Some reflections about leading large classes
Algunas reflexiones sobre el manejo de clases numerosas

GIOVANY SUÁREZ PINILLA**, NATALY CAROLINA GARCÍA QUINTERO***

ABSTRACT
This article provides some strategies for teachers to deal with large classes having into account that this is a very common situation in different educational levels. Some teaching methods that have been used to make significant progress in the learning and teaching process are presented here, with the aim of getting more efficient and effective educational environment. Under these circumstances, teachers need to assure that they provide an interactive learning environment to their students. Finally, a lesson plan example for a mathematics class considering all these aspects is presented at the end of this paper.

Keywords: large classes, lesson plan, instructions, collaborative work, learning environments.

RESUMEN
Este artículo proporciona algunas estrategias para los docentes que trabajan con clases numerosas, teniendo en cuenta que ésta es una situación muy común en diferentes niveles educativos. Se presentan aquí algunos métodos de enseñanza que han sido utilizados para lograr avances significativos en el proceso de enseñanza-aprendizaje, con el objetivo de lograr ambientes de aprendizaje más eficientes y eficaces. Bajo estas circunstancias, se invita a los docentes a asegurarse de que están proporcionando un entorno de aprendizaje interactivo a sus estudiantes. Por último, al final de este documento se presenta un ejemplo de plan de clase para un curso de matemáticas, que contempla todos estos aspectos.

Palabras clave: clases numerosas, plan de clase, instrucciones, trabajo colaborativo, ambientes de aprendizaje.

I. INTRODUCTION
Due to the currently educational system conditions in government and private universities, it is very common that teachers have to lead with over 40 student classes. It is actually a challenge for educators to achieve their academic aims in these kinds of classes; although getting a good lesson plan, giving clear instructions to students and keeping a suitable living environment, teachers could not be able to reach their objectives in a reasonable time [1].

Initially, having a well-designed lesson plan allows tutors to make an efficient control of materials, schedule, topics and students profiles.
and pitfalls: definitively lesson plan is a helpful map which preparation maybe carries on some time but it will represent an enormous advantage at the moment of teaching. There are different kinds of lesson plan templates but teachers can design it according to their students’ needs. Setting up a lesson plan is also allowing students to interact and to build new skills [2]. Even at university level, lesson plans are a significant tool in the development of the subject.

Thinking about a general structure, an effective lesson plan involves the following criteria: General Features (level of the class, date, time, assumed knowledge and class profile), Class development (Objectives, subject, human values worked) and Evaluation of the class (action research activities, important notes and commentaries). Figure 1 sums up these ideas.

On the other hand, giving clear instructions to students is an indispensable condition for getting them to do what teachers want. Obviously, teachers must be clear and brief about what they pretend and, at the same time, tutors must follow a logical order in the instructions given to students. As Richard Saul Wurman underlines in his book Follow the Yellow Brick Road: Learning to Give, Take, and Use Instructions, there are six conditions that an instruction must meet: mission, destination, procedure, time, anticipation and failure [3]. Fig. 2 describes Wurman’s concepts.

An additional strategy is the collaborative work, where the psychological functions that identify the human being and the development of his thought are well stimulated in an interactive social context. That is where collaborative work becomes more important. Patricia Glinz states that collaborative work helps to build areas of oral expression and communication between classmates and students, as well as between teachers and students. In her article, she also explains in detail the elements that collaborative work includes, namely: cooperation, responsibility, communication, team work and self-assessment [4]. See Fig. 2.

The last, but not the least strategy, refers to create a sane environment at the schoolroom between students and tutor and among students. It is a relevant ingredient in order to reach an efficient learning process. Perhaps there are and there will be lots of technical literature about this aspect, but possibly it is enough just one rule: to respect the others and getting the others respect. Furthermore, it is necessary to emphasize the contributions made by the Electronic Journal for Inclusive Education in the article Creating a Warm and Inclusive Classroom.
environment: Planning for All Children to Feel Welcome. The authors express that the type of classroom environment that a teacher creates and encourages can either increase or decrease a student’s ability to learn and feel comfortable as a member of the class. They also consider that the classroom environment should do as much to foster cooperation and acceptance as the teaching methods that the teacher uses. The article gives us different methods to structure and encourage a positive classroom environment [5].

In summary, we see that these simple strategies can help teachers to develop a productive and effective work with their students, in large or small groups, but without forgetting a little element immersed in all of them: the teachers’ charisma and their patience and dedication to their students [1]. So, the ideas given in this article can help educator’s daily labour by providing some tools to organize, to build and to design the class in order to meet the students’ expectations.

II. LESSON PLAN EXAMPLE

The following lesson plan collects several concepts exposed previously and it was carried out in a mathematics class at Corporación Universitaria Republicana in Bogotá city, with students of second semester in the Industrial and Systems Engineering program.

A. General features

<table>
<thead>
<tr>
<th>Teacher</th>
<th>G.S.P.</th>
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<tbody>
<tr>
<td>Level of class</td>
<td>University undergraduate students – first year. Industrial and Systems Engineering.</td>
</tr>
<tr>
<td>Time</td>
<td>80 minutes.</td>
</tr>
<tr>
<td>Date</td>
<td>May - 2016.</td>
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</tbody>
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| Assumed knowledge | - Basic competences in the use of web and computational tools  
- Basic definitions of math operations and lineal and second grade polynomials  
- Locating and plotting points on Cartesian Plane. |
| Anticipated Problems | - **Weakness**: use of interactive programs on the web and typing and editing algebraic expressions.  
- **Solution**: giving students a guide with a resume of those topics.  
- **Weakness**: to get confused about calculating some particular operations with integers.  
- **Solution**: some examples about calculating operations and using web and computer calculators. Additionally, previously to class, watching some videos on the web. |
| Class profile | - Almost 36 students.  
- Mostly teenagers (80%) and adults (20%).  
- They need to practice vocabulary and topics learned in the previous lesson about Cartesian Plane. |
| Materials & Human Resources | - Corporación Universitaria Republicana – System room (SR) and classroom.  
- Guides – photocopies. |

B. Work in classroom

| Objectives |  
- To make graphics in an interactive program.  
- To deduce the rules of translations using templates, and plotting several equations.  
- To apply these rules to any real function. |
Subject | Analytical Geometry – Axis Translation.
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Human Values Worked | Mutual help – Team work.

Schedule & Timing | - Warm up: To monitor homework at SR (10 minutes); students have to do a reflection about a previous reading which was sent to their e-boxes last week. In some minutes, they all discuss about their answers.
- Teacher hands out a work guide. Every student visits the web page suggested, types the equations proposed at the guide, compare them and try to deduce simple rules to translate graphics at the X and Y axis (30 minutes).
- Student are supposed to finish the activity at SR.

Later, in the second session of the class, we all go to classroom (5 min).

- The theory of graphics translation is showed on blackboard, some examples are drawn and a new guide is given, for practicing in class (15 min).
- Working in pairs, students will solve two proposed exercises in their notebooks (20 min). While, teacher attends students doubts and moves around supervising students.
- Independent work: At the end of this guide, there are some exercises to solve at home.

Assessment | Not today.

C. Evaluation

Action Research Activities | While students keep working, teacher makes annotations in his field diary. The rest of the observations will be consigned later.

Commentaries | This blank can be used when teachers want to make some notes about successful strategies as well as those that should be improved in next sessions.

III. CONCLUSIONS

Teaching large classes are very common today and teacher’s challenging task, is facilitating students learning by keeping a sane classroom environment and setting up appropriate lesson plans. Likewise, it is evident that the collaborative work strategy facilitates the communication process between students, generating communicative spaces in which all participants identify the valuable contributions they can make to accomplish the given task, having into account that the group involvement contributes to establish a favourable climate. In order to achieve these goals, educators must acquire the tools and mechanisms needed to handle any kind of student population in the conditions offered.

REFERENCES