

L'élaboration d'échelles de mesure de la perception par des étudiants du réseau collégial québécois des pratiques d'évaluation des apprentissages en salle de classe (titre de la proposition)

Development of measure scale of high school student's perception of assessment practices of learning in classroom

Nadine Talbot

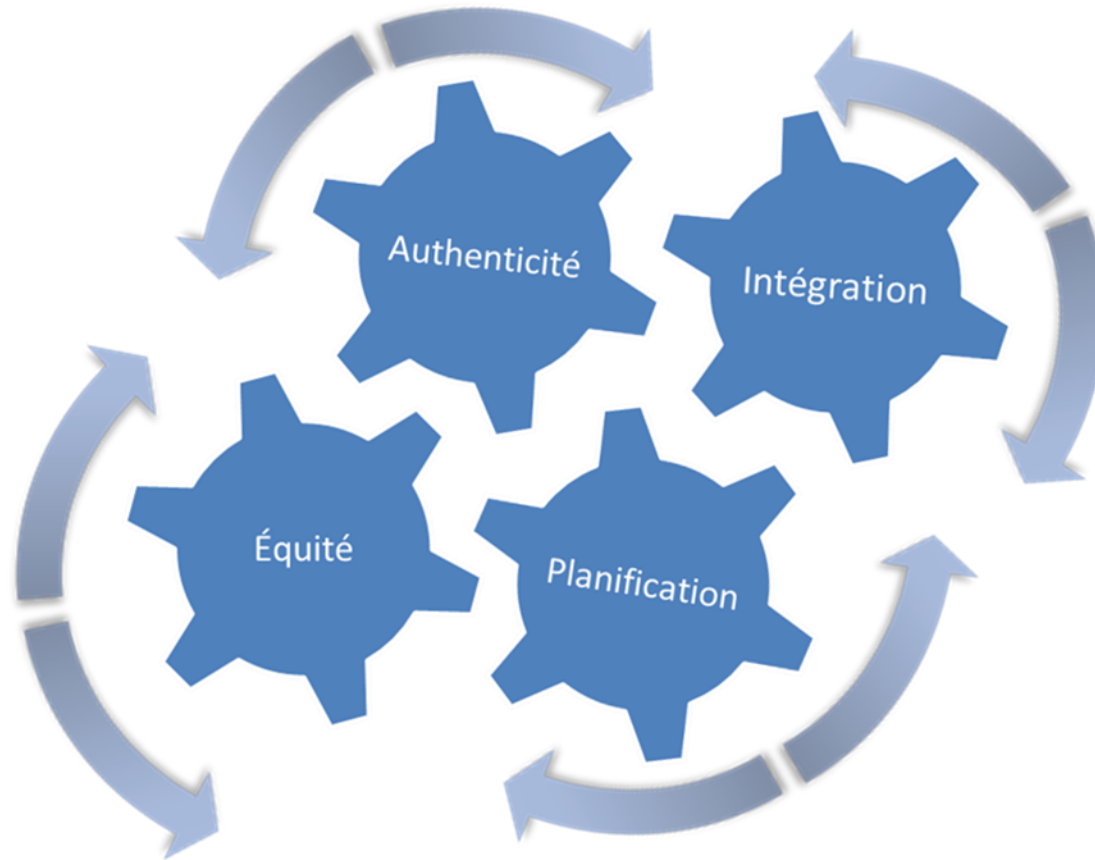
Gilles Raïche

Université du Québec à Montréal

Plan

- Principles of assessment
- Questionnaire's objective
- Questionnaire development
- Data collection
- Sample
- Questionnaire reliability
- Principal components analysis
- Analysis model choice
- Items parameters
- Persons parameters
- Item fit
- Person fit
- Is an another possible model?

Principles of assessment (Raïche, Cantin et Lalonde, 2005)



Planification

- Assessment planning is a part of course planning (Deshaies, 1996 et Durand et Chouinard, 2006)
 - Insure adequacy between assessment and teaching (Deshaies, 1996, p. 114)
 - Consist of a choice of assessment strategy integrate quality resources and coherent criterias with aimed competency (Deshaies, 1996, p. 140) traduction libre

Integration

- The methods of the assessment are :
 - integrated into the teaching.
 - integrated one into the others.
 - integrated into the curricula.
- (Raîche, 2006)

Equity

- **Students know expectations** (Suskie, 2000; Vos, 2000; Dietel, 1991)
- **Evaluate content is related with taught content** (Suskie, 2000; McMillan, 2000; Dietel, 1991; Bercier-Larivière, 1999)
- **Cultural neutrality**(Stobart, 2005; Astin, 1990; Bercier-Larivière, 1999)
- **Students know in advance which content will be evaluate** (Suskie, 2000; McMillan, 2000, Dietel, 1991; Bercier-Larivière, 1999)

Authenticity

- **Complexity : mobilization of several knowledges, habilities, attitudes or competencies** (Wiggins,1989; Herrington et Herrington, 1998; Gulikers et coll, 2004; Herrington et Herrington, 2006; Laurier, 2005)
- **Similarity of challenges and criterias with the professional reality** (Wiggins,1989; Wiggins, 1990; Herrington et Herrington, 1998; Gulikers et coll, 2004; Herrington et Herrington, 2006)
- **Several various tasks** (Wiggins,1989; Wiggins, 1990; Herrington et Herrington, 1998; Gulikers et coll, 2004; Herrington et Herrington, 2006)
- **Require high level of problem resolve habilities and reflection** (Wiggins, 1990; Herrington et Herrington, 2006)

Questionnaire's objective

The **development of a tool for data collection** to measure the student's perceptions of assessment practices in classes

Questionnaire development

- Development in team
- Two validations from experts and corrections
- Final version
- Development application for the iPod touch

Questionnaire

- 24 items
- Scale:
 - Never
 - Rarely
 - Often
 - Always

Sample

- Number of:
 - High schools: 19
 - Subjects: 1 975
 - Groups : 103
 - Size
 - Small: 797
 - Medium: 598
 - Large: 579
 - NA : 1

Questionnaire reliability: psychometric package – R software

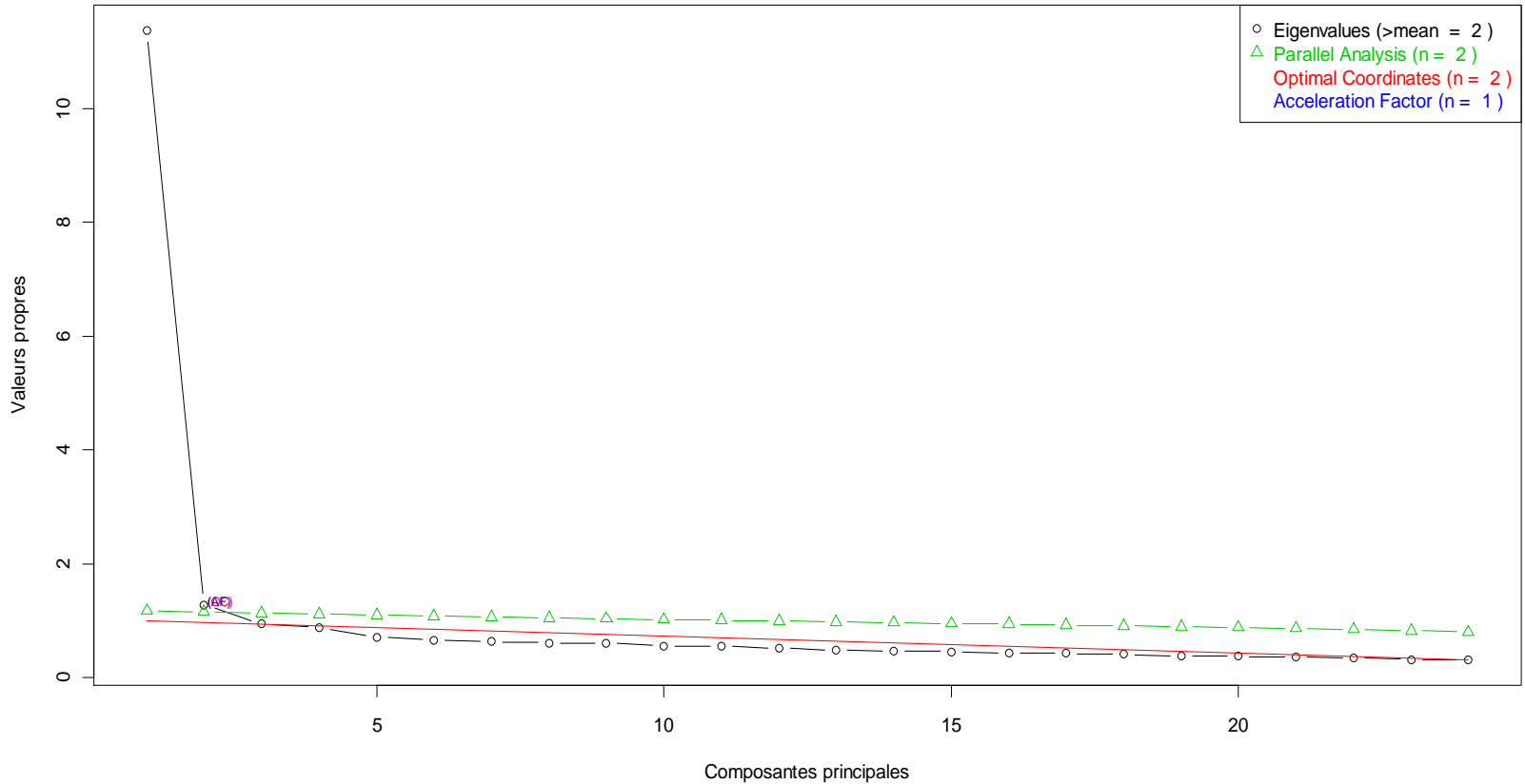
- Cronbach's alpha : ,95
- Reliability if any item is dropped : ,95

Principal component analysis – nfactors package – R software

Component	Eigenvalues	%
1	11,373	0,474
2	1,274	0,053
3	0,936	0,039
'''	'''	'''
24	0,303	0,013

Principal component analysis

Test de l'eboulis et analyse parallele



Principal component analysis

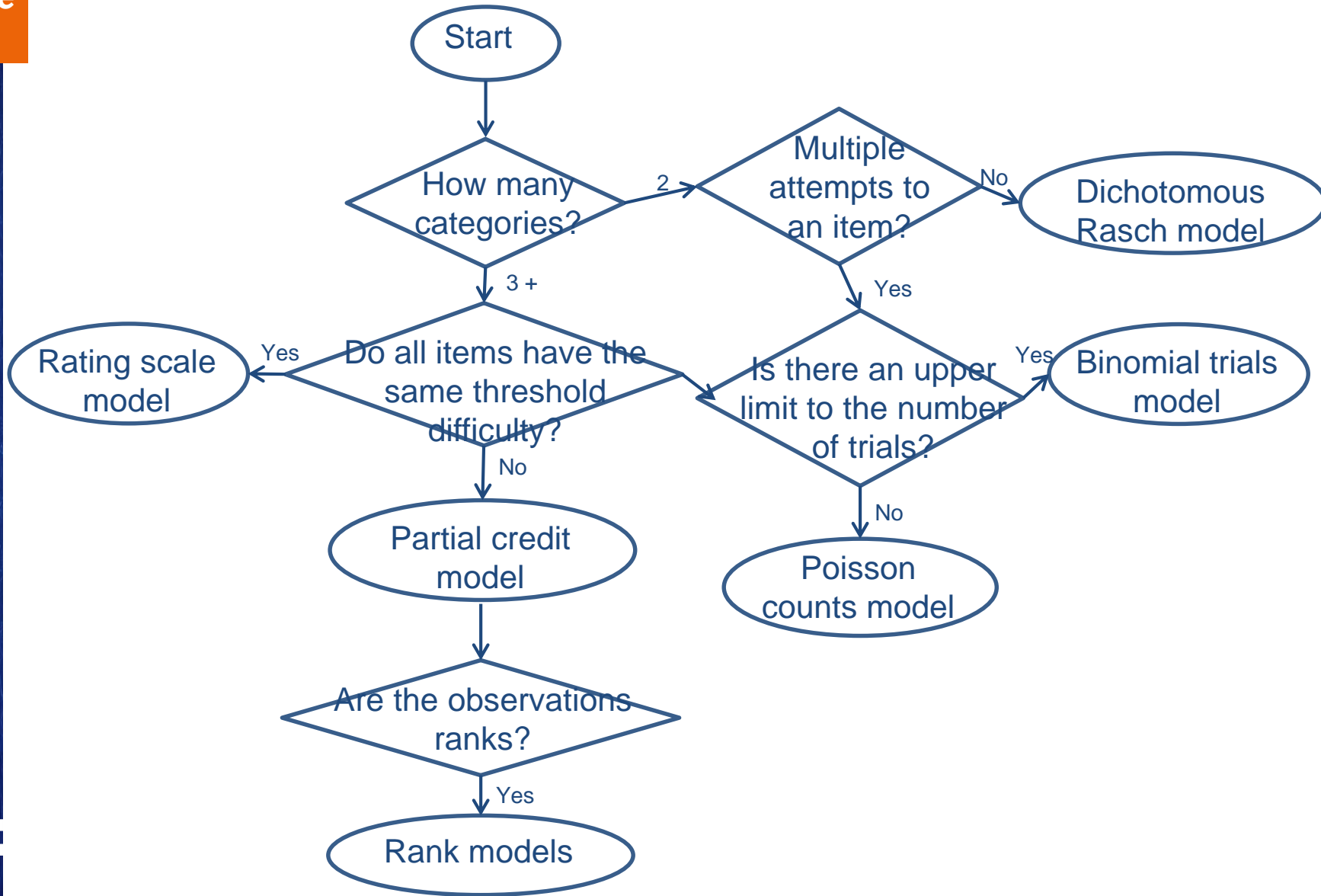
Principal component analysis = 1 dimension

VS

Theoretical framework = 4 dimensions

?

Analysis model choice



Item's parameters – eRm package – R software

Parameters for each steps are between
-4,68 et 2,356

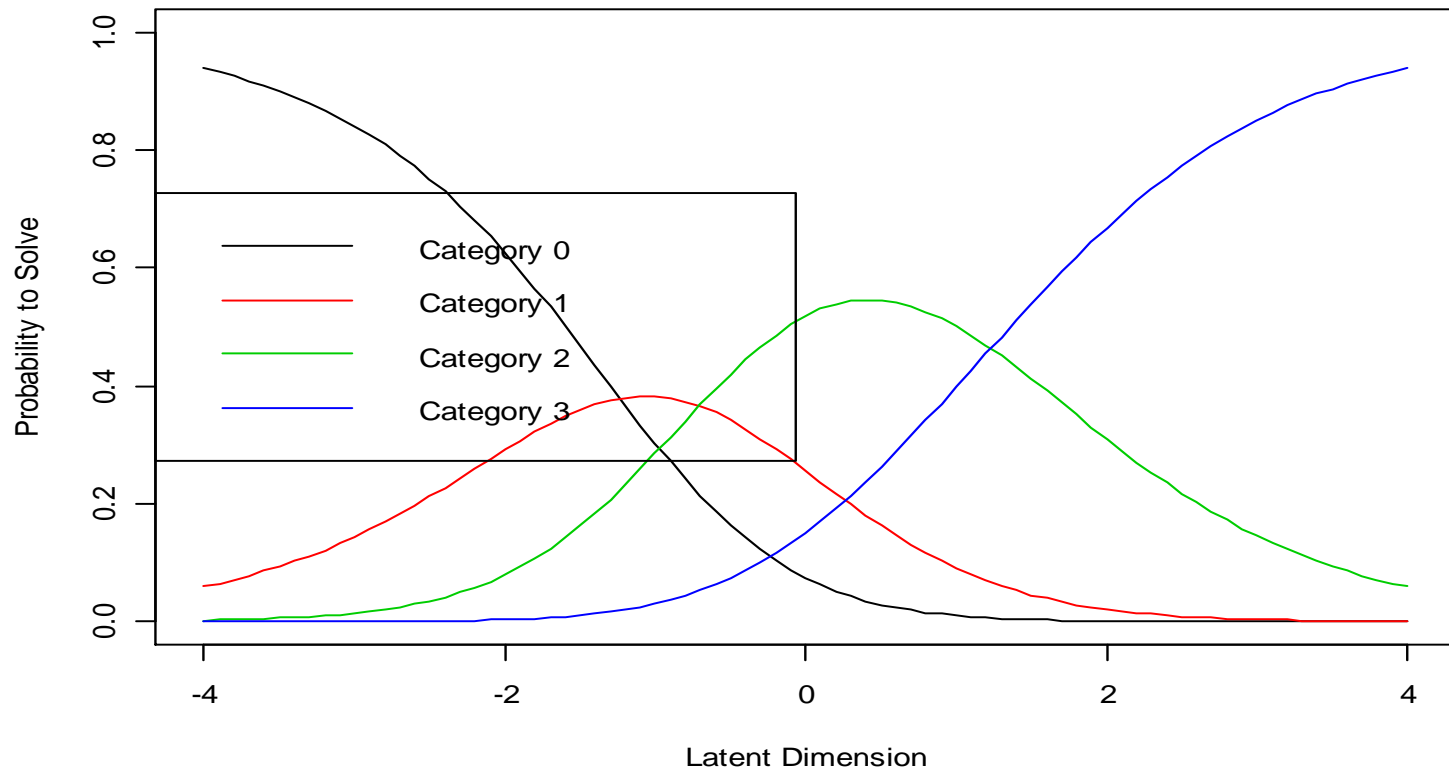
Exemple of item's parameter

Item	Item's parameter (step)
P2PLANIF2c1	-1,235
P2PLANIF2c2	-1,942
P2PLANIF2c3	-0,711
P2AUTH5c1	-1,296
P2AUTH5c2	-1,182
P2AUTH5c3	1,422

Example 1 of item's parameter

Mon enseignant m'informe à l'avance des tâches d'évaluation où je dois collaborer avec d'autres étudiants.

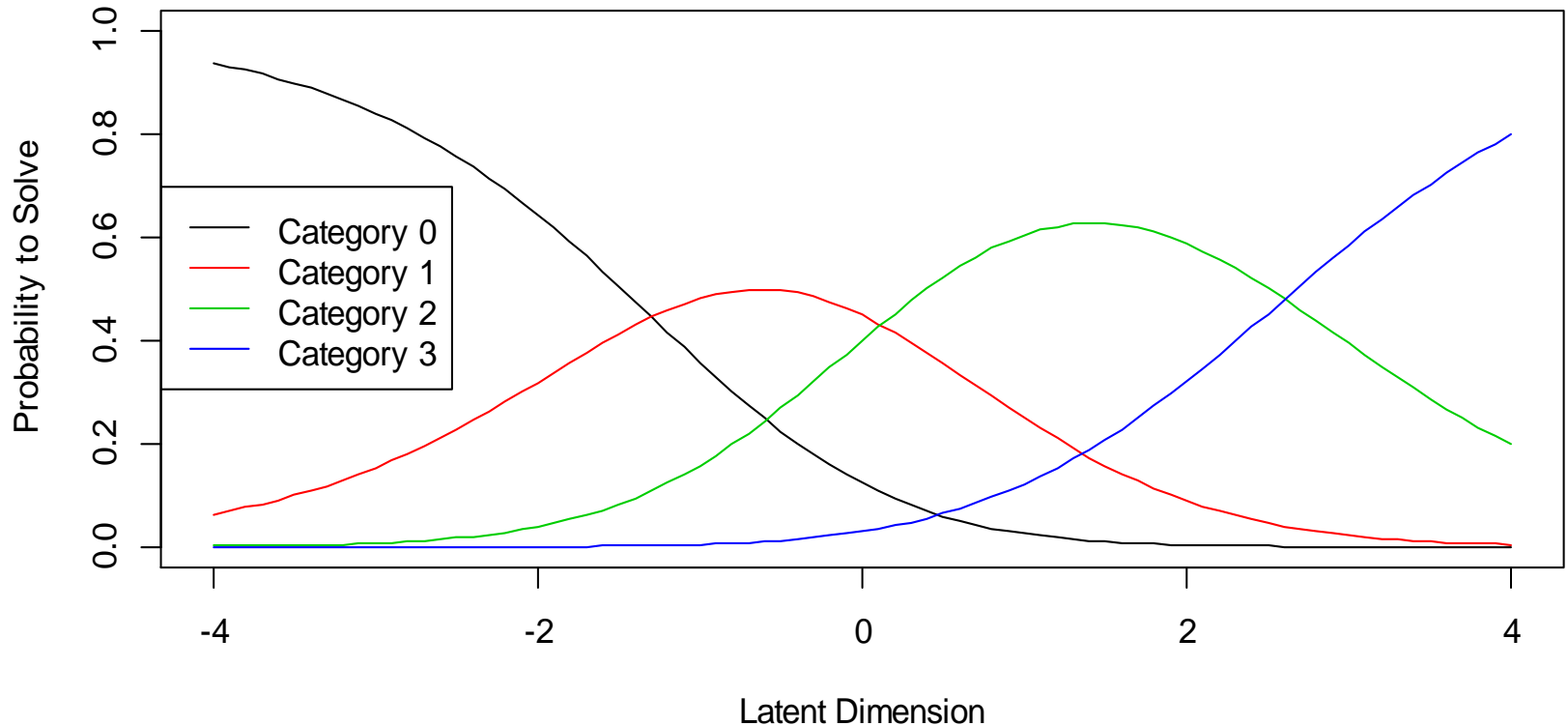
ICC plot for item P2PLANIF2



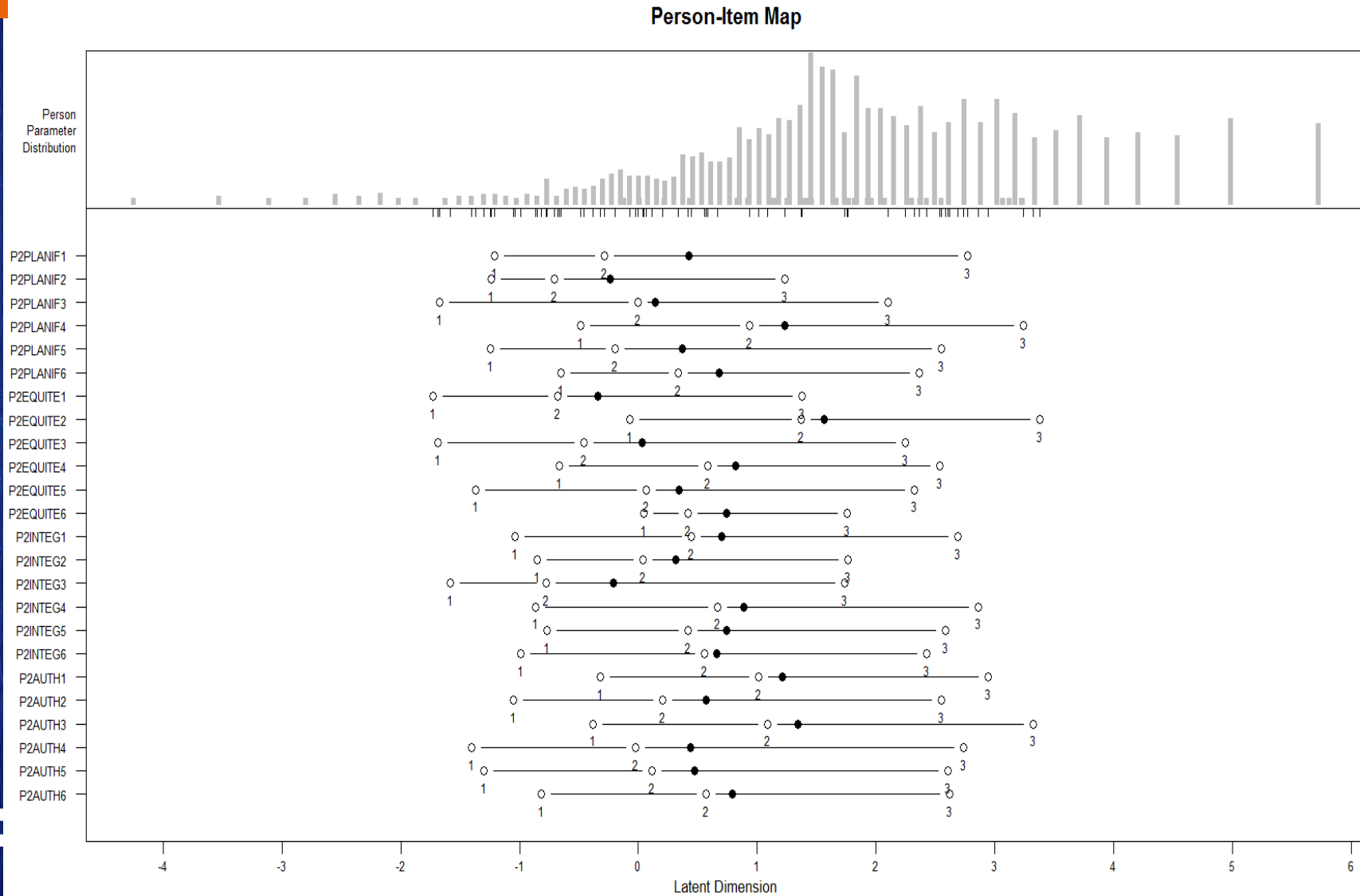
Example 2 of item's parameter

Mon enseignant me fait part de l'utilité des apprentissages ciblés par la tâche d'évaluation.

ICC plot for item P2AUTH5



Item – person map



Item fit

- Parameters are between :
 - outfit t : -9,72 and 29,49
 - infit t : -10,47 and 21,08
- Only item P2INTEG2 have not a misfit problem because :
 - Oufit t= 1,85
 - Infit t = 0,62

Person fit

- Parameters are between:
 - outfit t : -6,66 et 12,14
 - infit t : -6,68 et 11,12
- Some persons have a misfit problem
 - Oufit t et infit t > |2|

Is an another possible model?

ANOVA analysis : PCM vs GPCM

	AIC	BIC	log.Lik	LRT	df	p.value
res.pcm	86892.66	87295.02	-43374.33		72	
<u>res.gpcm</u>	<u>85506.76</u>	<u>86043.24</u>	<u>-42657.38</u>	<u>1433.91</u>	<u>96</u>	<u><0.001</u>

p.value < .05, GPCM is better of PCM

Thanks for your attention
and
a nice day