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# The link between cognitive abilities and the main soft skills for the 21st Century workplace: A literature review

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## 1.Background

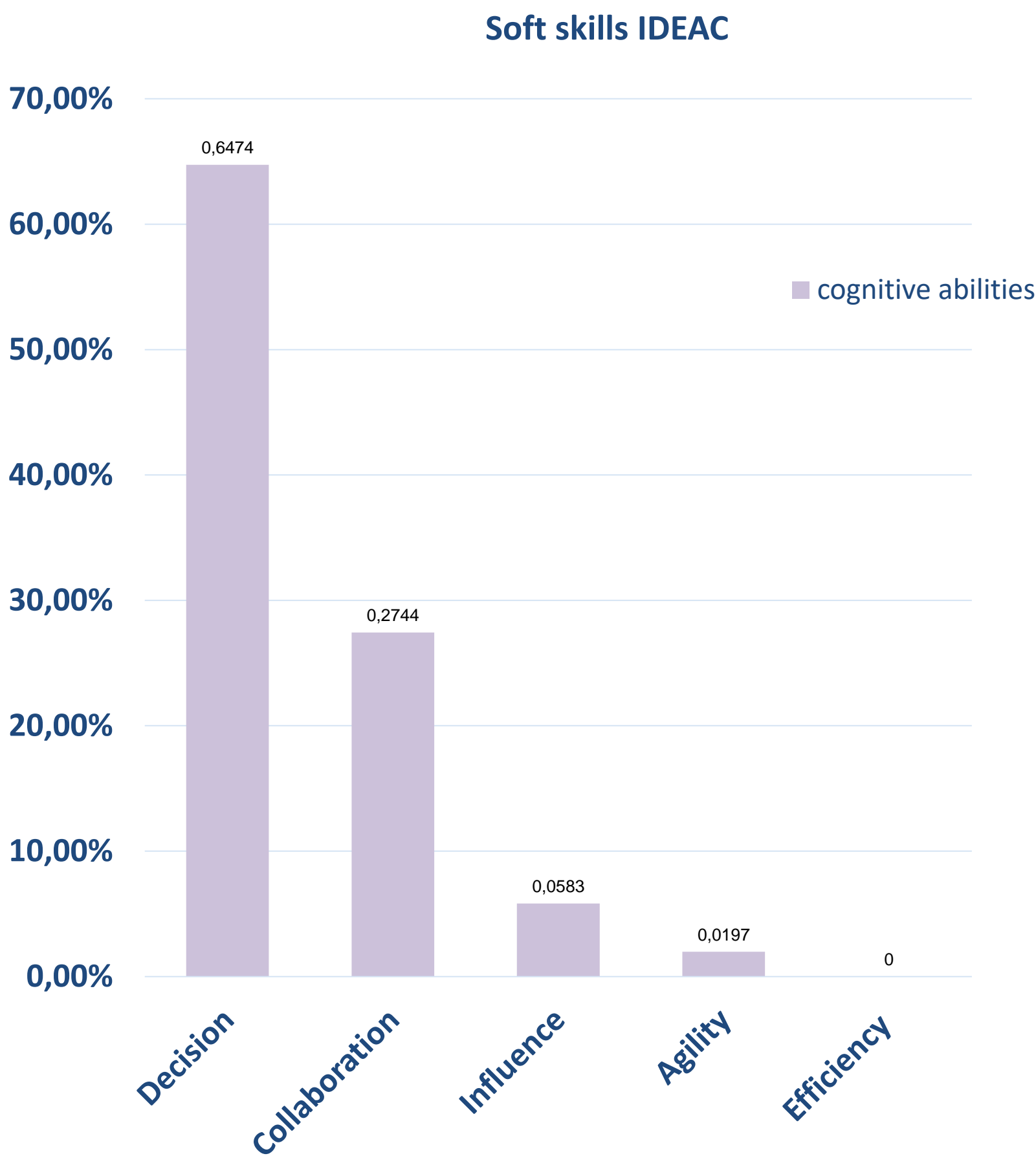
- Today’s workforce is organized very differently than it was a few years ago. Employees are required to adapt to changing environments, to communicate precisely (Sony & Mekoth, 2016), to think critically about tasks (Ozyurt, 2015) and to work in collaboration with others (Staar & Atzpodien, 2017).
- Therefore, to predict job performance, cognitive and soft skills often referred to as “21st century skills” are now central to recruitment, talent development and career management.
- In the literature there are a lot of skills that are referring to soft skills. But an investigation with HR professionals (n = 30 workshops) on organizational needs regarding talent development and evaluation in France revealed five critical domains of concerns: Influence, Decision, Efficiency, Agility and Collaboration. This practical model (i.e., IDEAc) encompasses 40 soft skills (8 per domains) and show arguments of facial validity (Trenvouez, Didry, Juhel, & Grasset, 2019).
- Also several studies have shown that we need at least seven **cognitive abilities** to thrive in the 21<sup>st</sup> century workplace: working, semantic and episodic memory, verbal and numerical reasoning, selective attention and mental flexibility, verbal attention and inhibition, abstract reasoning, problem resolution and creativity and finally learning potential.
- Despite the acknowledged theoretical connection between cognitive skills and soft skills, such relationships have rarely been investigated and need to be examined because of its practical uses by HR professionals.
- So, the aim of this proposal is to examine the theoretical relationship between **IDEAc’s softs skills** (Influence, Decision, Efficiency, Agility and Collaboration) and **cognitive abilities** previously mentioned.

## 2.Methods and Materials

- We conducted a broad literature search using the databases PsycINFO.
- We added one inclusion criteria : « 2009-2019 ».
- Search terms for IDEAc were « Influence », « Decision », « Efficiency », « Agility » and « Collaboration ».
- Search terms for the seven cognitive abilities were : «Working memory », « Semantic or Episodic memory », « Verbal and Numerical reasoning », « Attention », «Flexibility », « Abstract reasoning», and « Learning ».
- The search terms were combined in all 35 [5 (Soft skills IDEAc) x 7 (cognitive abilities)] possible ways.
- The review of the literature was limited to abstract.

## 3.Results

- We identified 22209 articles in our initial search.
- IDEAc’s soft skills are covered with respectively those proportions: Decision (64,74%), Collaboration (27,44%), Influence (5,83%), Agility (1,97%) and Efficiency (0%).



## 4.Discussion & conclusions

- Preliminary results show that the link between IDEAc’s softs skills and cognitive skills could be made.
- The lack of scientific studies which highlight the link between “Efficiency” and cognitive abilities (i.e., results) could be explained by the discrepancies between HR operational vocabulary on soft skills and those used in scientific studies. Redoing a literature review with other keywords could bring more significant results.
- It is, however, important to remain that we do not have a well-developed understanding of the causal direction, or the mechanisms underlying the relationships between soft skills and cognitive abilities.
- Nevertheless, this study can be useful in guiding future research design and analysis to these ends and what can also help HR professional to improve their decision-making skills.

## 5. References

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