

# Development of the competence of collaborative work in an online learning environment for graduate students

---

MARISELA CASTILLO ACOSTA

YOLANDA HEREDIA ESCORZA

MARCH 2015



# Research problem

---

The research describes the **development of the collaborative work competence** of the students of an **online postgraduate course** and its relationship with the **academic achievement** in a master degree program.

**Is there a relationship** between collaborative work competence and academic achievement of the postgraduate students in a online course?

# Method

---

The method of the research was **quantitative and descriptive** in order to relate the variables.

The research sample **consisted in 46 work teams** of the course Learning Theories of the Education master program.

The course was placed on the **Blackboard platform** and it was an online course with an **asynchronous work modality between students and tutors**.

Each team was composed by **4 randomly selected students**. Students were from **Mexico, Colombia and Costa Rica**.

The course contained 13 learning activities; **4 of them were collaborative learning activities**.

All students must collaborate to build the activities.

# Method

---

In order to assess the student's participation within the **online discussion forums** it is essential to study the **interactions occurring in discussion forums** reflected in the student's publication of their ideas that will help to construct knowledge.

For this we had considered the **frequency index and the quality** criteria for participations.

In order to classify the level of domain of the collaborative work competence an instrument was designed based on **Villa and Poblete's (2008) criteria of a collaborative competence and Johnson and Johnson's, (2001) characteristics of the collaborative team.**

All the interactions at the discussion forums **were read and were qualified** in a scale of 3 points, from the high level of collaboration to deficient level.

# Result

## Academic achievement

---

The results show that the **30% of the teams were classified as high level** and the rest of them got a deficient level.

**The average of the 4 grades of each team** (3 for the collaborative activities that the tutors evaluated, and the self-evaluation that every team gave to its performance)

The teams were classified by their academic achievement as: 8.69% of the teams had a low score of 70 to 80 points, 30.43% had a sufficient achievement of 80 to 90 points, 43.47% had a high score of more than 90 points **and 17.39% had an excellent achievement of 100 points.**

# Results

## Collaborative work vs. academic achievement

---

To relate the two variables **8 teams** of the 14 that get the **level of high collaborative work (87.14%)** also got a more than 90 points in the academic achievement **and 6 of these had an excellent academic achievement: they obtained 100 points. It is the 43% of all teams.**

The 32 teams with deficient collaborative work competence had a more variable score in academic achievement: 12.5% got 70 to 80 points; 43.75% got 80 to 90 points; 37.5% got more than 90 points and finally 6.25% had a note of 100.

Then we looked for the **relevant characteristics** of the teams that got the level of high collaborative work competence, applied the Johnson and Johnson description (1989).

# Results: Association

---

The results of collaborative work variables and academic performance in the SPSS statistical program were submitted, the levels of collaboration being 1 for poorly collaborative teams and 3 for classification of highly collaborative teams and each team's academic performance variable which was represented with the average grade the team obtained in collaborative activities of the course were placed.

Pearson coefficient **was 0.719** which means that there is a **high positive correlation between the variables of academic performance and collaborative work competence.**

This means that statistically there is a linear relationship between the variables.

# Discussion

---

As Johnson and Johnson (1989) mentioned, **highly collaborative teams have**: positive interdependence, individual responsibility and group assessment, i.e., highly collaborative teams have a way of acting empathetic, responsible and timely in the development of their activities, they also communicate early and cast their feedback using argumentation.

The online course with multicultural teams is an appropriate learning environment to develop the collaborative work competence.