

Universidade do Porto | 26 de julho |  
16h00 | sala 249

A 27ª edição do ciclo "No laboratório à  
conversa com..." recebe **Irene Ibarra**,  
para uma sessão intitulada

**"Handwriting: Important  
issues through  
Basque/Spanish  
materials"**

**Irene Ibarra**, University of the Basque Country



# ABSTRACT

In this age of new technologies, handwriting is still important. There is strong evidence to show that if children are slow as they form letters then language processing may be affected at higher levels (e.g. forming words, expressing ideas, sentence patterns etc).

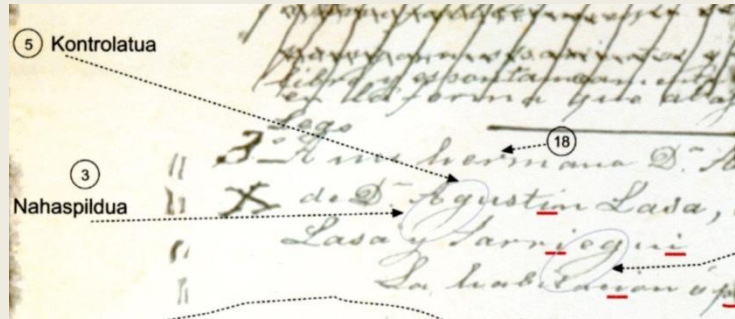
As an associate professor at the University of the Basque Country I have published numerous books, articles and videos that deal with handwriting. I have also taught many courses and workshops to teachers and I have collaborated with radio and television in educational spaces. At this moment, for example, I have developed a MOOC course in Spanish about evaluation instruments on legibility and speed. With these contributions I have tried to promote good practices with regard to handwriting, both in Spanish and in the Basque language, the latter, a minority language and the oldest living language in Europe, for many linguists. In the talk, I will show these materials in connection with the big important points of view about handwriting: the writing readiness view, the constructivism, the cognitive psychology view and the writing neuro-developmental view.

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# 1. The origins

Along with my undergraduate studies I trained in graphonomics, analysis of writing and interpretation of projective techniques at Bilbao (Centro Grafotec)



# 1. The origins

After the readings of Julián Ajuriaguerra's 'La escritura del niño', dysgraphia and grafotherapy classes, the stay at the Big Sur Center in California and the teachings from Marcel Matley, I started to write about the harmony of writing and to train teachers on how they could teach legible and harmonic writings.

I gave orientations about :

- The size of the writing
- The effective unions of the letters
- The layout of the paper
- Left-handed people, etc.

# 1. The origins

## Where to start?

1.999<sup>9</sup> ka orsoot 8  
IGANDEA  
kasizen Aligito jom nintzo  
eto gero kasiza zom nintzo  
Egneretio Barteldi kas  
garetsena jom nintzo  
Arasaldan Aligito reginon  
kas, bolian isilimien  
tam.  
Gollan gartainet jom  
mitum.

egun honen inguruan turria hitza  
kasari apletan. Zorrendatu turria  
ah ematen dutigun jaiak: odolotza,  
barizoa, jamaia, gihola, zieretia,  
musturra.

# 1. The origins

Teachers asked:

1. How much do I have to teach or repair in handwriting at school?
2. Do children need the explicit teaching of handwriting?
3. They have computers, why write by hand?

## 2. At the University of the Basque Country



Associate professor



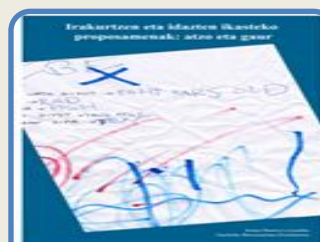
Some books, DVD and articles (mostly basque)



Teachers formation



Collaborations in media



Disgraphic children

- Relationships between handwriting and multilingual texts

Dissertation



## 3. Soon...

### MOOC COURSE:

Evaluación e intervención en la fluidez y la legibilidad de la  
escritura  
(4 weeks)

<https://miriadax.net/web/evaluacion-e-intervencion-en-la-fluidez-y-la-legibilidad-de-la-escritura-manual-en-primaria>

## 4. Why is handwriting still important?

- There are **cognitive benefits** from the handwriting practice, such as self-regulation, attention sustenance, working memory activation, better transcription of thought-to-script, and overall quality of text production (Karavanidou, 2017).
- Letter formation is a **key component** in reading and writing skills: independently writing by hand helps students learn and memorize letters much more efficiently than does typing them (Longcamp, Zerbato-Poudou, & Velay, 2005).
- Lower handwriting fluency is associated with poorer writing performance not only in primary but **also in middle grades** (Limpo & Alves & Connelly, 2017)

## 5. Points of view about handwriting

5. 1. The writing readiness view

5.2. The constructivism

5.3. The cognitive psychology view

5.4. The writing neuro-developmental view

## 5. 1. The writing readiness view

Writing readiness: having the needed characteristics to “profit satisfactorily from the instruction given in the teaching of handwriting at different stages through elementary school” (Sovik, 1975: 54).

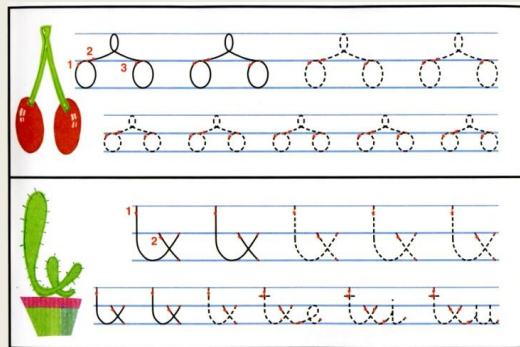
Prerequisites for handwriting: utensil or tool manipulation, basic stroke formation, small muscle development, eye-hand coordination, alphabet letter recognition and orientation to written language (Lamme, 1979)

# 5. 1. The writing readiness view

Ibarra, I. (2001). Grafomotrizitatea 4 <https://www.amazon.es/Grafomotrizitatea-Bat-margotu-eta-idatzi/dp/8483254123> [Graphomotricity for 4 years old children]

Ibarra, I. (2001). Grafomotrizitatea 5 [https://www.todostuslibros.com/libros/grafomotrizitatea-5-bat\\_978-84-8325-424-0](https://www.todostuslibros.com/libros/grafomotrizitatea-5-bat_978-84-8325-424-0) [Graphomotricity for 5 years old children]

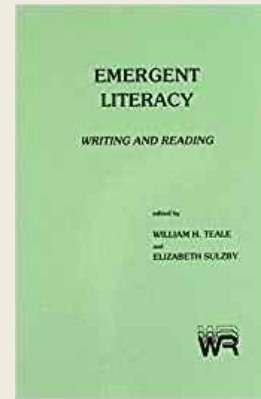
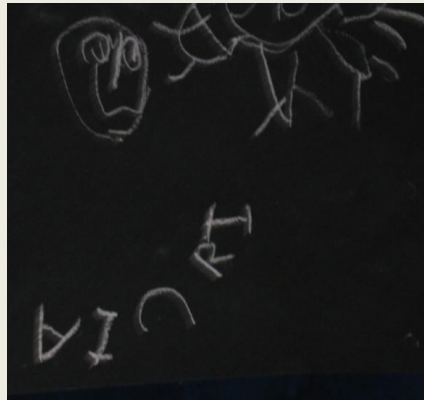
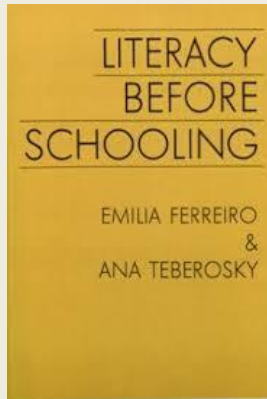
Ibarra, I. (2000, 2001). [Gustura idatziz](https://dialnet.unirioja.es/servlet/libro?codigo=41957): Idazketaren ergonomia eta genetika eskuizkribuetan. Euba : Ibaizabal. <https://dialnet.unirioja.es/servlet/libro?codigo=41957> [Book and video. Writing comfortably. Ergonomics and genetics of writing].



*Atzamar luzea idazgailuaren azpian.*

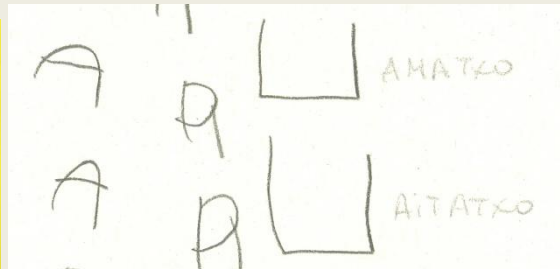
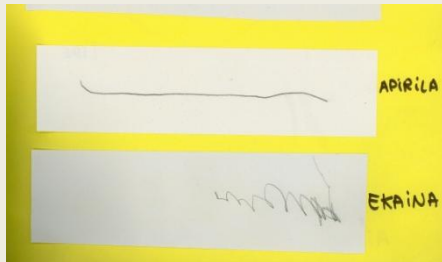
## 5. 2. The constructivism

- Emergent writing describes young children's attempts at writing (Mayer, 2007).
- Children start to learn that different symbols represent letters and numbers and progresses along a developmental continuum and ending with conventional writing (Baghban, 2007).



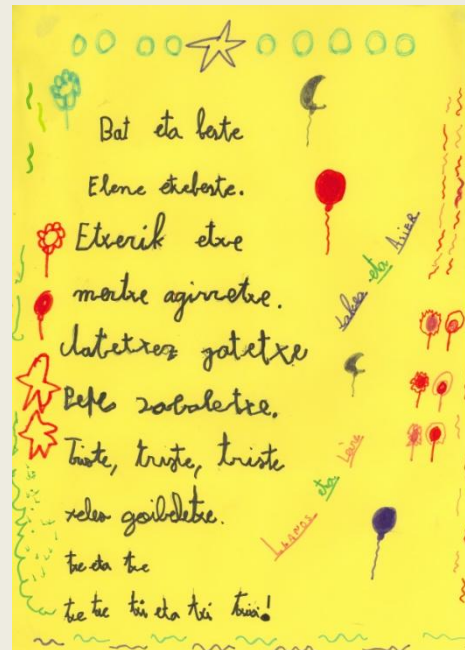
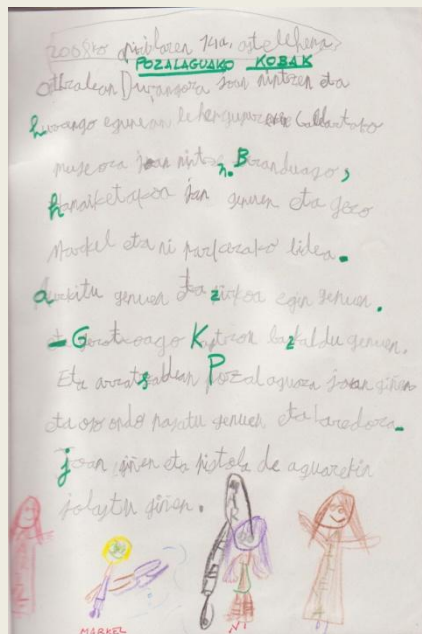
## 5. 2. The constructivism

**Stages:** 1) Drawing; 2) Scribbling; 3) Mock Letters  
4) Random letters; 5) Semi-phonetic; 6. Phonetic



## 5. 2. The constructivism

Writing doesn't  
end here....  
The  
orthography  
and the  
punctuation is  
a construction  
too





## 5. 3. The cognitive psychology view

- Cognitive models have tended to define writing in terms of problem-solving (McCutchen, Teske, & Bankston, 2008).

-Hayes and Flower (1980), specified three key writing processes: planning, translating, and reviewing/revising.

-Because of its limited capacity, writing requires managing the demands of working memory by developing automaticity and using strategies (McCutchen, 1996).

# So... How do we sequence it?

So... How do we sequence it in the curriculum?



Figura 2: Conflicto cognitivo extraído de "Kaligrafia: pentsatuz eta eginez". ¿Si empiezas el movimiento del círculo en la parte superior de la letra o a la izquierda, cuándo y cómo colocas la cola de la  $a$ ?

## 5. 4. The writing neuro-developmental view

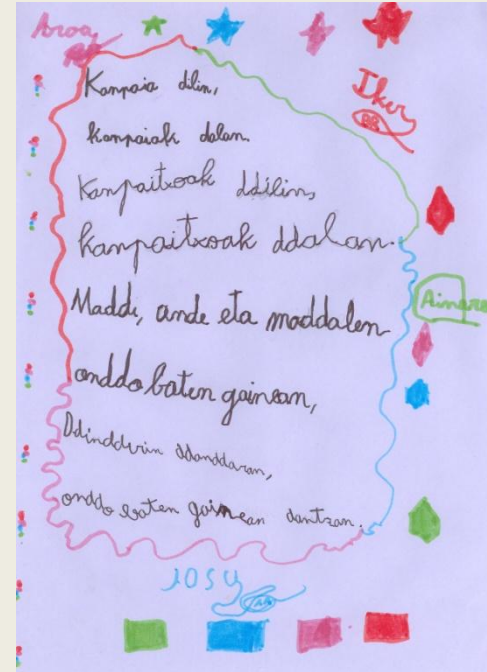
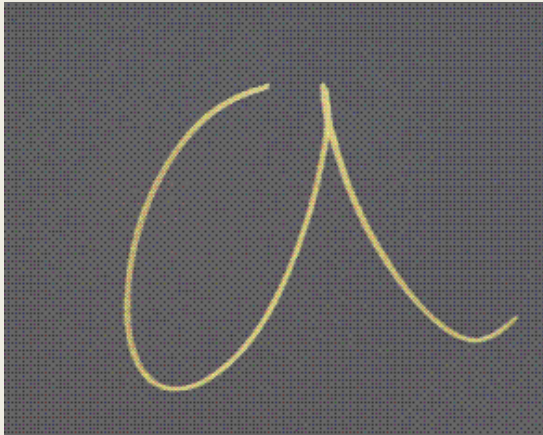
According to systematic research made in the neurodevelopmental model of writing....

Berninger &  
Swanson (1994)

Berninger & Graham  
(1998)

Berninger & Winn  
(2006)

## 5. 4. The writing neuro-developmental view



## 5. 4. The writing neuro-developmental view

My dissertation:

In the research undertaken with 2nd, 4th and 6th year Primary school pupils in the Basque Country, it was observed that handwriting fluency was linked to the texts written in three languages (Basque, Spanish and English).

-Pupils with greater handwriting fluency wrote significantly longer and more coherent texts in the three languages.

-Moreover, while girls scored significantly higher than boys in handwriting fluency throughout the whole sample, in multilingual text production this gender gap was only significant in the 2nd year, girls scoring better.

## 6. Summing up

Although we live in the era of new technologies, at school we have to continue with handwriting, but, refocusing its instruction, evaluation and the tasks for which it is used

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OBRIGADO  
THANK YOU  
ESKERRIK ASKO  
GRACIAS

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