

Education and Training on Construction Safety

- from the existent levels to the proposal systems -



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ABSTRACT:

This research study has at its main goal the analysis of social and labor development in Portugal, concerning the knowledge of the individual as a citizen and as a professional, related to safety in construction work.

Its intention that study analyses if there is a need (since when and in which levels) to introduce the teaching of prevention and safety to the individual worker, having as reference the construction sector in Portugal, because this economic sector is the one that presents higher index of non specialized and undifferentiated work force, and besides the sector with the higher index of professional accidents.

When analyzing the social development of the individual worker, its possible to infer that the “home made” education and school studies, as well the professional experience, translates itself into different degrees of performance and knowledge when working.

Afterwards, this study pretends to appreciate the development of the individual worker in the working construction environment. In this case the analysis is done considering his professional responsibility. The study considers three different levels: undifferentiated work, head masters and staff.

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Though, the study regarding prevention and safety in construction is done as followed:

As a social point of view:

- Civic education
Depends on social structure (low, medium, high)
- School education
Primary, elementary, superior

As a professional point of view:

- Simple information, awareness
- Undifferentiated workers
- Continuous training
- Staff and decision makers

INTRODUCTION:

Prevention and safety in construction work is all the more a social problem, the less is the formation or the instruction of the workers. The construction sector presents, in Portugal the higher index of non specialized and undifferentiated workmanship.

Some of the direct consequences of this situation are the elevated indicators of professional accidents in this area.

In European terms, the index of frequency and the index of gravity are largely above standard, being construction work the sector with worst performance.

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Regarding the social structure of the worker (specially concerning his individual development as a citizen) we can infer three big levels of school instruction (besides, of course, some lack of instruction at all).

One can talk about: primary, elementary (requested as a minimum in Portugal) and superior studies.

The hierarchy of workers while at work is done (in any company, region or country) regarding their degree of school education (instruction). Besides these skills, employers also regard their social structure and as a consequence their civic education/capacity.

It is curious to note that the higher their civic instruction is, the higher will be their intervention potential regarding their own hierarchic level.

What is pretended after all is a parallelism between the level of intervention of the worker while at work, based in his education and civic skills together with his real performance, regarding the legal qualifications concerning safety, hygiene and health at work, setting up limits (targets) and priorities related to the type of continuous formation to be given to each type of workers regarding their instruction level.



Figure I – construction worker

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EXPERIMENTAL:

Regarding the different levels of school education, we consider the following level:

- Lack of instruction: Individuals without school education at all. They can hardly read, so they depend on others to develop their work.
- Primary school education: Individuals without or with very poor school education, provoking the existence of non specialized work, and it establishes a non-specialized or undifferentiated performance.

Most of these workers have low civic education and together with their weak school education, their intervention capacity becomes reduced, their social intervention is also weak, regarding the circumstances.

- Elementary school education: Individuals with some kind of school education yet not really specialized/routed, it already determines the existence of some specialized labor work, and it also provides a specified professional performance.

Most of these workers have a fairly civic education, and the fact of having some school instruction makes their intervention skills higher.

Nevertheless, the social intervention of these workers is limited to “their own world”, what makes it also weak in terms of evaluation.

- Superior education: Individuals with high standards of specialized education, which determines the existence of specialized labor work and it will stipulate a performance determined upstream.

Most of these workers have a standard civic education and together with their high level of school education makes them determined in their intervention capacities. Due to their instruction level, these workers usually have high levels of social intervention,

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notwithstanding the fact that this might be related to the character and civism of the individual.

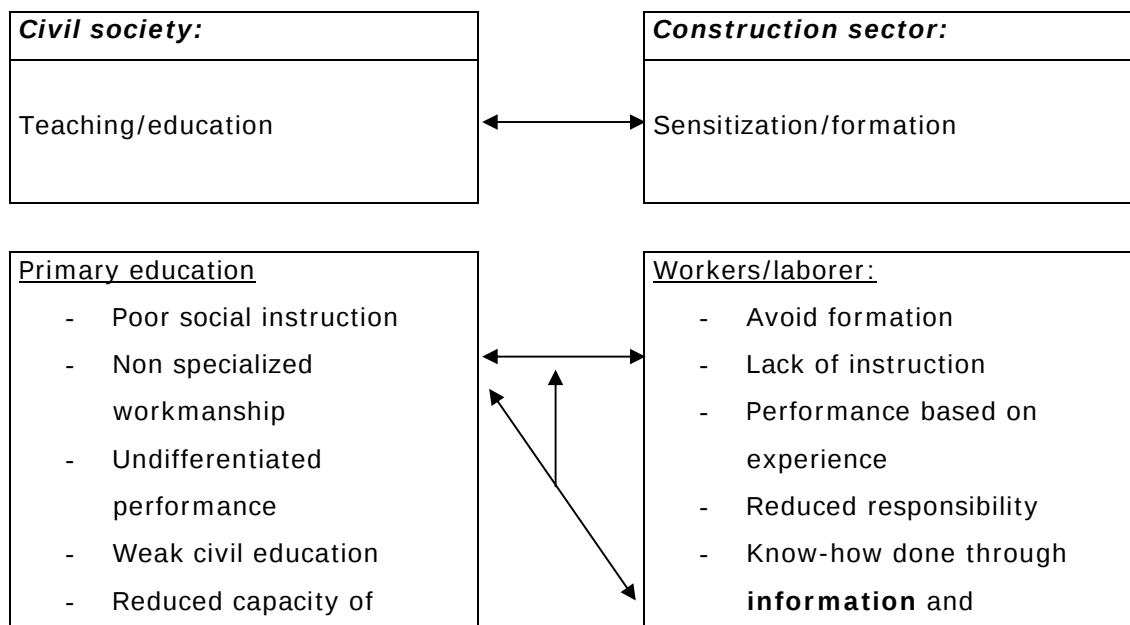
Maybe because there is a massive number of superior studies in Portugal over the past years, the professional and social skills are not along with the index of different levels of education anymore.

Applying this analysis to the type of worker's hierarchy with occupation in construction work, we may retire illations concerning professional categories and also some needs and typologies of formation for these very same hierarchies, in the sense of making construction a sector with less undifferentiated workers.

May this element be an utensil that will contribute to a major attractiveness and fidelity of workers in this area of activity.

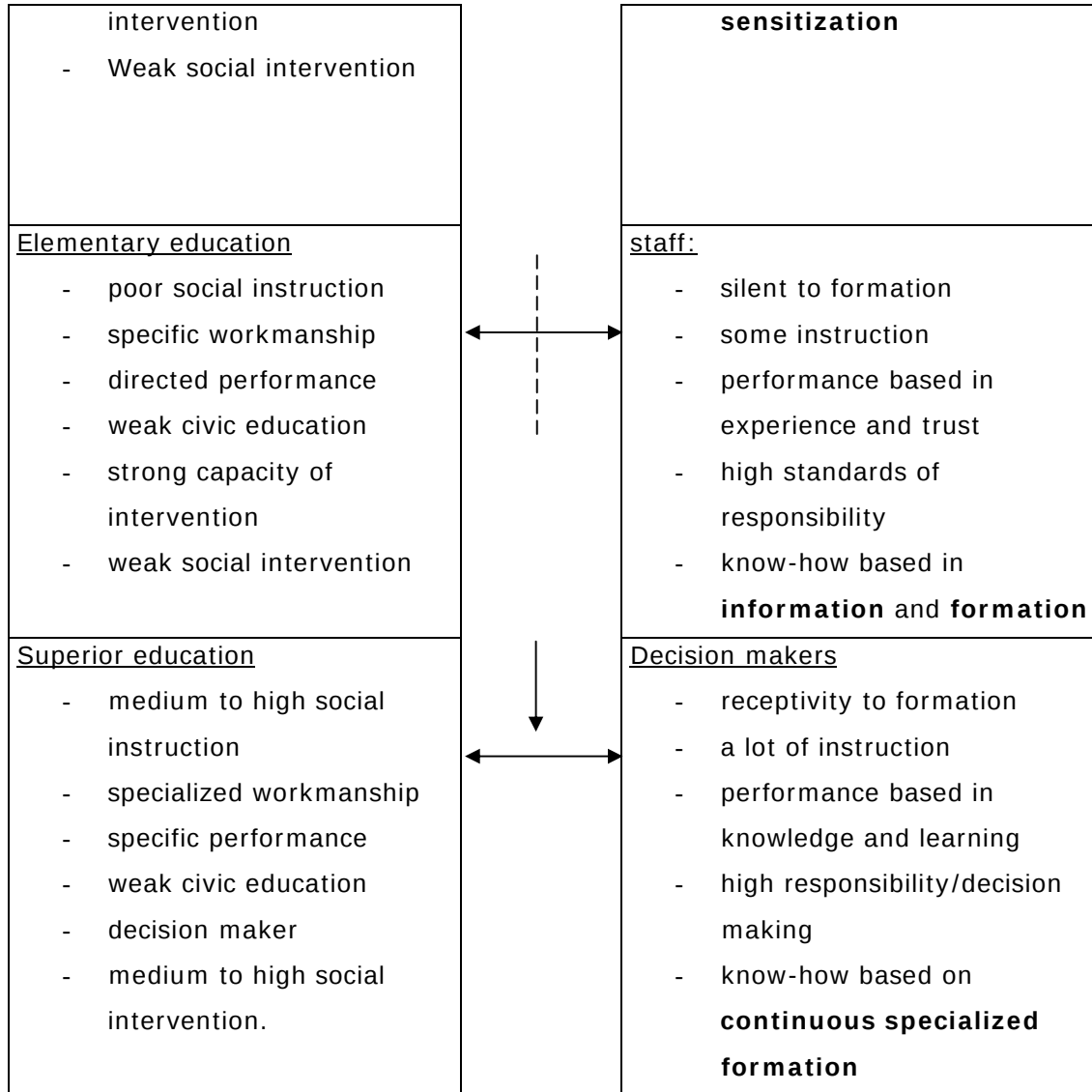
RESULTS:

Regarding this point of view the graphic representation of the parallelism between the civil society and civil construction is as follows:



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List I – Parallelism between hierarchic degrees of civil society and civil construction work.

DISCUSSION:

Regarding the obtained results, we observe the following (regarding to civil construction department), concerning the interventions and reactions of the workers to the respective needs of formation.

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- Primary school education: Workers avoid formation due to their weak instruction. This situation makes their performance based on experience only. The disadvantage of these workers is their reduced responsibility when at work, regarding their submission to orders in most of their tasks. The know-how of these workers is usually done through information and sensitization.
- Elementary school education: Workers with some instruction, which allows some self-government in their work. In some cases this self-government is reflected in the intermediate leadership jobs. These workers are reticent, as their performance is based in experience and self trust. These workers have already high responsibility in the work they perform or direct. The know-how of these workers is usually done throw information and formation, being at the same time transmitters of information to their employers.
- Superior education: Workers with a high degree of instruction, decisive in the guarantee of autonomy in their work/performance. In some cases these workers have their intervention in leadership levels with strong technical responsibilities in the process. Their functions reach leadership grades with respective men leading. Usually these men are decision makers and their performance is based on learning and experience. Their know-how is done based on continuous specialized formation, as this hierarchic degree of functions is very receptive to the attendance of formation acts.

IN CONCLUSION:

This study aims to notice the real needs of knowledge in different hierarchic levels of civil construction workers in Portugal.

The reinforcement of sensitization, information and formation of construction workers will allow a bigger fidelity to the sector, as well as a reduction in the trench between higher and lower hierarchies, through the workers intervention in production regarding productive performance.

Satisfactory performance skills have been achieved concerning companies (systems of work) and decision makers (degree of instruction and decision levels), but have not been achieved concerning undifferentiated workers.

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That difference must be started with civil instruction and development with professional sensitization, which in the Portuguese case study is practically undone and will probably take another generation to be solved....

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