DEVISING FAIR ASSESSMENT CONTEXTS

M-C Toczek-Capelle
Laboratoire ACTé – EA 4281
Université Blaise-Pascal, France

Beijing, China
National and International statistics clearly show

In France and in several other countries in the OECD

The social groups that students belong to determine

The length and the nature of their school education
How can such differences in achievement be explained?
Student with cognitive abilities

Learning task

Achievement, success = application of 1 to 2
We consider a contextual approach to be relevant
This scientific research is extremely interesting for all the professionals working in education

• The classroom is the setting for many assessments, at times positive, at others, negative

• There are assessments which lead students to compare themselves with the other students

• An impact on their performances
In the classroom, all the conditions are present for representations of self and certain behaviours to emerge

- The product of everything that a certain culture chooses to honour, reward and nurture

- The competitive bias is so dominant that it makes individuals continually compare themselves with others
What is interesting in this research is that it studies to what extent and in what way the actual classroom context

• Affects the way students process information

• and thereby makes children succeed or fail
Two different types of evaluation contexts which determine performances

1. The first contexts show the effects of a reputation of inferiority

2. The second show the effects of achievement goals
The research on reputed intellectual inferiority

All this research points to the fact that when the classroom context heightens children’s awareness of their reputation of intellectual inferiority, the students concerned doubt their own abilities and perform less well.
The impact of the group one belongs to

The stereotypes prevalent in society may have a direct impact on behaviour.

For when a school evaluation context makes these stereotypes appear relevant, we can observe the phenomenon of stereotype threat.
Hypothesized that stereotypes about black people could affect them in some assessment contexts.
Blacks and whites

The same task presented either as an IQ test or simply as an exercise

Steele et Aronson, 1995
This experiment proves

It is not the students’ intellectual abilities that determine achievement.

The assessment context influences their performances.

However, when this evaluative pressure is not present, all the students get the same results.
This princeps study has been repeated and adapted in different ways depending on the characteristics of the stereotypes prevalent in a particular country.

- In France, it would seem that the social group which is a victim of a bad intellectual reputation is students coming from disadvantaged socio-economic backgrounds.

- Croizet and Claire (1998) repeated Steele and Aronson’s experiment with two groups of French students coming from very different social backgrounds (high versus low status).
Croizet and Claire, 1998

- The students with a low socio-economic status are sensitive to the pressure of evaluation because they fail.
- When they are in a context which is presented as being potentially correlated with measuring intelligence.
- Whereas the same students do well when they are in a context with no evaluative pressure.
It would seem that students construct this bad reputation during their childhood

• Being stigmatized means devaluing a person’s identity, deeming it to be inferior to others.
• This stigmatization has a negative impact on the personal value people give themselves.
• When it comes to skin colour, several experiments in the US have shown that children become aware of the stereotype associated with black people very early on.
In 1949, Clark and Cark carried out a study on Afro-American children

- The authors thus showed that black children (as early as the age of 4) seem to know the negative stereotypes related to their skin colour, and to accept these.

- More recently, Agustos et Rosewarne (2001) have shown that five to six year-old children already know the stereotype related to black people.
The phenomenon of stereotype threat

The fear of confirming or being seen to confirm a negative stereotype in relation to the group you belong to (and thus of being reduced to this one negative characteristic) gives rise to evaluative pressure on an individual.

This pressure may be sufficient to prevent them from functioning ‘normally’.
These research studies on the stereotype threat show that

1 – The representations that children have built of themselves in the course of time are determinant

2 – Cognitive productions at school cannot be solely put down to the student’s abilities

3 – These studies also seem to point out that a fair assessment situation is a situation with no evaluative characteristics!
Should we stop assessing students?

Is it possible to modify the assessment situation for it to be less threatening?

Is it possible to devise fair assessment contexts?

Students / Stereotype

Assessment Context

- Anticipating failure
- Doubts about themselves
- Disturbing thoughts

A DROP IN THEIR COGNITIVE RESOURCES AND THUS IN THEIR PERFORMANCES
When we present research on the effects of stereotype threat

• We are asked to devise fair assessment contexts whilst still keeping the evaluative nature of the context!

• Teachers need to assess their students.
It has been observed that

• Gender equality isn’t attainable in science classes.
• In view of this, we did not try to restore female students’ performances by implementing a stereotype threat protocol because we wanted to keep the evaluative nature of the context.
The concept of achievement goals developed by Dweck particularly relevant

- An assessment can be more or less threatening depending on whether its objective is:
  - **Mastery goals**: learning something new, and progressing.
  - **Performance goals**: achieving the best results to show that you are better than the others.
The motivation to succeed  (Dweck, 1989)

**MASTERY GOALS**

- Intrinsic motivation
- A high level of perseverance
- The value given to the effort made

**PERFORMANCE GOALS**

- Self doubt, saturation of the working memory
- Quickly giving up trying to do the task
- Devalorizing effort

**ACHIEVEMENTS MAINTAINED**

**A DROP IN ACHIEVEMENT**
On the basis of this research,

• We tried to imagine several assessment contexts in science classes,
• bearing in mind the asymmetrical achievements already discussed.

Our research question was:

Is mastery-oriented assessment always threatening for girls in physics classes?
Our experimental study

- 192 high school students (Year 11) took part in our experimental study
- They were taught a physics class
- There was experimental induction before the lesson and just before the students did the assessment
- Lesson / Questions on the lesson

*Souchal, C., Toczek, M-C, Darnon, C., Smeding, A. Butera, F., Martinot, D. (2014)*
We tested the effects of three situations

1. **No Evaluation, and no grade -- NE**

2. **Mastery-oriented Assessment with a grade given -- MA**

3. **Performance-oriented Assessment with a grade given -- PA**
Performance at the science test as a function of assessment type and gender
• The boys do better when they are assessed

• The girls do better in a non-threatening situation when the learning context does not include any assessment, or when the assessment is mastery–oriented

• The girls are threatened in an performance-oriented assessment context

• Assessment is necessary for the boys

• **Mastery – oriented assessments suit all students, and thus create a context for fair assessment**
To conclude...

- Student achievement cannot entirely be put down to the individuals’ intrinsic abilities
- Cognitive achievements cannot be dissociated from the social and cultural contexts
To conclude...

- We feel optimistic as a result of all these studies for they allow us to begin to see an educational solution to the recurrent problems of inequality in achievement in the classroom.

- Future studies: need to check that these assessment contexts have all the characteristics which are necessary to guarantee true equity for all students, whatever the cultural context may be?
Thank you for listening
The way individuals react to success or failure

**Canadian**
- Failure
  - No Persistence
- Success
  - Persistence

**Japanese**
- Success
  - Persistence: Less
  - Self improvement: More
- Failure
  - Persistence: More
  - Self improvement: Less

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Heine, Kitayama, Lehman, Takata, Ide, Leung and Matsumot (2001)