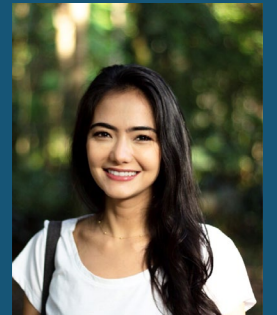


# Artificial Intelligence in TVET Education: Insights into Teacher Training and Generational Adaptation



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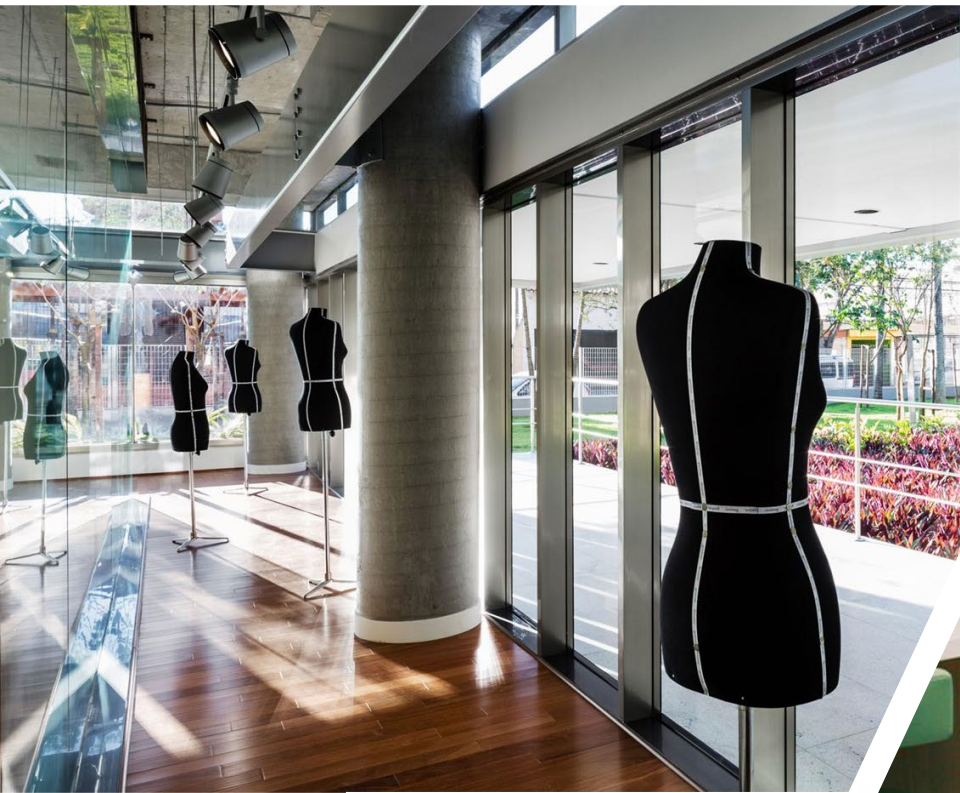
## SCHOOL LEADERSHIP

- Vocational High Schools
- Curriculum design
- Course's development
- Teacher training
- Teaching materials
- Pedagogical support
- Vocational High Schools

## RESEARCH

- Vocational Education and Training
- Teacher training
- Professional development of teachers
- Curriculum Studies





Educação básica

Educação Superior

Educação Infantil

Ensino Fundamental

Ensino Médio

Graduação

Pós-Graduação

Tecnólogo

Especialização

Licenciatura

Mestrado

Bacharelado

Doutorado

Curso Técnico

Qualificação Profissional

Educação Profissional Técnica de Nível Médio

Educação Profissional Tecnológica de Graduação e Pós-graduação

Formação continuada ou Qualificação Profissional

**EDUCAÇÃO PROFISSIONAL E TECNOLÓGICA**

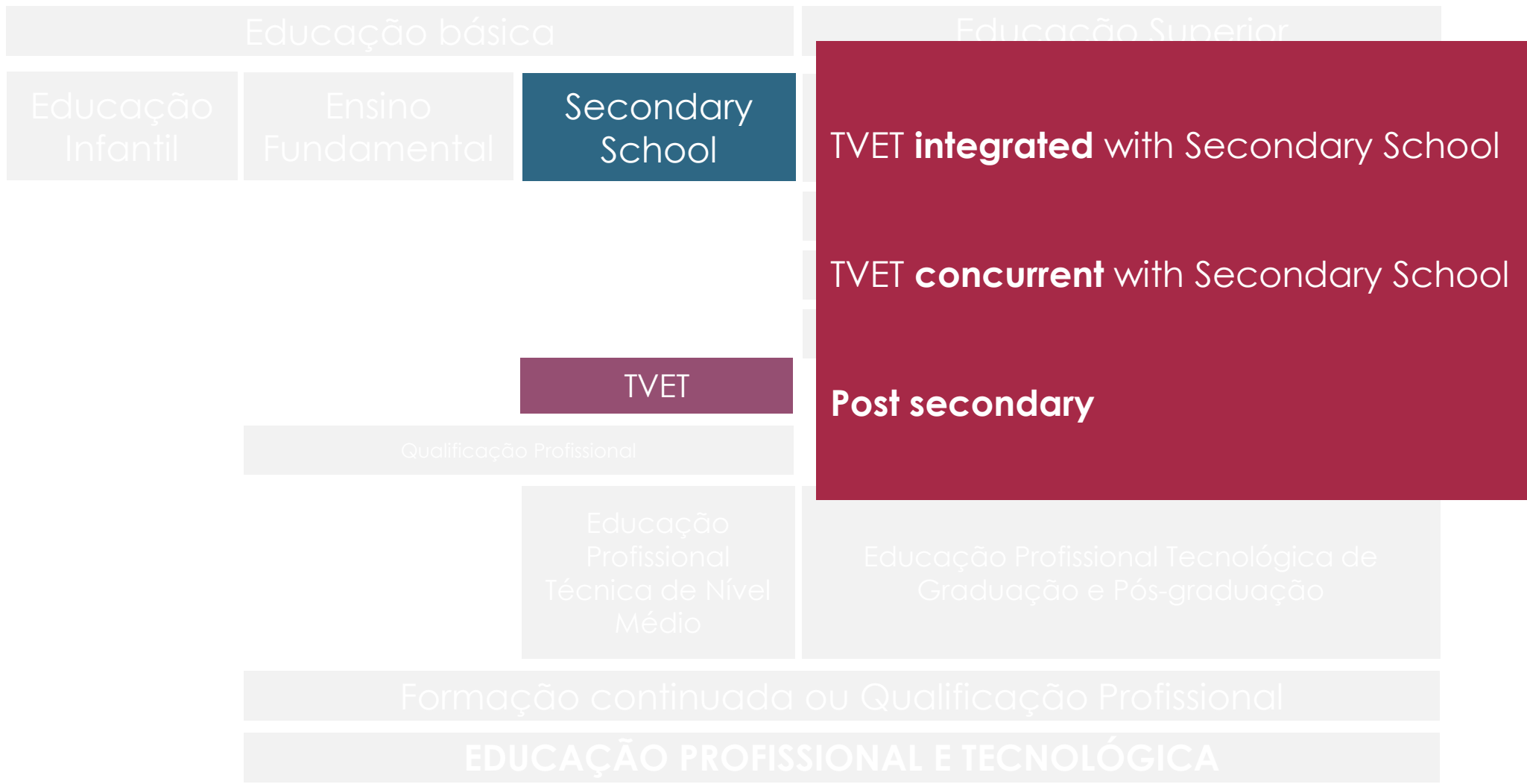
Context

Historical Overview

Lessons Learned

Teacher Training

Projects



# SECONDARY EDUCATION

”Education, the right of everyone and the duty of the State and family, shall be promoted and encouraged with the collaboration of society, aiming for the **full development of the person, their preparation for the exercise of citizenship, and their qualification for work.**”  
(art. 205 Constituição).

”II - The **basic preparation for work and citizenship of the student, in order to continue learning**, so as to be able to adapt flexibly to new conditions of occupation or further improvement.”  
(art. 35 LDB)

# Who is the Vocational teacher?

- They have **mastery of specific content** and/or professional experience in the profession to be taught
- Many have **no pedagogical training** (specific licensing or a degree in pedagogy)
- In many cases, they **do not professionalize** themselves as teachers.





ESCOLA NORMAL DE ARTES E OFÍCIOS



DECRETO 2208



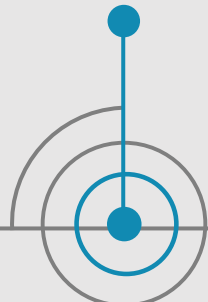
LEI 13415

1909



ESCOLAS DE APRENDIZES E ARTÍFICES

1917

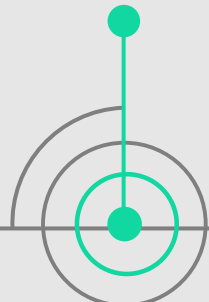


COMISSÃO BRASILEIRO-AMERICANA DE ENSINO INDUSTRIAL

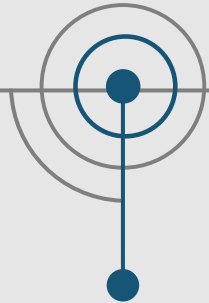
1946



1997



2004



DECRETO 5154

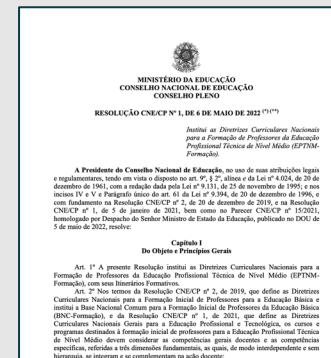
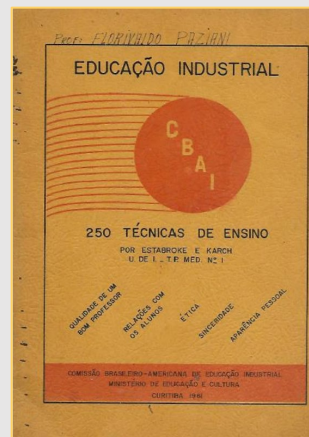
2017



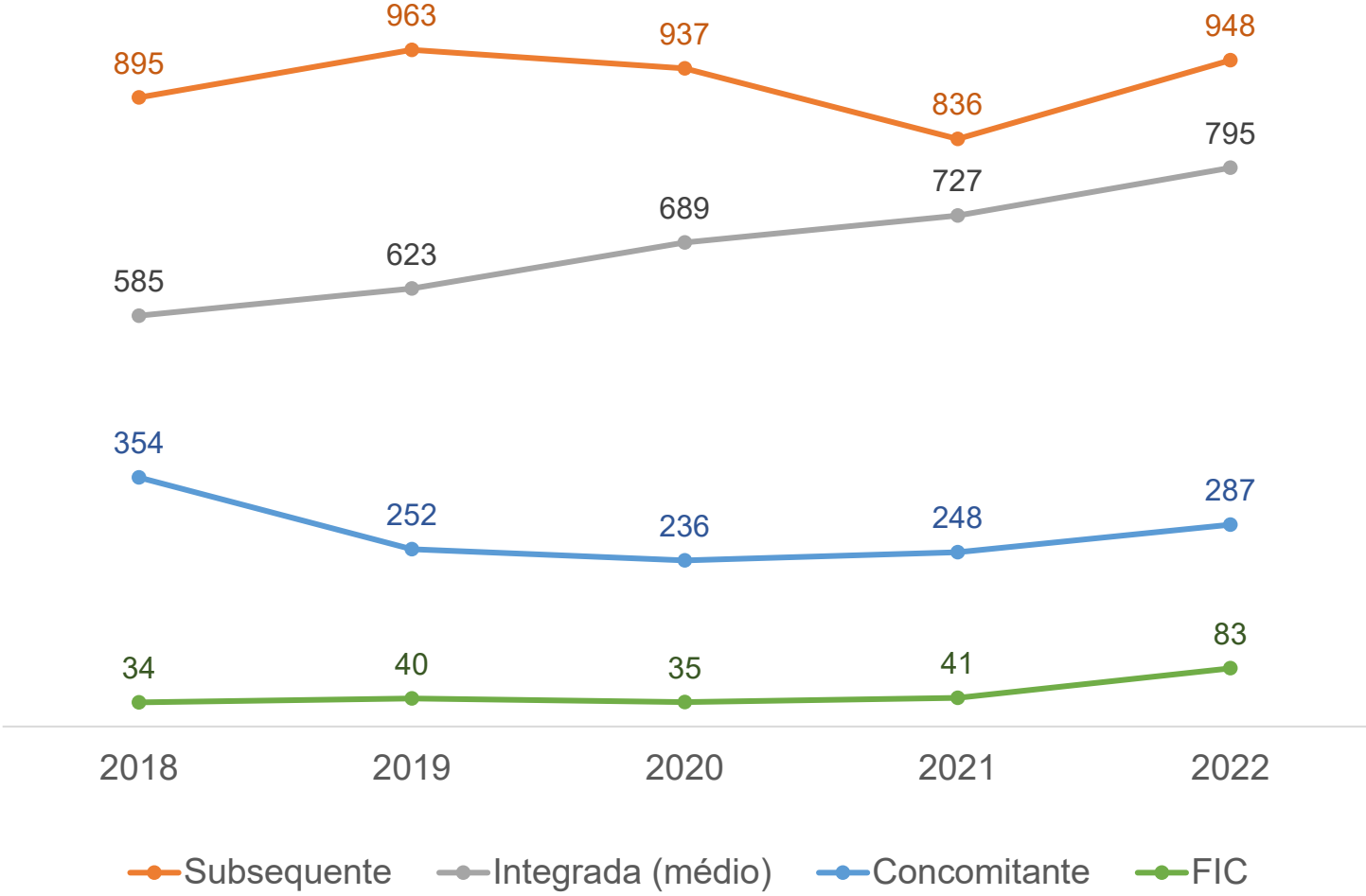
2022



RESOLUÇÃO CNE/CP Nº 01



# Enrollments in Vocational Education (2018 – 2022)

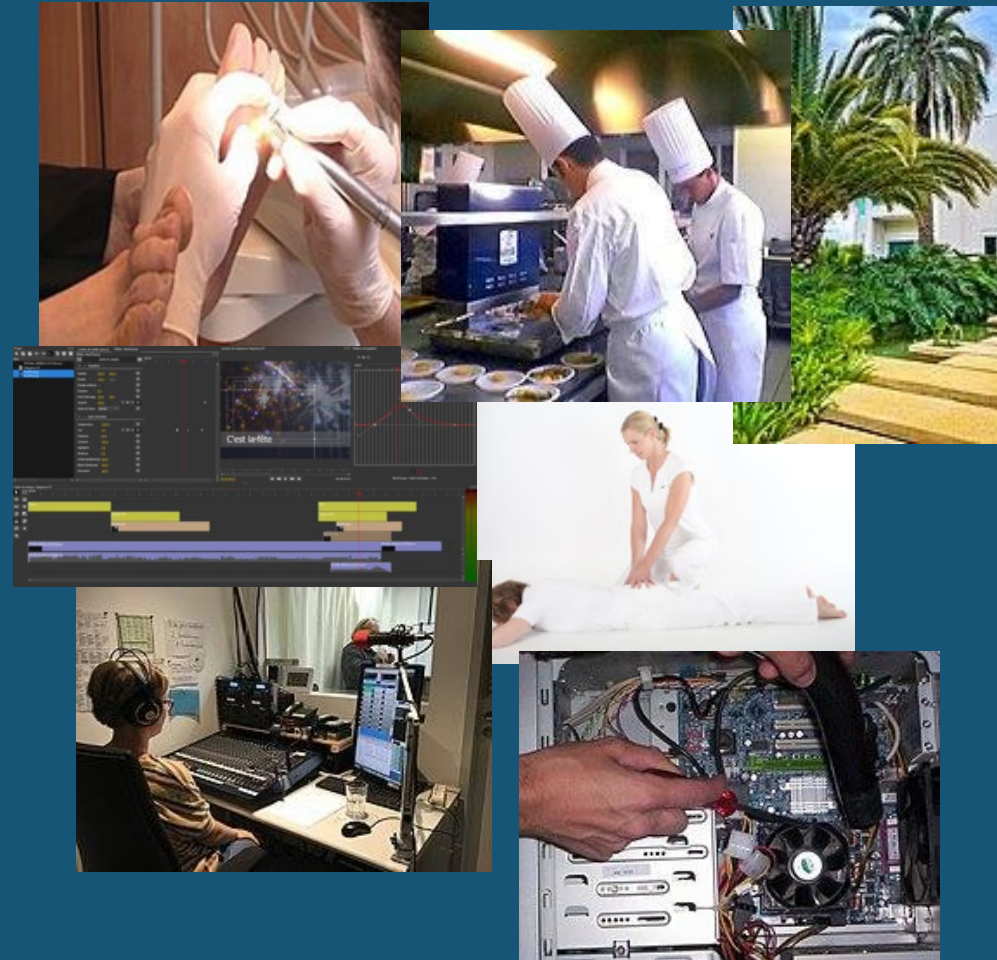


Source: Censo Escolar (INEP, 2022)

# LEARNING PATHS OF TEACHING: VOCATIONAL EDUCATION

- They do **not identify** themselves as **teachers**
- **Specific knowledge is not enough** to act as a teacher
- They rely on **past experiences** from their student years
- The way of teaching is primarily based on the **method** in which **they learned**
- They emphasize the need for **continuous training**, especially with courses **focused on the area**

(Yamamoto, 2013)



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INFORMAÇÃO  
4090-1030

# PROFESSIONAL DEVELOPMENT AND LEARNING PATHS OF TEACHERS VOCATIONAL HIGH SCHOOL



- Need for more moments of **integration** between the technical area and the knowledge area
- Need to elaborate specific **Didactic Material**
- Need to understand the relation of the profession in focus with **other areas**

(Yamamoto, 2021)



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# VOCATIONAL TEACHER

- Recognition of **technological impacts** and **organizational changes** on professional relationships
- Appreciation of the **knowledge and intelligence of work** (Rose / Pinto)
- Recognition of **work in its ontological dimension**
- Content knowledge and **pedagogical content knowledge** (Shulman)
- Knowing how to teach what you know how to do considering **professional didactics** (Pastre)
- Dialogue and knowledge of the **relationships between** the **vocational field** and other **areas of knowledge**
- **Continuous/permanent updating** in the technical and pedagogical area
- **Identification** and commitment as a teacher

- The analysis is grounded in the appreciation of work-

## VOCATIONAL TEACHER: AI - TVET

- with the distinctive methodologies of vocational education.
- Preliminary findings reveal a notable generational divide: younger educators demonstrate both proficiency and creativity in adopting AI tools, whereas their senior counterparts initially face challenges and frequently revert to more traditional teaching methods.
- Despite these differences, the integration of AI has had a broadly positive impact, significantly contributing to the professional development of educators.
- These findings highlight the importance of designing tailored training programs to address the varying levels of technological competency among faculty members, ultimately enhancing their ability to innovate within the TVET context



# WORK IN PROGRESS

## TEACHING CREDENTIAL

### PROTOTYPE INTERDISCIPLINARY DEGREE IN LABOR SCIENCES, CULTURES, AND TECHNOLOGIES.

- Work as a means of transformation
- Work and production of knowledge and values
- Innovations, technologies and transformation at work
- Social and cultural relations in the world of work
- Education, work and social practices

## RESEARCH

### ELEMENTS FOR THE PROFESSIONAL DEVELOPMENT OF TEACHING: VOCATIONAL TEACHERS

- Examine how this pedagogical practice was or is being conceived
- Recognize the educational processes that actively participated in the formation of these teachers
- Analyze the perceptions related to the challenges and difficulties experienced by them in pedagogical actions
- Identify indispensable elements to this formation.

In Vocational Education, those who  
teach must know how to do.  
Those who know how to do and want to  
teach must learn how to teach.  
This is one of the greatest  
challenges in training teachers for  
vocational education and training.

(Francisco Aparecido Cordão)





Obrigada

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