

# **The use of an e-Portfólio as a way of understanding students learning preferences**

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# Summary

Introduction

Background Context

Methodology

Assessment Tools

Outcomes

Conclusion



# Introduction

*New paths have been design in order to understand what the learner needs, what the learner wants, and how he learns*



Carried out a case-study, with the purpose of exploring the relationship between the development of an ePortfolio and the students learning styles and multiple intelligences



Using several assessment tools.



# Background Context

ePortfolios

Learning Styles

Multiple Intelligences



# ePortfolios

*“a collection of authentic and diverse evidence, drawn from a larger archive representing what a person or organization has learned over time on which the person or organization has reflected, and designed for presentation to one or more audiences for a particular rhetorical purpose”*

Barret& Carney (2005)



The ePortfolio comes forward as one of the initiatives which over the years gained acceptance and popularity in different communities.



Due to that...



European Institute  
for e-learning



higher education institutions  
need to act proactively in order  
to provide suitable educative  
offers and opportunities in this  
domain.

Students used **ELGG platform** in order to construct their ePortfolios



Version 0.2



- a personal and academic profile;
- a weblog;
- discussion communities;
- files and videos, among other possibilities.

# Learning Styles

Learning styles, can be defined as “a particular way in which an individual learns” (Pritchard, 2007).

So....

is interesting to understand how students learn best in order to be able to provide suitable educational offers.

*There are many approaches to this task, most already described in the literature, but we've decided to use the ePortfolio as a tool to better understand that relationship.*

# Learning Styles

## Felder- Silverman Model

*Learners can be:*

“Active and Reflective”, “Sensing and Intuitive”, “Visual and Verbal”, and “Sequential and Global”.

- **Active** learners learn by doing;
- **Reflective** learners learn by thinking;
- **Sensing** learners are more fond of concrete approaches and are facts oriented;
- **Intuitive** learners prefer innovation and creativity;

- **Visual** learners learn better by seeing (visual representations, charts and diagrams);
- **Verbal** learners learn better with written and spoken explanations;
- **Sequential** learners prefer learning by small steps in a more organized way;
- **Global** learners tend to appreciate a more holistic and global point of view.



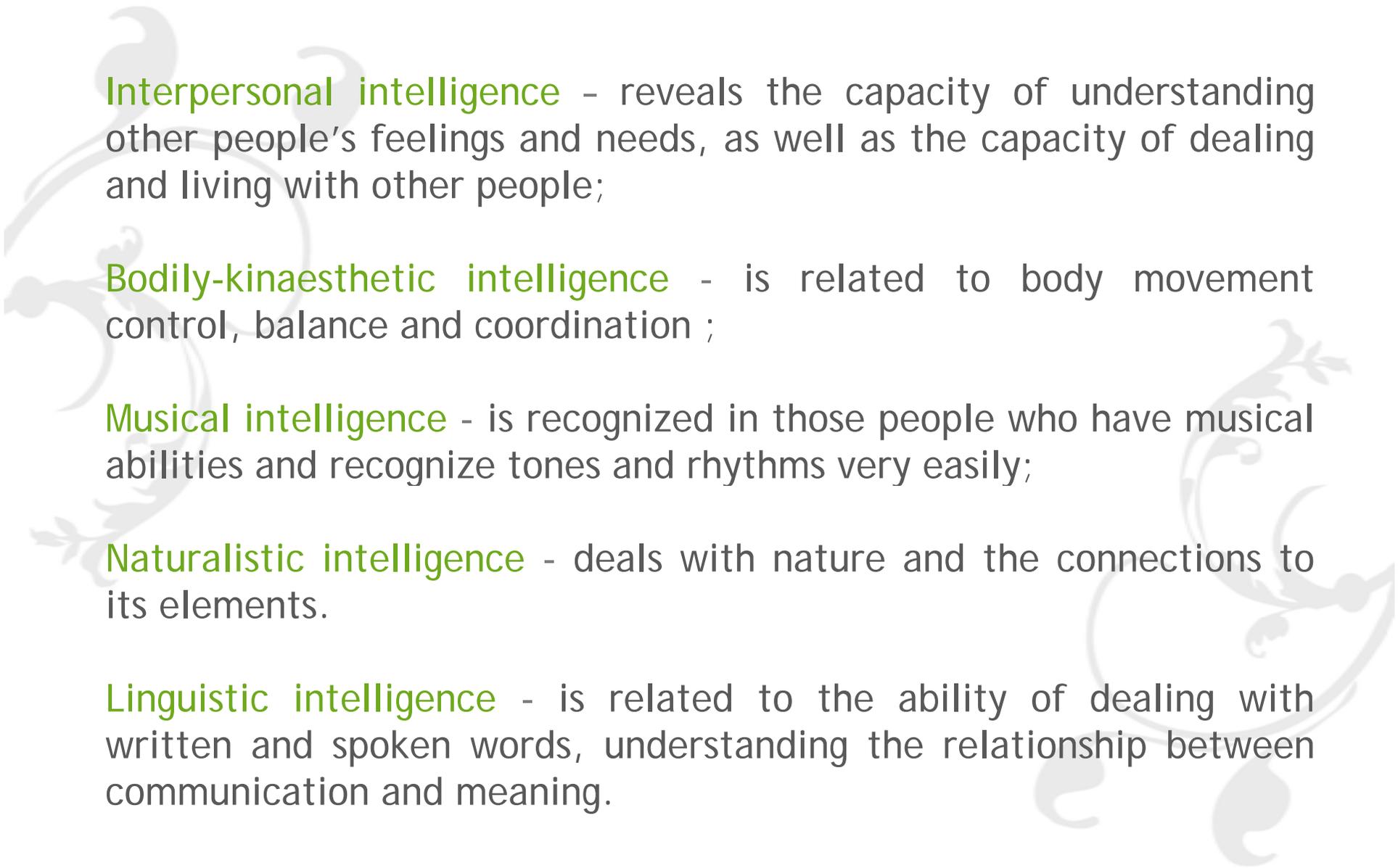
# Multiple Intelligences

The Multiple Intelligences Theory was developed by **Howard Gardner** and, according to him, his theory “is framed in light of the biological origins of each problem solving skill” (Gardner, 2006).

**Logical-mathematical intelligence** - is related to logical thinking, problem analysis and performance of mathematical calculations;

**Spatial intelligence** - is related to the perception of space and distances, as well as a better understanding of visual images ;

**Intrapersonal intelligence** - translates into self-awareness, and a more accurate capacity of understanding oneself and one's relationship with the world;

A decorative background featuring a light gray floral and vine pattern. The pattern includes stylized leaves and swirling lines, creating an elegant and artistic backdrop for the text.

**Interpersonal intelligence** - reveals the capacity of understanding other people's feelings and needs, as well as the capacity of dealing and living with other people;

**Bodily-kinaesthetic intelligence** - is related to body movement control, balance and coordination ;

**Musical intelligence** - is recognized in those people who have musical abilities and recognize tones and rhythms very easily;

**Naturalistic intelligence** - deals with nature and the connections to its elements.

**Linguistic intelligence** - is related to the ability of dealing with written and spoken words, understanding the relationship between communication and meaning.



# Methodology



## Case-study

**Institution:** School of Accounting and Administration of Oporto (during the winter semester 2007-2008)

**Course:** Electronic Tools Applied to Translation, taught in the 3rd year in the Administrative Assistance and Translation degree (evening class and a day class).

*Students were expect to develop an ePortfolio during the 1<sup>st</sup> and the 2<sup>nd</sup> semester*

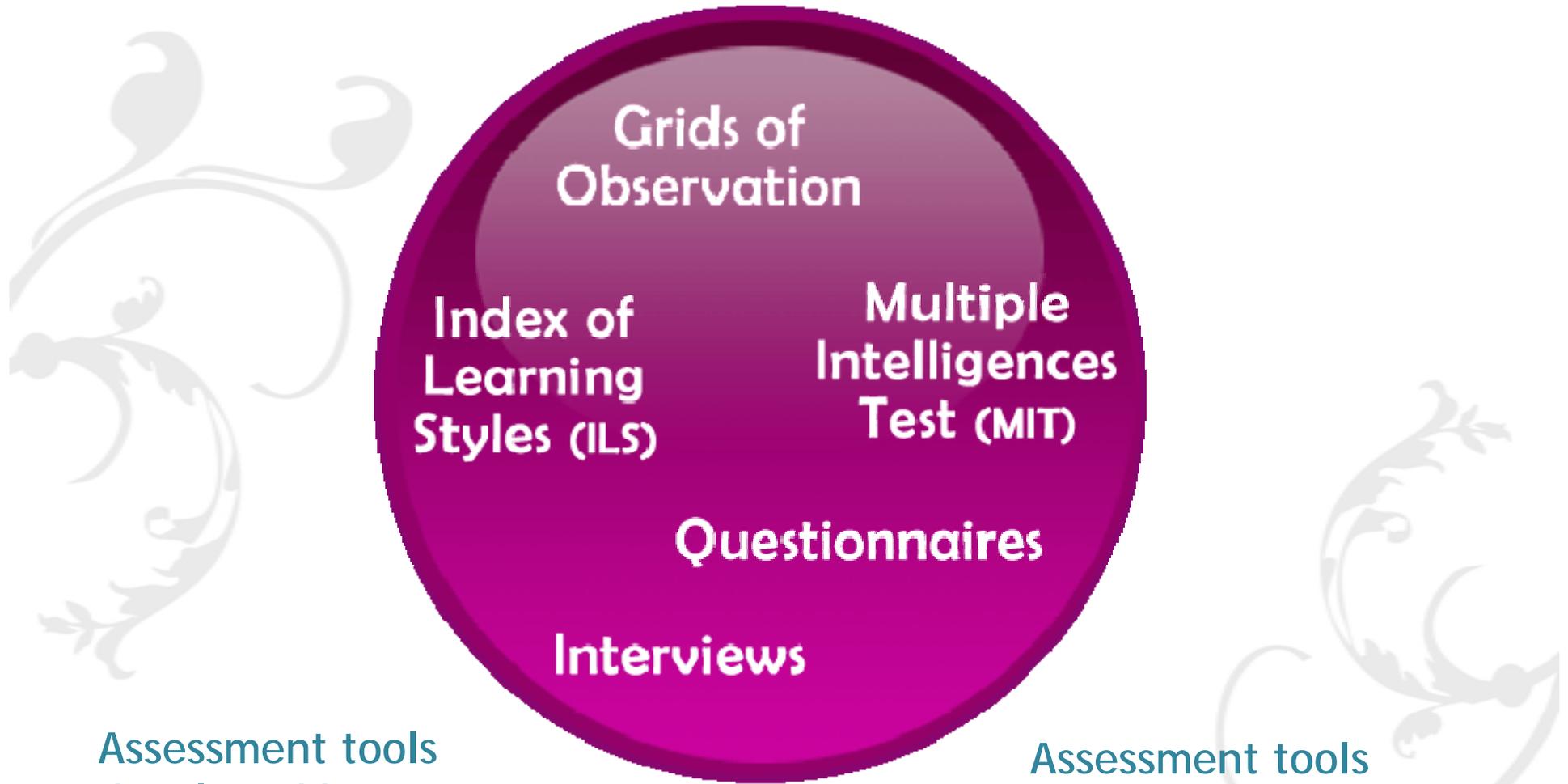
## Qualitative analysis

The qualitative analysis was chosen due to the type of data previously gathered and to the small number of participants (11) in the case study, which made it difficult to follow a more quantitative approach.



# Assessment Tools





**Assessment tools developed by us:**

- Observation Grids
- Questionnaires
- Interviews

**Assessment tools developed by others:**

- ILS - Richard Felder and Barbara Soloman
- MIT - Literacy Works

## Grids of Observation

Observation grids were developed in order to evaluate the students' profiles, blog posts, as well as their behaviour.

After analysing and gathering the information, the data were inserted in the grids and organised into six main categories:

- ➔ "Platform usage" ,
- ➔ "Homework and Files" ,
- ➔ "Socialization" ,
- ➔ "Graphic elements of the platform (Customization)"
- ➔ "Students' reflections"
- ➔ "Observations of the researcher" .

## Index of Learning Styles (Felder and Solomon)

 This instrument contains 44 sentences;



Each scale dimension of the Felder-Silverman model (4 scale dimensions) had 11 sentences, and each one of the 11 sentences tried to assess one of the 4 scales of the model.

Each sentence had to be completed by the student, based upon the two hypothesis given, because each scale has two dimensions, and each option corresponded to one of the dimensions of the scale in assessment.

## Multiple Intelligences Test

There is no Multiple Intelligences Test (MIT) designed by Howard Gardner or fully approved by him.

However, there are several MIT available on the Internet developed based on his theory. We considered that it was useful to use one of those tools.

We choose the MIT form Literacy works

Each MIT had 56 sentences and the goal was to have students classifying the sentences from 1 to 5, being 1 the classification for the sentences that were not a reflection of the students personality, and 5 the classification given to the sentence which was able to characterize the student the most.

## Questionnaires

We used questionnaires developed by us in order to confirm some of the information collected in the observation grid and to collect other information such as:

- Age;
- Personal opinions about the platform;
- Other aspects that couldn't be gathered by a simple observation of the students' development of the ePortfolios;
- etc.

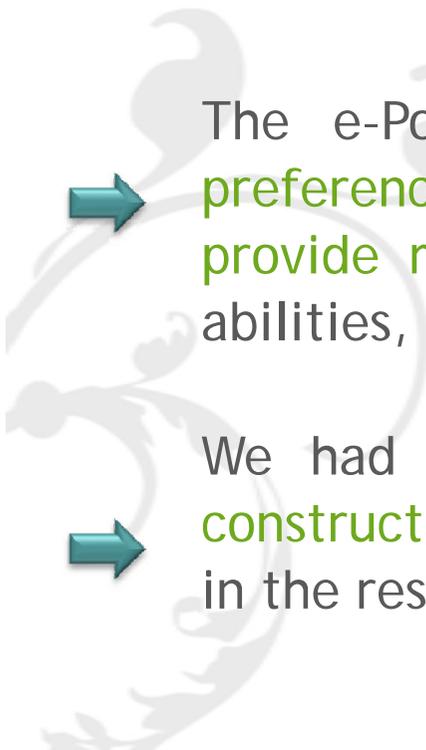
**Interviews** (one student from the evening class and one student from the day class )

With the interviews we were able to confirm and confront some of the aspects that had been previously brought forward by using the other tools, namely the ILS and the MIT.



# Outcomes





The e-Portfolio is an excellent way of observing the work preferences of the students and therefore it helps teachers provide more suitable tasks to motivate and enhance students' abilities, as well as promote the development of other skills.



We had the opportunity to confirm that several assumptions constructed upon observing students' work were in fact translated in the results that the students achieved in the tests (ILS, MIT).

For example



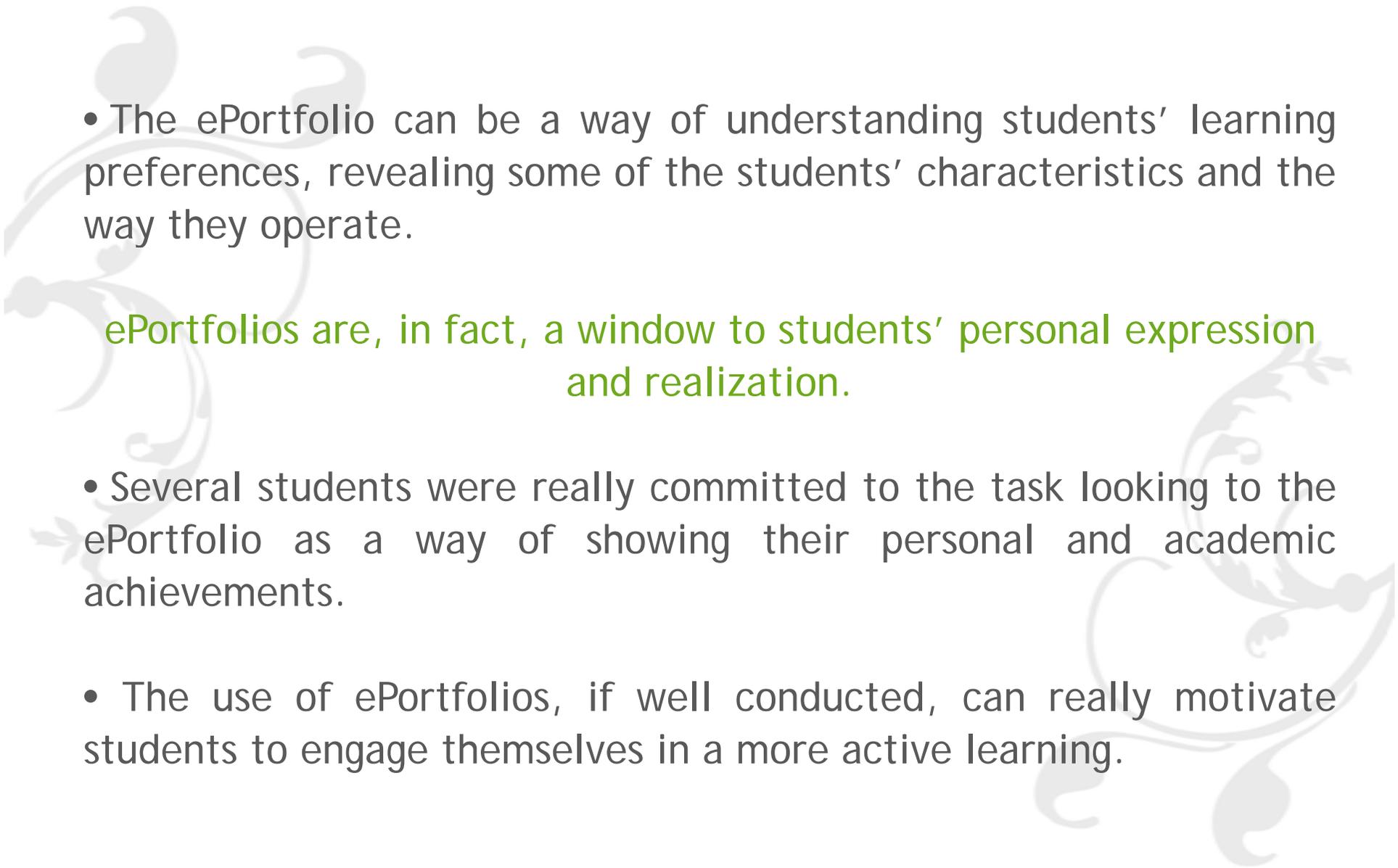
- students that had their files very well organized in the ePortfolio, generally matched the ILS for having Sequential characteristics;

- students that were often commenting their colleagues blogs were very commonly to be found as students with a high Interpersonal intelligence in the MIT.



# Conclusions



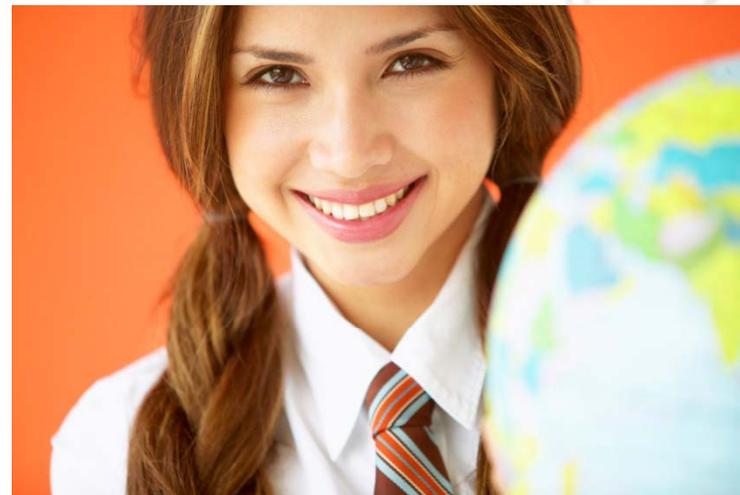
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- A decorative background featuring light gray, stylized floral and vine motifs. The design is symmetrical, with intricate scrollwork and leaf-like shapes framing the central text area.
- The ePortfolio can be a way of understanding students' learning preferences, revealing some of the students' characteristics and the way they operate.

ePortfolios are, in fact, a window to students' personal expression and realization.

- Several students were really committed to the task looking to the ePortfolio as a way of showing their personal and academic achievements.
- The use of ePortfolios, if well conducted, can really motivate students to engage themselves in a more active learning.

- The evening students (older) were more committed to the tasks they were assigned than the daily students (younger).
- The development of these projects, which engage students in group work in a cooperative and virtual environment (ELGG), helped them combine the knowledge related to the course with other transversal abilities.

In a near Future we hope to extend the use of ePortfolios with more students and teachers, promoting and developing learning strategies that can be useful in class according to students learning preferences.



# Thank you very much!

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