

Flipped Classroom and Universal Design for Learning: Towards an Inclusive Educational Environment and Curriculum

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Session Information

03 SES 12 B, Inclusion and the Complexity of Curriculum Evaluation

Paper Session

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15:30-17:00

Room: C4.04

Chair: Mark Priestley

Contribution

In one of its most recent documents, UNESCO (2017) states that every learner's full educational progress has to be assumed as a challenge by all countries. Also, it recognizes the importance of the curriculum as a mean of real inclusion and equity.

The Universal Design for Learning (UDL) could be the pedagogical approach that may help in responding to this challenge, since its key idea is remove all the barriers that even teaching methods and didactics can create.

UDL is a concept extension of the Universal Design, an architectural movement whose idea was proposed firstly in 1987 by Ron Mace. The tenet that lies behind the Universal Design is that, in architecture, everything has to be conceived and designed in order to suit the widest range of users, including the ones with disabilities.

In the '90s, this concept was applied to the education field, with the objective to provide to everyone the access to learning, not just to information (Rose & Meyer, 2002).

Universal Design for Learning bases on three principles:

- provide multiple means of engagement
- provide multiple means of representation of contents and information
- provide multiple means of action and expression (Meo, 2008)

Actually, what UDL does, is helping and guiding teachers in creating a flexible curriculum, which includes different alternatives through which present contents, evaluate and give students the opportunity to express themselves and show what they know in their most appropriate way (LaRocco & Wilken, 2013). To obtain this, teachers have to consider not only the presence/absence of disabilities, but also students' cultural and social backgrounds, their learning styles and their abilities and competences.

Also, through UDL framework teachers can design instructional environments in a proactive way, so that they can suit learners' differences and variability (Rao & Meo, 2016).

Moreover, through UDL guidelines (CAST, 2018), teachers can provide flexible options which permit a standard-based lesson to be accessible to a wide range of students.

Flipped Classroom (FC) methodology too tends to make learning process significant and accessible to every student.

Basically, FC is a didactic methodology that consists in inverting learning process' moments and places. Thus, what was traditionally done at school such as lectures, is done at home, and what normally was done at home, like homework and exercises, is done at school (Bergmann & Sams, 2012).

Therefore, for instance, while students are at home, they would watch videolessons or read others materials that were given to them or uploaded in the Internet by their professor, and then, when they are at school, they would do practical activities that give them the chance to deepen and work with the theoretical principles they've already learnt at home (Brame, 2013).

Nevertheless, it doesn't exist a unique way to flip the classroom, but every teacher, according to the context in which he/she works and to the characteristics of his/her students, can choose how to structure the educational materials and the ways of providing them, in order to suite people and the situation within he/she is. For this reason, flipping the classroom has to be firstly a mind-set (Siegle, 2014), which has its main objective in helping every student to learn in a deeper way and that founds its way of acting on the belief that learning has to be student-centred (McLaughlin et al., 2014).

Since we suppose that Universal Design for Learning and Flipped Classroom could be used together in the instructional practice, in this study we would like to compare them, trying to answer the question: which elements of UDL may we use so that FC is used as an inclusive methodology?

Method

The study we are presenting is in its first stage and will be conducted using mixed method, particularly the Triangulation design, according to Creswell & Plano Clark (2007). Actually, we'll use triangulation of methodologies. The first part of the research will be realized through in-depth interviews (Flick, 2007) to university professors who use FC as didactic methodology. To define interviews' questions, we firstly created a questionnaire grounded in findings of numerous researches that highlight different aspects of FC method (Lee, Lim, & Kim, 2017; Long, Cummins, & Waugh, 2017; McLaughlin et al., 2014). Also, we included some questions about how the materials given by professors were adapted or adjusted, if so, in order to be accessible to students. In

our questions, we didn't explicitly name UDL because the majority of the participants doesn't know anything about that and, with mentioning, it would happen to be an obstacle to the communication. Interviews' content analysis will give us the opportunity to identify: 1) typologies of didactic materials used and their adaptability to diverse students and contexts; 2) educational strategies useful to respond to learning difficulties; 3) which difficulties were encountered by teachers and which solutions they found to overcome them. In the second part of the research, we will define UDL's characteristics. This phase will provide us the opportunity to become aware of which strategies, materials, uses of technologies are necessary to implement UDL. Finally, in the third phase, we will be able to note which elements FC and UDL have in common, in order to realise some proposals of integration. Therefore, professors' experience with FC will help us in facilitating the decrease of difficulties from the moment of the instructional design.

Expected Outcomes

Thanks to this study, we expect to find connections between FC and UDL that could help teachers in creating an inclusive environment and curriculum. Here are some previsions of them. For instance, UDL approach provides options for sustaining students' effort and persistence through fostering collaboration or increasing mastery-oriented feedback. FC method can provide these options thanks to cooperative learning activities, peer instruction and teachers' advices and feedbacks, since in an inverted classroom environment, instructor covers the role of a guide and a helper. Thanks to this facilitation, FC teachers, through information processing and visualization (UDL second principle's guideline), can also guide students to fully understand concepts and their concrete applications. Also, UDL framework and FC go in the same direction regarding the development of self-assessment and reflection. Indeed, FC provides contents and activities in a way that encourage students to think: they have to read or listen by themselves and then will be required to expose their thoughts about what they have learned. Also, FC due to the fact that is a learner-centred methodology, besides the traditional evaluation can propose various modalities of self-evaluation, so that students can improve their skills in this field too. Moreover, FC uses a huge variety of media, apps, software to communicate course content or to get students to do practical activities and homework. Examples of this are interactive videos, that can be subtitled, videos and images, written texts, material manipulation; all of this can be well integrated with UDL guidelines "illustrate through multiple media" and "use multiple media for communication". Finally, since FC helps students to be responsible of their learning process by leaving them the possibility to autonomously organize their work and time at home, it also help them in enhancing the capacity for monitoring progress and guide them to an appropriate goal-setting.

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