

# Analysis of the Situation of Computer Science Education in Venezuela using the Darmstadt Model

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  - Educational System
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  - Media
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# Brief overview of Venezuela



## Motivation

- Interest in the advancement of national CSE and its didactics in Venezuela
- Results as a baseline for further comparisons between different countries.

## Data collection methods

- 1 Darmstadt Model
- 2 Interviews based on the Darmstadt Model
- 3 Transcription and translation into English
- 4 Analysis into eight categories

# The Darmstadt Model

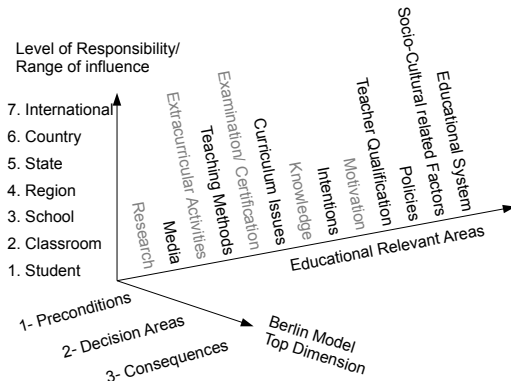


Figure : The Darmstadt Model (Hubwieser et al, 2011)

## Qualitative Content Analysis

Interview to the Ministry of Education in Venezuela

- How is the educational system organized?
- Is Computer Science Education compulsory at school?
- How is the educational plan for computer science?
- is the Curriculum for the subject CSE general?

	Country	Region	School	Teacher	P
Educational System					
Socio-cultural related factors					
Policies					
Teacher Qualification					
Motivation					
Intentions					
Curriculum					
Teaching Methods					

**Table :** Important categories in combination with the range of influence

# Location of the interviews



Figure : Venezuela (Wikipedia, 2014)



## Findings in the eight categories

- Educational systems
- Socio-cultural related factors
- Policies
- Teacher qualification
- Intentions
- Media
- Curriculum Issues
- Teaching methods

# Findings in the eight categories

## Educational System

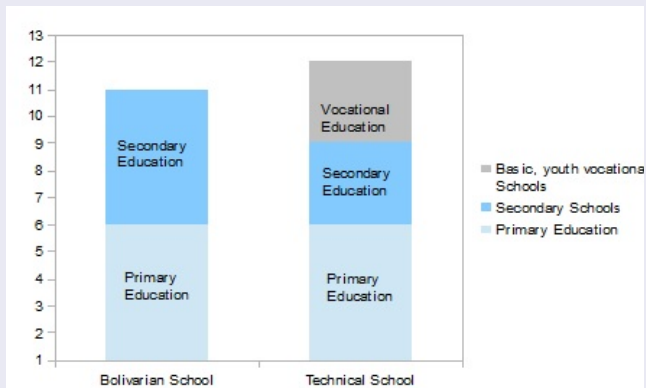


Figure : Differences in the school system (Fecht, 2013)

## Policies

- 1999: The new government introduces ICTs in Venezuela
- The legal framework of 2000: Decree 825
- 2004: Plans for the educational policy focus on:
  - ① Education content development for primary and secondary school.
  - ② Teacher training programs about the use of ICTs.
  - ③ The development of ICTs, telecommunications, infrastructure and internet connectivity.
- Fundabit. The Bolivarian Foundation of Informatics and Telematics
- 2004: Bolivarian Missions
- 2010: The Canaima Project

## Media

This infratructure consists of three different columns.

- The first column is a dense net of numerous technical centers well equipped with ICT.
- A free Laptop for every student of a public and semi-private school.
- Educational software for every subject.

## Curriculum Issues

- The Ministry of Education has not yet developed a definitive curriculum for CSE.
- Neither public nor private Venezuelan schools has not got a definitive curriculum for CSE.
- Every schools develops its own curriculum for the CSE subject.

- Venezuela has got the best technical infrastructure in South America. This definitely is a great success. Policies concentrate more on ICTs, regarding CSE as less important.
- Strengthening conceptual knowledge in contrast to producing knowledge would also help to motivate more students with CSE.
- Our findings are necessary and relevant to politicians, universities and schools.



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A tale of two countries: Successes and challenges in K-12 computer science education in Israel and the United States.

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Latin America

Url: [www.wikipedia.org](http://www.wikipedia.org)



Fecht, Nubia (2013)

Analysis of the situation of computer science education in Venezuela using the Darmstadt Model

Bachelor-Thesis. Carl von Otsiesky University of Oldenburg



# The End