	Accomodator
	0,222	0,194	0,276	0,222	0,246	0,030	0,476	0,252	Assimilator
	0,333	0,269	0,293	0,333	0,312	0,062	0,536	0,267	Converger
	0,250	0,204	0,290	0,250	0,269	0,049	0,563	0,292	Diverger
Weighted Avg.	0,319	0,227	0,314	0,319	0,314	0,090	0,550	0,288	

=== Confusion Matrix ===

```

a b c d <-- classified as
17 8 5 6 | a = Accomodator
10 8 13 5 | b = Assimilator
7 6 12 11 | c = Converger
9 7 11 9 | d = Divergir
  
```

## Efectos de la ordenación de las instancias del Dataset de Entrenamiento

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: KolbBasicos36MejoresNotasOrdenadosPorPlayVideo-  
weka.filters.unsupervised.attribute.Remove-R1-22,24-35  
Instances: 144  
Attributes: 14  
Grade  
Access  
Submitted.Exams  
Slides  
Page.Teacher  
Play.Video  
Stop.Video  
Completed.Videos  
Page.Web  
Practices  
Forums.Read  
Forums.Created  
Page.Support  
class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Page.Web <= 6: Assimilator (4.0/1.0)
| | | | Page.Web > 6: Converger (3.0)
| | | | Forums.Created > 4: Assimilator (3.0)
| | | Grade > 0.67
| | | | Grade <= 0.72
| | | | | Submitted.Exams <= 25
| | | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | | Grade > 0.69
| | | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | | | Submitted.Exams > 25: Assimilator (2.0)
| | | | Grade > 0.72
| | | | | Forums.Created <= 7
| | | | | | Access <= 40
| | | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | | | Access > 40
| | | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | | Forums.Read > 6: Converger (6.0)
| | | | | | Forums.Created > 7
| | | | | | | Forums.Created <= 12: Assimilator (4.0)
```

```

| | | | | Forums.Created > 12: Diverger (2.0)
| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Play.Video <= 86
| | | Forums.Created <= 5
| | | | Stop.Video <= 11
| | | | | Grade <= 0.8: Assimilator (4.0/1.0)
| | | | | Grade > 0.8
| | | | | | Forums.Read <= 12: Accomodator (3.0)
| | | | | | Forums.Read > 12: Diverger (2.0)
| | | | | Stop.Video > 11
| | | | | | Completed.Videos <= 7
| | | | | | | Slides <= 18
| | | | | | | | Slides <= 9: Accomodator (2.0)
| | | | | | | | Slides > 9
| | | | | | | | | Access <= 41: Accomodator (2.0)
| | | | | | | | | Access > 41: Diverger (5.0)
| | | | | | | | Slides > 18: Converger (4.0/1.0)
| | | | | | Completed.Videos > 7
| | | | | | | Forums.Created <= 2: Accomodator (3.0)
| | | | | | | Forums.Created > 2
| | | | | | | | Page.Teacher <= 21: Accomodator (2.0)
| | | | | | | | Page.Teacher > 21: Converger (4.0)
| | | | Forums.Created > 5
| | | | | Page.Web <= 20
| | | | | | Page.Web <= 2: Assimilator (3.0/1.0)
| | | | | | Page.Web > 2
| | | | | | | Submitted.Exams <= 22: Accomodator (12.0)
| | | | | | | Submitted.Exams > 22
| | | | | | | | Page.Teacher <= 17: Assimilator (2.0)
| | | | | | | | Page.Teacher > 17: Accomodator (4.0/1.0)
| | | | | Page.Web > 20: Diverger (3.0)
| | | | Play.Video > 86
| | | | | Completed.Videos <= 13: Assimilator (7.0/1.0)
| | | | | Completed.Videos > 13: Accomodator (5.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 35

Size of the tree : 69

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	49	34.0278 %
Incorrectly Classified Instances	95	65.9722 %

Kappa statistic 0.1204  
 Mean absolute error 0.3328  
 Root mean squared error 0.5422  
 Relative absolute error 88.693 %  
 Root relative squared error 125.1355 %  
 Total Number of Instances 144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,556	0,167	0,526	0,556	0,541	0,382	0,729	0,431	Accomodator
	0,222	0,231	0,242	0,222	0,232	-0,010	0,482	0,271	Assimilator
	0,167	0,278	0,167	0,167	0,167	-0,111	0,453	0,232	Converger
	0,417	0,204	0,405	0,417	0,411	0,211	0,594	0,315	Diverger
Weighted Avg.	0,340	0,220	0,335	0,340	0,338	0,118	0,565	0,312	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
20	6	6	4	a = Accomodator
8	8	12	8	b = Assimilator
5	15	6	10	c = Converger
5	4	12	15	d = Diverger

DatasetKolbBasicosCvAcMejoresCalificacionesOrdenadosPorExamenFinal

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: CvAc36MejoresNOtasOrdenadasporTfin-weka.filters.unsupervised.attribute.Remove-R1-6,8-16  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Page.Web <= 6: Assimilator (4.0/1.0)
| | | | Page.Web > 6: Converger (3.0)
| | | | Forums.Created > 4: Assimilator (3.0)
| | | Grade > 0.67
| | | | Grade <= 0.72
| | | | | Submitted.Exams <= 25
| | | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | | Grade > 0.69
| | | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | | | Submitted.Exams > 25: Assimilator (2.0)
| | | | Grade > 0.72
| | | | | Forums.Created <= 7
| | | | | | Access <= 40
| | | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | | Access > 40
| | | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | | Forums.Read > 6: Converger (6.0)
| | | | | | Forums.Created > 7
| | | | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | | | Forums.Created > 12: Diverger (2.0)
```

```

| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Play.Video <= 86
| | | Forums.Created <= 5
| | | | Stop.Video <= 11
| | | | | Grade <= 0.8: Assimilator (4.0/1.0)
| | | | | Grade > 0.8
| | | | | | Forums.Read <= 12: Accomodator (3.0)
| | | | | | Forums.Read > 12: Diverger (2.0)
| | | | Stop.Video > 11
| | | | | Completed.Videos <= 7
| | | | | | Slides <= 18
| | | | | | | Slides <= 9: Accomodator (2.0)
| | | | | | | Slides > 9
| | | | | | | | Access <= 41: Accomodator (2.0)
| | | | | | | | Access > 41: Diverger (5.0)
| | | | | | | Slides > 18: Converger (4.0/1.0)
| | | | | Completed.Videos > 7
| | | | | | Forums.Created <= 2: Accomodator (3.0)
| | | | | | Forums.Created > 2
| | | | | | | Page.Teacher <= 21: Accomodator (2.0)
| | | | | | | Page.Teacher > 21: Converger (4.0)
| | | Forums.Created > 5
| | | | Page.Web <= 20
| | | | | Page.Web <= 2: Assimilator (3.0/1.0)
| | | | | Page.Web > 2
| | | | | | Submitted.Exams <= 22: Accomodator (12.0)
| | | | | | Submitted.Exams > 22
| | | | | | | Page.Teacher <= 17: Assimilator (2.0)
| | | | | | | Page.Teacher > 17: Accomodator (4.0/1.0)
| | | | Page.Web > 20: Diverger (3.0)
| | Play.Video > 86
| | | Completed.Videos <= 13: Assimilator (7.0/1.0)
| | | Completed.Videos > 13: Accomodator (5.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 35

Size of the tree : 69

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	49	34.0278 %
Incorrectly Classified Instances	95	65.9722 %
Kappa statistic	0.1204	

Mean absolute error            0.3311  
 Root mean squared error        0.5382  
 Relative absolute error        88.2256 %  
 Root relative squared error    124.2036 %  
 Total Number of Instances     144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,472	0,222	0,415	0,472	0,442	0,240	0,665	0,403	Accomodator
	0,250	0,194	0,300	0,250	0,273	0,059	0,538	0,275	Assimilator
	0,333	0,287	0,279	0,333	0,304	0,044	0,550	0,258	Converger
	0,306	0,176	0,367	0,306	0,333	0,138	0,591	0,303	Diverger
Weighted Avg.	0,340	0,220	0,340	0,340	0,338	0,120	0,586	0,310	

=== Confusion Matrix ===

```

a b c d <-- classified as
17 5 6 8 | a = Accomodator
11 9 12 4 | b = Assimilator
6 11 12 7 | c = Converger
7 5 13 11 | d = Divergir
  
```

DatasetKolbBasicosCvAc36MejoresNotasOrdenadoPorTfin

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: CvAc36MejoresNOTasOrdenadasporTfin-weka.filters.unsupervised.attribute.Remove-R1-22,24-35  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Submitted.Exams <= 19: Assimilator (4.0/1.0)
| | | | Submitted.Exams > 19: Converger (2.0)
| | | Forums.Created > 4: Assimilator (3.0)
| | Grade > 0.67
| | | Grade <= 0.72
| | | | Submitted.Exams <= 25
| | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | Grade > 0.69
| | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | Submitted.Exams > 25: Assimilator (2.0)
| | | Grade > 0.72
| | | | Forums.Created <= 7
| | | | | Access <= 40
| | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | Page.Web > 5: Assimilator (3.0)
| | | | | Access > 40
| | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | Forums.Read > 6: Converger (6.0)
| | | | Forums.Created > 7
| | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | Forums.Created > 12: Diverger (2.0)
```



```

| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Forums.Created <= 5
| | | Access <= 29: Diverger (3.0)
| | | Access > 29
| | | | Page.Web <= 15
| | | | Page.Web <= 8
| | | | | Page.Web <= 7
| | | | | Submitted.Exams <= 18
| | | | | | Forums.Created <= 2: Diverger (3.0/1.0)
| | | | | | Forums.Created > 2: Converger (2.0)
| | | | | Submitted.Exams > 18
| | | | | Grade <= 0.84
| | | | | | Play.Video <= 18: Assimilator (4.0/1.0)
| | | | | | Play.Video > 18: Accomodator (4.0)
| | | | | | Grade > 0.84: Assimilator (3.0/1.0)
| | | | | Page.Web > 7: Diverger (4.0/1.0)
| | | | | Page.Web > 8
| | | | | | Forums.Read <= 13: Accomodator (4.0/1.0)
| | | | | | Forums.Read > 13: Converger (3.0)
| | | | | Page.Web > 15: Accomodator (9.0/1.0)
| | | Forums.Created > 5
| | | Page.Web <= 20
| | | | Stop.Video <= 38
| | | | | Submitted.Exams <= 23: Accomodator (15.0/1.0)
| | | | | Submitted.Exams > 23: Assimilator (3.0/1.0)
| | | | Stop.Video > 38: Assimilator (7.0)
| | | Page.Web > 20: Diverger (4.0/1.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 32

Size of the tree : 63

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	44	30.5556 %
Incorrectly Classified Instances	100	69.4444 %
Kappa statistic	0.0741	
Mean absolute error	0.351	
Root mean squared error	0.5616	
Relative absolute error	93.5413 %	
Root relative squared error	129.6031 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,500	0,176	0,486	0,500	0,493	0,321	0,699	0,387	Accomodator
	0,278	0,185	0,333	0,278	0,303	0,099	0,518	0,293	Assimilator
	0,222	0,306	0,195	0,222	0,208	-0,080	0,435	0,230	Converger
	0,222	0,259	0,222	0,222	0,222	-0,037	0,474	0,241	Diverger
Weighted Avg.	0,306	0,231	0,309	0,306	0,307	0,076	0,531	0,288	

=== Confusion Matrix ===

```
a b c d <-- classified as
18 6 7 5 | a = Accomodator
6 10 10 10 | b = Assimilator
7 8 8 13 | c = Converger
6 6 16 8 | d = Divergir
```

DatasetKolbBasicosCvAc36MejoresNotasOrdenadoPorTeacherPages

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: CvAc36MejoresNOTasOrdenadasporTeacherPages-  
weka.filters.unsupervised.attribute.Remove-R1-22,24-35  
Instances: 144  
Attributes: 14  
    Grade  
    Access  
    Submitted.Exams  
    Slides  
    Page.Teacher  
    Play.Video  
    Stop.Video  
    Completed.Videos  
    Page.Web  
    Practices  
    Forums.Read  
    Forums.Created  
    Page.Support  
    class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Grade <= 0.77
| Page.Web <= 25
| | Grade <= 0.67
| | | Forums.Created <= 4
| | | | Page.Web <= 6: Assimilator (4.0/1.0)
| | | | Page.Web > 6: Converger (3.0)
| | | | Forums.Created > 4: Assimilator (3.0)
| | | Grade > 0.67
| | | | Grade <= 0.72
| | | | | Submitted.Exams <= 25
| | | | | | Grade <= 0.69: Converger (10.0/3.0)
| | | | | | Grade > 0.69
| | | | | | | Page.Teacher <= 5: Converger (2.0)
| | | | | | | Page.Teacher > 5: Diverger (12.0/1.0)
| | | | | | Submitted.Exams > 25: Assimilator (2.0)
| | | | Grade > 0.72
| | | | | Forums.Created <= 7
| | | | | | Access <= 40
| | | | | | | Page.Web <= 5: Converger (6.0/1.0)
| | | | | | | Page.Web > 5: Assimilator (3.0)
| | | | | | Access > 40
| | | | | | | Forums.Read <= 6: Diverger (2.0)
| | | | | | | Forums.Read > 6: Converger (6.0)
| | | | | | Forums.Created > 7
| | | | | | | Forums.Created <= 12: Assimilator (4.0)
| | | | | | | Forums.Created > 12: Diverger (2.0)
```

```

| Page.Web > 25: Diverger (5.0)
Grade > 0.77
| Page.Web <= 27
| | Play.Video <= 86
| | | Forums.Created <= 5
| | | | Stop.Video <= 11
| | | | | Grade <= 0.8: Assimilator (4.0/1.0)
| | | | | Grade > 0.8
| | | | | | Forums.Read <= 12: Accomodator (3.0)
| | | | | | Forums.Read > 12: Diverger (2.0)
| | | | Stop.Video > 11
| | | | | Completed.Videos <= 7
| | | | | | Slides <= 18
| | | | | | | Slides <= 9: Accomodator (2.0)
| | | | | | | Slides > 9
| | | | | | | | Access <= 41: Accomodator (2.0)
| | | | | | | | Access > 41: Diverger (5.0)
| | | | | | | Slides > 18: Converger (4.0/1.0)
| | | | | Completed.Videos > 7
| | | | | | Forums.Created <= 2: Accomodator (3.0)
| | | | | | Forums.Created > 2
| | | | | | | Page.Teacher <= 21: Accomodator (2.0)
| | | | | | | Page.Teacher > 21: Converger (4.0)
| | | Forums.Created > 5
| | | | Page.Web <= 20
| | | | | Page.Web <= 2: Assimilator (3.0/1.0)
| | | | | Page.Web > 2
| | | | | | Submitted.Exams <= 22: Accomodator (12.0)
| | | | | | Submitted.Exams > 22
| | | | | | | Page.Teacher <= 17: Assimilator (2.0)
| | | | | | | Page.Teacher > 17: Accomodator (4.0/1.0)
| | | | Page.Web > 20: Diverger (3.0)
| | Play.Video > 86
| | | Completed.Videos <= 13: Assimilator (7.0/1.0)
| | | Completed.Videos > 13: Accomodator (5.0)
| Page.Web > 27
| | Practices <= 25: Accomodator (2.0)
| | Practices > 25
| | | Page.Web <= 54
| | | | Play.Video <= 50: Assimilator (2.0)
| | | | Play.Video > 50: Converger (5.0)
| | | Page.Web > 54: Assimilator (4.0/1.0)

```

Number of Leaves : 35

Size of the tree : 69

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	46	31.9444 %
Incorrectly Classified Instances	98	68.0556 %
Kappa statistic	0.0926	

Mean absolute error            0.344  
 Root mean squared error        0.5463  
 Relative absolute error        91.6854 %  
 Root relative squared error    126.0908 %  
 Total Number of Instances    144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,472	0,241	0,395	0,472	0,430	0,219	0,624	0,342	Accomodator
	0,222	0,194	0,276	0,222	0,246	0,030	0,476	0,252	Assimilator
	0,333	0,269	0,293	0,333	0,312	0,062	0,536	0,267	Converger
	0,250	0,204	0,290	0,250	0,269	0,049	0,563	0,292	Diverger
Weighted Avg.	0,319	0,227	0,314	0,319	0,314	0,090	0,550	0,288	

=== Confusion Matrix ===

```

a b c d <-- classified as
17 8 5 6 | a = Accomodator
10 8 13 5 | b = Assimilator
7 6 12 11 | c = Converger
9 7 11 9 | d = Divergir
  
```

## Prueba Entrenamiento diferentes tipos de algoritmos de aprendizaje de máquina

=== Run information ===

```
Scheme: weka.classifiers.bayes.BayesNet -D -Q weka.classifiers.bayes.net.search.local.K2 -- -
P 1 -S BAYES -E weka.classifiers.bayes.net.estimate.SimpleEstimator -- -A 0.5
Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-
weka.filters.unsupervised.attribute.Remove-R1-5,7-8
Instances: 144
Attributes: 14
    Grade
    Access
    Submitted.Exams
    Slides
    Page.Teacher
    Play.Video
    Stop.Video
    Completed.Videos
    Page.Web
    Practices
    Forums.Read
    Forums.Created
    Page.Support
    class
Test mode: 10-fold cross-validation
```

=== Classifier model (full training set) ===

```
Bayes Network Classifier
not using ADTree
#attributes=14 #classindex=13
Network structure (nodes followed by parents)
Grade(2): class
Access(1): class
Submitted.Exams(1): class
Slides(1): class
Page.Teacher(1): class
Play.Video(1): class
Stop.Video(1): class
Completed.Videos(1): class
Page.Web(1): class
Practices(1): class
Forums.Read(1): class
Forums.Created(1): class
Page.Support(1): class
class(4):
LogScore Bayes: -286.4261367920984
LogScore BDeu: -295.7131043374324
LogScore MDL: -295.97733284292036
LogScore ENTROPY: -278.58298629440435
LogScore AIC: -285.58298629440435
```

Time taken to build model: 0.02 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	53	36.8056 %
Incorrectly Classified Instances	91	63.1944 %
Kappa statistic	0.1574	
Mean absolute error	0.3422	
Root mean squared error	0.4151	
Relative absolute error	91.1998 %	
Root relative squared error	95.8056 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	1,000	0,407	0,450	1,000	0,621	0,516	0,713	0,350	Accomodator
	0,000	0,000	?	0,000	?	?	0,427	0,218	Assimilator
	0,278	0,250	0,270	0,278	0,274	0,028	0,555	0,277	Converger
	0,194	0,185	0,259	0,194	0,222	0,010	0,568	0,286	Diverger
Weighted Avg.	0,368	0,211	?	0,368	?	?	0,566	0,283	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
36	0	0	0	a = Accomodator
19	0	11	6	b = Assimilator
12	0	10	14	c = Converger
13	0	16	7	d = Diverger

=== Run information ===

Scheme: weka.classifiers.functions.MultilayerPerceptron -L 0.3 -M 0.2 -N 500 -V 0 -S 0 -E 20 -H  
a

Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-  
weka.filters.unsupervised.attribute.Remove-R1-5,7-8

Instances: 144

Attributes: 14

- Grade
- Access
- Submitted.Exams
- Slides
- Page.Teacher
- Play.Video
- Stop.Video
- Completed.Videos
- Page.Web
- Practices
- Forums.Read
- Forums.Created
- Page.Support
- class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Sigmoid Node 0

Inputs Weights

Threshold -2.609991848130974

Node 4 -8.6879015110989

Node 5 9.715316229149302

Node 6 -7.611138628985055

Node 7 4.693836262518521

Node 8 -0.5405567945521793

Node 9 0.8780675825041453

Node 10 -6.505724773789694

Node 11 -4.452967034682963

Sigmoid Node 1

Inputs Weights

Threshold -2.3886982213339563

Node 4 5.1999808020155145

Node 5 -5.772870824213746

Node 6 7.775886715566519

Node 7 -1.704838007474748

Node 8 3.220521996654703

Node 9 -0.9247318930509925

Node 10 10.22781103332809

Node 11 -5.851708765079009

Sigmoid Node 2

Inputs Weights

Threshold -0.49749618751304536

Node 4 0.39270568327256694

Node 5 -3.11092369533225

Node 6 -1.0817003234980063

Node 7 -4.193639923605179

Node 8 -1.2048825442809166



Node 9 2.0081125174297862  
Node 10 -5.659908873414654  
Node 11 10.744531484717351

#### Sigmoid Node 3

Inputs Weights  
Threshold 0.26955123053736296  
Node 4 -3.9244773219909255  
Node 5 -3.7439892260510272  
Node 6 -1.709713702051243  
Node 7 1.6443825884211107  
Node 8 -1.9772910908049552  
Node 9 -3.8263607943834717  
Node 10 -0.10939411534744628  
Node 11 0.0693891887636012

#### Sigmoid Node 4

Inputs Weights  
Threshold -6.650994232293869  
Attrib Grade -12.215468069341508  
Attrib Access 1.864482589825086  
Attrib Submitted.Exams 2.2263865787211903  
Attrib Slides -1.131494274037349  
Attrib Page.Teacher 1.2703710066864404  
Attrib Play.Video -1.593270236412501  
Attrib Stop.Video 4.087113120854033  
Attrib Completed.Videos -0.3426727941252344  
Attrib Page.Web -2.6532084538756733  
Attrib Practices -4.966364911100471  
Attrib Forums.Read 4.478490744639751  
Attrib Forums.Created -0.4207044489545782  
Attrib Page.Support 2.8425775764649406

#### Sigmoid Node 5

Inputs Weights  
Threshold -1.978638574581547  
Attrib Grade 4.279033597356192  
Attrib Access -3.064572001270243  
Attrib Submitted.Exams -0.5317704267703472  
Attrib Slides -0.31861309667185905  
Attrib Page.Teacher -3.779821624430117  
Attrib Play.Video 4.91325086103986  
Attrib Stop.Video -2.7708626898243196  
Attrib Completed.Videos 2.5079571263541536  
Attrib Page.Web 3.6568938914799567  
Attrib Practices 0.2747516475435824  
Attrib Forums.Read 6.0950529222013685  
Attrib Forums.Created -0.21762889700094912  
Attrib Page.Support -4.683685703726849

#### Sigmoid Node 6

Inputs Weights  
Threshold 0.6652429982727507  
Attrib Grade 3.6795308337436876  
Attrib Access -0.8297746302690716  
Attrib Submitted.Exams 6.580085541455159  
Attrib Slides -1.1897029966069108  
Attrib Page.Teacher -1.0509681948634888  
Attrib Play.Video 7.366565339454197  
Attrib Stop.Video 6.108690536528571

Attrib Completed.Videos -0.9123700174250633  
Attrib Page.Web -1.7962970940877305  
Attrib Practices 1.024307182566837  
Attrib Forums.Read -2.909766770949913  
Attrib Forums.Created 7.300544310704593  
Attrib Page.Support -4.065264265605834

Sigmoid Node 7

Inputs Weights

Threshold 6.85197799583811  
Attrib Grade 5.0071240960216  
Attrib Access 2.329794001087251  
Attrib Submitted.Exams 4.315342924074998  
Attrib Slides -4.229795224416838  
Attrib Page.Teacher 7.072527953676572  
Attrib Play.Video 3.2814374223594633  
Attrib Stop.Video -3.4524246048843352  
Attrib Completed.Videos -3.6091242781680553  
Attrib Page.Web 2.6035752336026747  
Attrib Practices 0.25859526684439677  
Attrib Forums.Read 4.936698243870505  
Attrib Forums.Created -0.57111114535474664  
Attrib Page.Support 1.9930340115679555

Sigmoid Node 8

Inputs Weights

Threshold -1.7186521650759856  
Attrib Grade 3.5631730064918687  
Attrib Access 1.1021815079107127  
Attrib Submitted.Exams 1.5030973269742596  
Attrib Slides -3.3575156514044933  
Attrib Page.Teacher 1.7794558161526504  
Attrib Play.Video -1.278474195113487  
Attrib Stop.Video 1.4822524674259034  
Attrib Completed.Videos 0.21985086404276732  
Attrib Page.Web 2.903091718710776  
Attrib Practices 2.5982122900246685  
Attrib Forums.Read -2.053320684168074  
Attrib Forums.Created 0.16433733854167115  
Attrib Page.Support -5.222184173935038

Sigmoid Node 9

Inputs Weights

Threshold -0.7994266581831363  
Attrib Grade 5.896955055288788  
Attrib Access -0.4776447968945966  
Attrib Submitted.Exams 0.16407117110643166  
Attrib Slides -0.7529494640354668  
Attrib Page.Teacher -0.4647472561296859  
Attrib Play.Video 1.4338448722551644  
Attrib Stop.Video 0.7575808377256752  
Attrib Completed.Videos 1.6630506992956862  
Attrib Page.Web -0.23625117889679523  
Attrib Practices 0.99075045770025  
Attrib Forums.Read 4.5283968771079275  
Attrib Forums.Created -4.039935049217057  
Attrib Page.Support -3.8665893295926

Sigmoid Node 10

Inputs Weights

Threshold -0.8317448157894342  
 Attrib Grade 6.664366259927628  
 Attrib Access 0.8647569825359513  
 Attrib Submitted.Exams 0.7038462918197799  
 Attrib Slides 5.107820820288793  
 Attrib Page.Teacher -0.652578250215048  
 Attrib Play.Video -3.0096610201360123  
 Attrib Stop.Video 0.47017353021703967  
 Attrib Completed.Videos -1.849146633216779  
 Attrib Page.Web 1.2237440517650724  
 Attrib Practices 2.4064457749505426  
 Attrib Forums.Read 1.8476628565601345  
 Attrib Forums.Created -1.131470886619683  
 Attrib Page.Support 5.963128703505504

Sigmoid Node 11

Inputs Weights

Threshold 2.4912099229005875  
 Attrib Grade 3.505792032854496  
 Attrib Access 1.6693696172086538  
 Attrib Submitted.Exams 3.6463252455392867  
 Attrib Slides 4.41398237127637  
 Attrib Page.Teacher 2.1104083022997147  
 Attrib Play.Video 2.09292793799898  
 Attrib Stop.Video 4.9522969246589446  
 Attrib Completed.Videos -7.264247036085946  
 Attrib Page.Web -2.760821172013581  
 Attrib Practices 5.20405387683647  
 Attrib Forums.Read -0.314272548176984  
 Attrib Forums.Created 3.242647628675837  
 Attrib Page.Support 3.9147238011659837

Class Accomodator

Input  
Node 0

Class Assimilator

Input  
Node 1

Class Converger

Input  
Node 2

Class Diverger

Input  
Node 3

Time taken to build model: 0.32 seconds

=== Stratified cross-validation ===  
 === Summary ===

Correctly Classified Instances	33	22.9167 %
Incorrectly Classified Instances	111	77.0833 %
Kappa statistic	-0.0278	
Mean absolute error	0.3685	
Root mean squared error	0.4944	
Relative absolute error	98.2061 %	
Root relative squared error	114.1116 %	

Total Number of Instances 144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,361	0,269	0,310	0,361	0,333	0,088	0,646	0,375	Accomodator
	0,167	0,222	0,200	0,167	0,182	-0,059	0,422	0,229	Assimilator
	0,250	0,343	0,196	0,250	0,220	-0,086	0,506	0,245	Converger
	0,139	0,194	0,192	0,139	0,161	-0,063	0,498	0,239	Diverger
Weighted Avg.	0,229	0,257	0,224	0,229	0,224	-0,030	0,518	0,272	

=== Confusion Matrix ===

```
a b c d <-- classified as
13 7 9 7 | a = Accomodator
11 6 14 5 | b = Assimilator
8 10 9 9 | c = Converger
10 7 14 5 | d = Diverger
```

=== Run information ===

Scheme: weka.classifiers.lazy.KStar -B 20 -M a  
Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-weka.filters.unsupervised.attribute.Remove-R1-5,7-8  
Instances: 144  
Attributes: 14  
Grade  
Access  
Submitted.Exams  
Slides  
Page.Teacher  
Play.Video  
Stop.Video  
Completed.Videos  
Page.Web  
Practices  
Forums.Read  
Forums.Created  
Page.Support  
class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

KStar Beta Verion (0.1b).  
Copyright (c) 1995-97 by Len Trigg (trigg@cs.waikato.ac.nz).  
Java port to Weka by Abdelaziz Mahoui (am14@cs.waikato.ac.nz).

KStar options : -B 20 -M a

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	46	31.9444 %
Incorrectly Classified Instances	98	68.0556 %
Kappa statistic	0.0926	
Mean absolute error	0.3453	
Root mean squared error	0.5376	
Relative absolute error	92.0325 %	
Root relative squared error	124.0705 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,500	0,222	0,429	0,500	0,462	0,265	0,664	0,463	Accomodator
	0,306	0,194	0,344	0,306	0,324	0,116	0,601	0,311	Assimilator
	0,167	0,278	0,167	0,167	0,167	-0,111	0,417	0,212	Converger
	0,306	0,213	0,324	0,306	0,314	0,094	0,572	0,298	Diverger
Weighted Avg.	0,319	0,227	0,316	0,319	0,317	0,091	0,563	0,321	

=== Confusion Matrix ===

```
a b c d <-- classified as
18 2 9 7 | a = Accomodator
9 11 11 5 | b = Assimilator
6 13 6 11 | c = Converger
9 6 10 11 | d = Diverger
```

=== Run information ===

Scheme: weka.classifiers.meta.IterativeClassifierOptimizer -W weka.classifiers.meta.LogitBoost  
-L 50 -P 1 -E 1 -I 1 -F 10 -R 1 -percentage 0.0 -metric RMSE -S 1 -- -P 100 -L -  
1.7976931348623157E308 -H 1.0 -Z 3.0 -O 1 -E 1 -S 1 -I 10 -W  
weka.classifiers.trees.DecisionStump  
Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-  
weka.filters.unsupervised.attribute.Remove-R1-5,7-8  
Instances: 144  
Attributes: 14  
Grade  
Access  
Submitted.Exams  
Slides  
Page.Teacher  
Play.Video  
Stop.Video  
Completed.Videos  
Page.Web  
Practices  
Forums.Read  
Forums.Created  
Page.Support  
class  
Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Best value found: 0.42595733501228017  
Best number of iterations found: 1

LogitBoost: Base classifiers and their weights:

Iteration 1

Class 1 (class=Accomodator)

Decision Stump

Classifications

Grade <= 0.775 : -1.3333333333333355  
Grade > 0.775 : 0.927536231884059  
Grade is missing : -1.6653345369377358E-16

Class 2 (class=Assimilator)

Decision Stump

Classifications

Practices <= 54.5 : -0.07894736842105272  
Practices > 54.5 : 3.0000000000000155  
Practices is missing : 1.2952601953960178E-16

Class 3 (class=Converger)

Decision Stump

Classifications

Grade <= 0.805 : 0.4536082474226809  
Grade > 0.805 : -0.7457627118644051  
Grade is missing : 5.85951040774389E-16

Class 4 (class=Diverger)

Decision Stump

Classifications

Page.Web <= 3.5 : 0.8656716417910453  
Page.Web > 3.5 : -0.34730538922155674  
Page.Web is missing : 4.996003610813209E-16

Number of performed iterations: 1

Time taken to build model: 0.33 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	47	32.6389 %
Incorrectly Classified Instances	97	67.3611 %
Kappa statistic	0.1019	
Mean absolute error	0.357	
Root mean squared error	0.4324	
Relative absolute error	95.1372 %	
Root relative squared error	99.7972 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,944	0,435	0,420	0,944	0,581	0,445	0,771	0,407	Accomodator
	0,000	0,065	0,000	0,000	0,000	-0,131	0,534	0,266	Assimilator
	0,250	0,306	0,214	0,250	0,231	-0,053	0,520	0,246	Converger
	0,111	0,093	0,286	0,111	0,160	0,027	0,544	0,284	Diverger
Weighted Avg.	0,326	0,225	0,230	0,326	0,243	0,072	0,592	0,301	

=== Confusion Matrix ===

```
a b c d <-- classified as
34 0 1 1 | a = Accomodator
18 0 16 2 | b = Assimilator
15 5 9 7 | c = Converger
14 2 16 4 | d = Diverger
```



=== Run information ===

Scheme: weka.classifiers.misc.InputMappedClassifier -I -trim -W weka.classifiers.rules.ZeroR  
Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-weka.filters.unsupervised.attribute.Remove-R1-5,7-8

Instances: 144

Attributes: 14

- Grade
- Access
- Submitted.Exams
- Slides
- Page.Teacher
- Play.Video
- Stop.Video
- Completed.Videos
- Page.Web
- Practices
- Forums.Read
- Forums.Created
- Page.Support
- class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

InputMappedClassifier:

ZeroR predicts class value: Accomodator

Attribute mappings:

Model attributes	Incoming attributes
(numeric) Grade	--> 1 (numeric) Grade
(numeric) Access	--> 2 (numeric) Access
(numeric) Submitted.Exams	--> 3 (numeric) Submitted.Exams
(numeric) Slides	--> 4 (numeric) Slides
(numeric) Page.Teacher	--> 5 (numeric) Page.Teacher
(numeric) Play.Video	--> 6 (numeric) Play.Video
(numeric) Stop.Video	--> 7 (numeric) Stop.Video
(numeric) Completed.Videos	--> 8 (numeric) Completed.Videos
(numeric) Page.Web	--> 9 (numeric) Page.Web
(numeric) Practices	--> 10 (numeric) Practices
(numeric) Forums.Read	--> 11 (numeric) Forums.Read
(numeric) Forums.Created	--> 12 (numeric) Forums.Created
(numeric) Page.Support	--> 13 (numeric) Page.Support
(nominal) class	--> 14 (nominal) class

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	30	20.8333 %
Incorrectly Classified Instances	114	79.1667 %
Kappa statistic	-0.0556	

Mean absolute error           0.3752  
 Root mean squared error       0.4333  
 Relative absolute error       100 %  
 Root relative squared error   100 %  
 Total Number of Instances    144

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,333	0,426	0,207	0,333	0,255	-0,082	0,448	0,229	Accomodator
	0,333	0,407	0,214	0,333	0,261	-0,066	0,459	0,234	Assimilator
	0,000	0,000	?	0,000	?	0,459	0,234		Converger
	0,167	0,222	0,200	0,167	0,182	-0,059	0,448	0,229	Diverger
Weighted Avg.	0,208	0,264	?	0,208	?	?	0,453	0,232	

=== Confusion Matrix ===

a	b	c	d	<-- classified as
12	16	0	8	a = Accomodator
16	12	0	8	b = Assimilator
14	14	0	8	c = Converger
16	14	0	6	d = Diverger

=== Run information ===

Scheme: weka.classifiers.rules.DecisionTable -X 1 -S "weka.attributeSelection.BestFirst -D 1 -N 5"

Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-weka.filters.unsupervised.attribute.Remove-R1-5,7-8

Instances: 144

Attributes: 14

- Grade
- Access
- Submitted.Exams
- Slides
- Page.Teacher
- Play.Video
- Stop.Video
- Completed.Videos
- Page.Web
- Practices
- Forums.Read
- Forums.Created
- Page.Support
- class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

Decision Table:

Number of training instances: 144

Number of Rules : 2

Non matches covered by Majority class.

Best first.

Start set: no attributes

Search direction: forward

Stale search after 5 node expansions

Total number of subsets evaluated: 68

Merit of best subset found: 41.667

Evaluation (for feature selection): CV (leave one out)

Feature set: 1,14

Time taken to build model: 0.08 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	56	38.8889 %
Incorrectly Classified Instances	88	61.1111 %
Kappa statistic	0.1852	
Mean absolute error	0.3449	
Root mean squared error	0.4179	
Relative absolute error	91.9157 %	
Root relative squared error	96.452 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	1,000	0,407	0,450	1,000	0,621	0,516	0,716	0,358	Accomodator
	0,000	0,000	?	0,000	?	?	0,414	0,244	Assimilator
	0,472	0,324	0,327	0,472	0,386	0,134	0,556	0,280	Converger
	0,083	0,083	0,250	0,083	0,125	0,000	0,551	0,280	Diverger
Weighted Avg.	0,389	0,204	?	0,389	?	?	0,559	0,291	

=== Confusion Matrix ===

```

a b c d <-- classified as
36 0 0 0 | a = Accomodator
19 0 15 2 | b = Assimilator
12 0 17 7 | c = Converger
13 0 20 3 | d = Diverger

```

=== Run information ===

Scheme: weka.classifiers.trees.RandomForest -P 100 -I 100 -num-slots 1 -K 0 -M 1.0 -V 0.001 -S 1

Relation: DatasetPrueba36InstanciasPorEstilo-weka.filters.unsupervised.attribute.Remove-R1-weka.filters.unsupervised.attribute.Remove-R1-5,7-8

Instances: 144

Attributes: 14

- Grade
- Access
- Submitted.Exams
- Slides
- Page.Teacher
- Play.Video
- Stop.Video
- Completed.Videos
- Page.Web
- Practices
- Forums.Read
- Forums.Created
- Page.Support
- class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

RandomForest

Bagging with 100 iterations and base learner

weka.classifiers.trees.RandomTree -K 0 -M 1.0 -V 0.001 -S 1 -do-not-check-capabilities

Time taken to build model: 0.15 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	47	32.6389 %
Incorrectly Classified Instances	97	67.3611 %
Kappa statistic	0.1019	
Mean absolute error	0.3503	
Root mean squared error	0.4321	
Relative absolute error	93.3677 %	
Root relative squared error	99.7227 %	
Total Number of Instances	144	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,750	0,324	0,435	0,750	0,551	0,372	0,760	0,407	Accomodator
	0,167	0,157	0,261	0,167	0,203	0,011	0,537	0,288	Assimilator
	0,194	0,231	0,219	0,194	0,206	-0,039	0,551	0,266	Converger
	0,194	0,185	0,259	0,194	0,222	0,010	0,613	0,329	Diverger
Weighted Avg.	0,326	0,225	0,294	0,326	0,296	0,089	0,615	0,322	

=== Confusion Matrix ===

```
a b c d <-- classified as
27 3 4 2 | a = Accomodator
15 6 7 8 | b = Assimilator
10 9 7 10 | c = Converger
10 5 14 7 | d = Diverger
```

## Entrenamiento para clasificar Rendimiento Académico -cualitativo-

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: NuevoDatasetCompletoGradeGroup-weka.filters.unsupervised.attribute.Remove-R1-weka.filters.unsupervised.attribute.Remove-R22-weka.filters.unsupervised.attribute.Remove-R2-24,26-weka.filters.unsupervised.attribute.Remove-R2

Instances: 251

Attributes: 22

- Gender
- Layer
- Age
- Semester
- Average
- Priority
- School
- Entry.Score
- Access
- Submitted.Exams
- Slides
- Page.Teacher
- Play.Video
- Stop.Video
- Completed.Videos
- Page.Web
- Practices
- Forums.Read
- Forums.Created
- Page.Support
- Kolb
- class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Submitted.Exams <= 15
| Submitted.Exams <= 12: D (8.0)
| Submitted.Exams > 12
| | Page.Support <= 8
| | | Layer <= 1
| | | | Page.Support <= 5: D (5.0)
| | | | Page.Support > 5: B (2.0)
| | | Layer > 1
| | | | Age <= 20: C (3.0/1.0)
| | | | Age > 20: D (2.0)
| | Page.Support > 8
| | | Priority <= 1: C (7.0)
| | | Priority > 1
| | | | Age <= 21: D (3.0)
| | | | Age > 21: C (2.0)
Submitted.Exams > 15
```

```

Average <= 0.78
| Layer <= 3
| | Access <= 37
| | | Age <= 23
| | | | Page.Teacher <= 24
| | | | | Layer <= 2
| | | | | | Layer <= 1
| | | | | | | Play.Video <= 8: D (5.0/1.0)
| | | | | | | Play.Video > 8
| | | | | | | | Forums.Created <= 2
| | | | | | | | | Age <= 21
| | | | | | | | | | Entry.Score <= 55: C (2.0)
| | | | | | | | | | Entry.Score > 55: B (7.0/1.0)
| | | | | | | | | | Age > 21: C (3.0)
| | | | | | | | | | Forums.Created > 2: C (2.0/1.0)
| | | | | | | | Layer > 1: C (12.0/1.0)
| | | | | | Layer > 2
| | | | | | | Kolb <= 3: B (5.0/1.0)
| | | | | | | Kolb > 3: D (3.0)
| | | | | | Page.Teacher > 24: B (5.0)
| | | | | Age > 23
| | | | | | School <= 1: C (2.0)
| | | | | | School > 1: B (15.0/1.0)
| | | | Access > 37
| | | | | Semester <= 3
| | | | | | Semester <= 1: C (2.0)
| | | | | | Semester > 1
| | | | | | | Completed.Videos <= 1: C (2.0)
| | | | | | | Completed.Videos > 1
| | | | | | | | Kolb <= 2: B (5.0)
| | | | | | | | Kolb > 2: D (4.0/1.0)
| | | | | Semester > 3
| | | | | | Age <= 26
| | | | | | | Priority <= 2
| | | | | | | | Slides <= 13
| | | | | | | | | Layer <= 1
| | | | | | | | | | Slides <= 4: A (2.0)
| | | | | | | | | | Slides > 4
| | | | | | | | | | Page.Teacher <= 22
| | | | | | | | | | | Access <= 43: B (5.0/1.0)
| | | | | | | | | | | Access > 43: C (5.0)
| | | | | | | | | | Page.Teacher > 22
| | | | | | | | | | | Gender <= 1
| | | | | | | | | | | | Entry.Score <= 54: B (3.0)
| | | | | | | | | | | | Entry.Score > 54: A (3.0)
| | | | | | | | | | | Gender > 1: B (2.0)
| | | | | | | | Layer > 1
| | | | | | | | | Age <= 20: A (2.0)
| | | | | | | | | Age > 20
| | | | | | | | | | Age <= 23: B (7.0)
| | | | | | | | | | Age > 23: A (3.0/1.0)
| | | | | | | Slides > 13
| | | | | | | | Semester <= 8
| | | | | | | | | School <= 1
| | | | | | | | | | Access <= 53: C (4.0/1.0)
| | | | | | | | | | Access > 53: B (4.0)

```



```

| | | | | | | | | | School > 1
| | | | | | | | | | Practices <= 32
| | | | | | | | | | Page.Web <= 11: B (18.0)
| | | | | | | | | | Page.Web > 11
| | | | | | | | | | Stop.Video <= 56: B (6.0/1.0)
| | | | | | | | | | Stop.Video > 56: C (2.0)
| | | | | | | | | | Practices > 32: C (2.0)
| | | | | | | | | | Semester > 8: C (2.0)
| | | | | | | | | | Priority > 2: B (3.0/2.0)
| | | | | | | | | | Age > 26
| | | | | | | | | | Submitted.Exams <= 22: B (5.0)
| | | | | | | | | | Submitted.Exams > 22
| | | | | | | | | | Average <= 0.67: A (3.0)
| | | | | | | | | | Average > 0.67: B (3.0/1.0)
| | | | | | | | | | Layer > 3
| | | | | | | | | | Average <= 0.68: D (2.0)
| | | | | | | | | | Average > 0.68: C (5.0/1.0)
| | | | | | | | | | Average > 0.78
| | | | | | | | | | Slides <= 9
| | | | | | | | | | Play.Video <= 49: B (8.0/1.0)
| | | | | | | | | | Play.Video > 49: C (3.0)
| | | | | | | | | | Slides > 9
| | | | | | | | | | Page.Web <= 5
| | | | | | | | | | School <= 1: C (4.0/1.0)
| | | | | | | | | | School > 1
| | | | | | | | | | Gender <= 1: B (5.0/1.0)
| | | | | | | | | | Gender > 1
| | | | | | | | | | Average <= 0.79: B (2.0)
| | | | | | | | | | Average > 0.79: A (2.0)
| | | | | | | | | | Page.Web > 5
| | | | | | | | | | Submitted.Exams <= 19: A (8.0/2.0)
| | | | | | | | | | Submitted.Exams > 19
| | | | | | | | | | Forums.Created <= 6
| | | | | | | | | | Forums.Created <= 2: A (3.0/1.0)
| | | | | | | | | | Forums.Created > 2: B (8.0)
| | | | | | | | | | Forums.Created > 6: A (11.0/2.0)

```

Number of Leaves : 55

Size of the tree : 109

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	106	42.2311 %
Incorrectly Classified Instances	145	57.7689 %
Kappa statistic	0.1379	
Mean absolute error	0.2959	
Root mean squared error	0.5092	
Relative absolute error	87.2543 %	
Root relative squared error	123.7633 %	
Total Number of Instances	251	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,182	0,110	0,200	0,182	0,190	0,075	0,570	0,152	A
	0,547	0,425	0,529	0,547	0,538	0,121	0,545	0,495	B
	0,318	0,259	0,304	0,318	0,311	0,058	0,542	0,287	C
	0,429	0,074	0,484	0,429	0,455	0,373	0,668	0,326	D
Weighted Avg.	0,422	0,291	0,420	0,422	0,421	0,134	0,564	0,372	

=== Confusion Matrix ===

```
a b c d <-- classified as
6 19 7 1 | a = A
16 64 30 7 | b = B
7 30 21 8 | c = C
1 8 11 15 | d = D
```

=== Run information ===

Scheme: weka.classifiers.trees.J48 -C 0.25 -M 2  
Relation: DatasetCompletoCvACOrdenadoGrades-weka.filters.unsupervised.attribute.Remove-  
R1,3-28

Instances: 251

Attributes: 21

- Gender
- Layer
- Age
- Semester
- Average
- Priority
- School
- Entry.Score
- Access
- Submitted.Exams
- Slides
- Page.Teacher
- Play.Video
- Stop.Video
- Completed.Videos
- Page.Web
- Practices
- Forums.Read
- Forums.Created
- Page.Support
- class

Test mode: 10-fold cross-validation

=== Classifier model (full training set) ===

J48 pruned tree

-----

```
Submitted.Exams <= 11
| Average <= 0.55: Converger (3.0)
| Average > 0.55: Assimilator (4.0)
Submitted.Exams > 11
| Semester <= 6
| | Entry.Score <= 48.75
| | | Forums.Created <= 8
| | | | Forums.Read <= 2: Accomodator (2.0/1.0)
| | | | Forums.Read > 2
| | | | | School <= 1: Accomodator (3.0/1.0)
| | | | | School > 1
| | | | | Stop.Video <= 72
| | | | | | Age <= 29: Converger (16.0/1.0)
| | | | | | Age > 29: Accomodator (2.0/1.0)
| | | | | Stop.Video > 72: Accomodator (2.0)
| | | Forums.Created > 8: Accomodator (7.0/1.0)
| | Entry.Score > 48.75
| | | Forums.Created <= 13
| | | | Page.Web <= 24
| | | | | Forums.Read <= 26
| | | | | Submitted.Exams <= 25
```

```

| | | | | | Forums.Read <= 19
| | | | | | | Average <= 0.76
| | | | | | | | Gender <= 1
| | | | | | | | | Entry.Score <= 59.08
| | | | | | | | | | Semester <= 4
| | | | | | | | | | | School <= 1: Diverger (3.0)
| | | | | | | | | | | School > 1
| | | | | | | | | | | | Practices <= 7: Accomodator (4.0)
| | | | | | | | | | | | Practices > 7: Converger (3.0/1.0)
| | | | | | | | | | | Semester > 4: Accomodator (6.0)
| | | | | | | | | | Entry.Score > 59.08
| | | | | | | | | | | Semester <= 3: Accomodator (2.0)
| | | | | | | | | | | Semester > 3: Assimilator (3.0)
| | | | | | | | | | Gender > 1
| | | | | | | | | | | Semester <= 1: Accomodator (2.0)
| | | | | | | | | | | Semester > 1
| | | | | | | | | | | | Age <= 19
| | | | | | | | | | | | | Average <= 0.71: Diverger (4.0/1.0)
| | | | | | | | | | | | | Average > 0.71: Converger (3.0)
| | | | | | | | | | | | Age > 19
| | | | | | | | | | | | | Average <= 0.63
| | | | | | | | | | | | | | Forums.Created <= 1: Converger (2.0)
| | | | | | | | | | | | | | Forums.Created > 1: Accomodator (5.0/1.0)
| | | | | | | | | | | | | Average > 0.63
| | | | | | | | | | | | | | Page.Teacher <= 6: Accomodator (3.0/1.0)
| | | | | | | | | | | | | | Page.Teacher > 6
| | | | | | | | | | | | | | | Completed.Videos <= 5: Diverger (12.0/1.0)
| | | | | | | | | | | | | | | Completed.Videos > 5: Accomodator (3.0/1.0)
| | | | | | | | | | | Average > 0.76
| | | | | | | | | | | | Slides <= 11: Assimilator (4.0)
| | | | | | | | | | | | Slides > 11
| | | | | | | | | | | | | Page.Support <= 6: Accomodator (3.0)
| | | | | | | | | | | | | Page.Support > 6: Converger (3.0/1.0)
| | | | | | | | | | Forums.Read > 19
| | | | | | | | | | | Age <= 20: Assimilator (3.0)
| | | | | | | | | | | Age > 20: Diverger (2.0)
| | | | | | | | | | Submitted.Exams > 25: Assimilator (4.0/1.0)
| | | | | | | | | Forums.Read > 26
| | | | | | | | | | Age <= 21: Accomodator (11.0/1.0)
| | | | | | | | | | Age > 21
| | | | | | | | | | | Semester <= 3: Accomodator (2.0)
| | | | | | | | | | | Semester > 3: Converger (2.0)
| | | | | | | | | | Page.Web > 24: Diverger (4.0)
| | | | | | | | | Forums.Created > 13
| | | | | | | | | | Access <= 59: Diverger (2.0)
| | | | | | | | | | Access > 59: Converger (3.0)
| | | | | | | | Semester > 6
| | | | | | | | | Entry.Score <= 66.25
| | | | | | | | | | Slides <= 9
| | | | | | | | | | | Age <= 21: Diverger (6.0/1.0)
| | | | | | | | | | | Age > 21
| | | | | | | | | | | Layer <= 1
| | | | | | | | | | | | Slides <= 5: Assimilator (3.0/1.0)
| | | | | | | | | | | | Slides > 5: Converger (6.0/1.0)
| | | | | | | | | | | Layer > 1
| | | | | | | | | | Page.Teacher <= 24

```

```

| | | | | | Page.Web <= 4
| | | | | | | Access <= 26: Accomodator (6.0/2.0)
| | | | | | | Access > 26: Diverger (6.0/1.0)
| | | | | | Page.Web > 4: Accomodator (6.0/1.0)
| | | | | | Page.Teacher > 24: Assimilator (4.0/1.0)
| | | | | Slides > 9
| | | | | Forums.Created <= 4
| | | | | | Priority <= 2
| | | | | | | Play.Video <= 8: Diverger (2.0)
| | | | | | | Play.Video > 8: Accomodator (23.0/4.0)
| | | | | | Priority > 2
| | | | | | | Age <= 27: Diverger (3.0)
| | | | | | | Age > 27: Accomodator (2.0/1.0)
| | | | | Forums.Created > 4
| | | | | | Average <= 0.88
| | | | | | | Priority <= 1
| | | | | | | | Stop.Video <= 41: Accomodator (12.0)
| | | | | | | | Stop.Video > 41
| | | | | | | | | School <= 1: Accomodator (2.0)
| | | | | | | | | School > 1: Assimilator (8.0/1.0)
| | | | | | | Priority > 1
| | | | | | | Forums.Created <= 11
| | | | | | | | Entry.Score <= 48.75: Assimilator (8.0)
| | | | | | | | Entry.Score > 48.75: Accomodator (3.0/1.0)
| | | | | | | Forums.Created > 11: Accomodator (3.0)
| | | | | | Average > 0.88: Assimilator (2.0/1.0)
| | | | | Entry.Score > 66.25
| | | | | Forums.Created <= 1: Accomodator (2.0/1.0)
| | | | | Forums.Created > 1: Diverger (7.0/1.0)

```

Number of Leaves : 54

Size of the tree : 107

Time taken to build model: 0.01 seconds

=== Stratified cross-validation ===  
 === Summary ===

Correctly Classified Instances	81	32.2709 %
Incorrectly Classified Instances	170	67.7291 %
Kappa statistic	0.0621	
Mean absolute error	0.342	
Root mean squared error	0.5481	
Relative absolute error	94.9643 %	
Root relative squared error	129.2079 %	
Total Number of Instances	251	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0,400	0,371	0,417	0,400	0,408	0,029	0,525	0,414	Accomodator
	0,222	0,150	0,244	0,222	0,233	0,074	0,525	0,221	Assimilator
	0,300	0,194	0,278	0,300	0,288	0,103	0,533	0,228	Converger
	0,286	0,226	0,267	0,286	0,276	0,059	0,509	0,247	Diverger

Weighted Avg. 0,323 0,264 0,325 0,323 0,323 0,059 0,523 0,305

=== Confusion Matrix ===

```
a b c d <-- classified as
40 15 17 28 | a = Accomodator
22 10 7 6 | b = Assimilator
19 6 15 10 | c = Converger
15 10 15 16 | d = Diverger
```