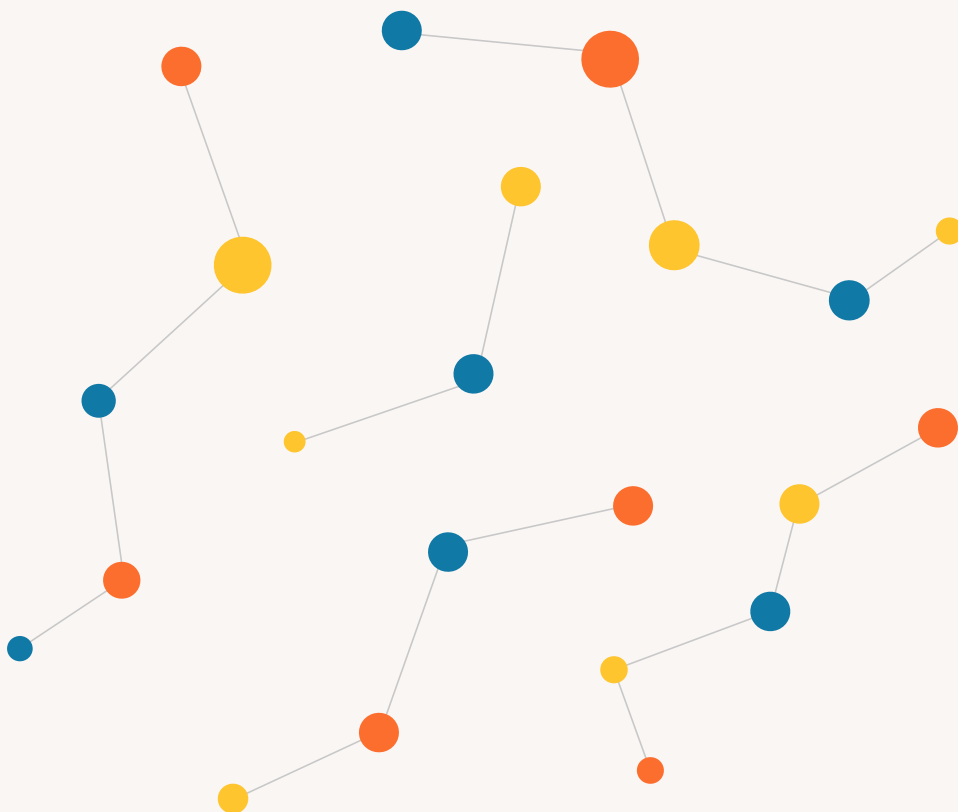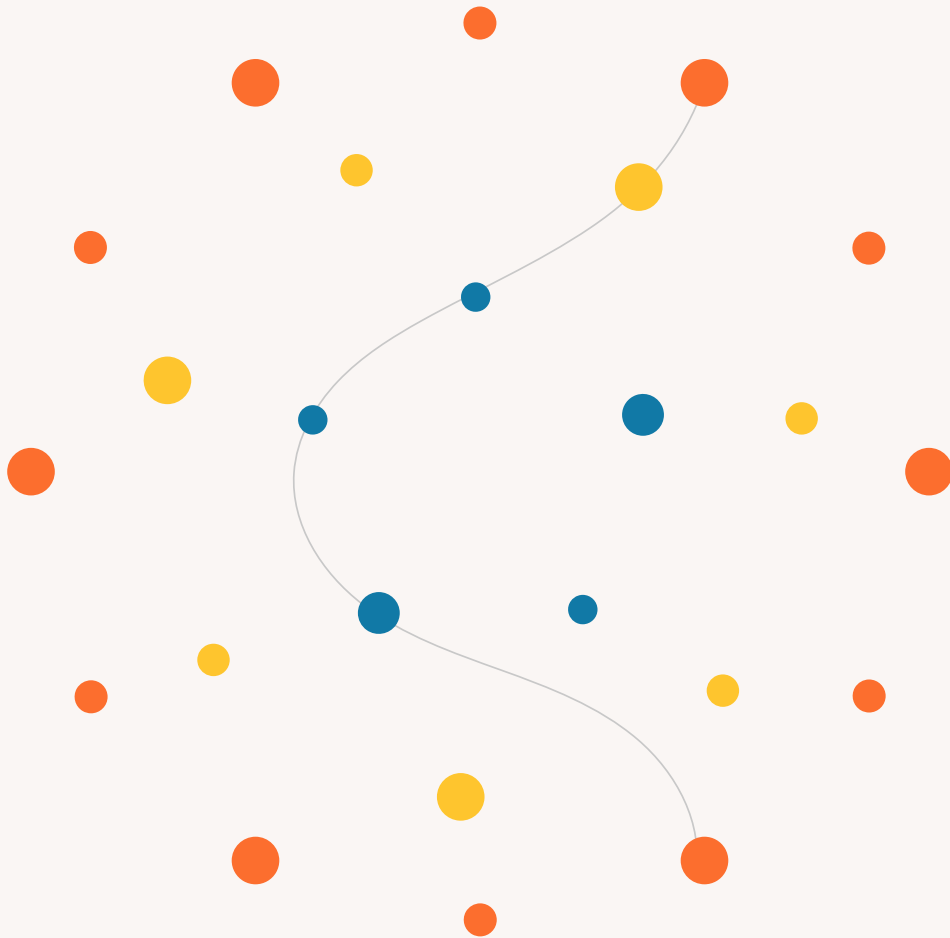# cadra

Assessment of development shifts in the second round of Leadership Profiles in the CADRA project - CADRA Report IO4
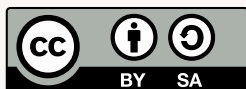
Ariane Schulz, kaa Faensen

What is CADRA?

The CADRA project was a three year Erasmus+ co-funded, pan-European initiative, running from December 2020 until August 2023. It explored leadership developmental needs and leadership development and focused on delivering working tools and methodologies to help leaders navigate the challenges of our times.

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Introduction

In the previous report ([How Leaders Think and Relate - CADRA Intellectual Output 3 Report](#)), we presented the findings from the leadership profiles and the methodology for doing so. In this report, we focus on the findings related to the developmental shifts taken between interviews and observed in the second evaluation of the profiles.

What influences whether and how adults develop, and how can these developmental steps be observed and assessed? With regard to the social-emotional and cognitive development of adults/leaders, we addressed this question in this part of the 3-year Erasmus+ part-funded CADRA project.

Assessing personal development in adults requires not one but necessarily two points of reference. It needs the comparison of before and after. In the first part of the 3-year Erasmus+ part-funded CADRA project (Intellectual Output/IO3), we assessed a broad group of political, business and civil society leaders in terms of their social-emotional and cognitive development and gained insights into how both levels (social-emotional and cognitive) interact. After approximately two years, the development of the same individuals was examined and assessed again. The aim was to detect changes. The procedure (two semi-structured interviews and evaluation by two scorers - meaning people analyzing the produced texts) was largely maintained in the second run. Minor changes in the procedure, especially different interviewers and scorers, could not be avoided. The second run (Intellectual Output/IO4) aimed to observe and assess further development in cognitive and social-emotional development.

The aim was to determine whether developmental steps in thinking and relating can be observed with the methodology used and to generate ideas for relevant influencing factors. In a time marked by COVID-19 and expanding global crises, there is no shortage of influences on the people whose development we studied and assessed. So, after the assessment after two years, we hoped to discover developmental trends. We have been able to determine two things:

- The individuals we studied have changed both in their thinking (dialectical strength) and in the way they relate to themselves, others, and the world (social-emotional development). The scope of thinking has increased and the basis on which people make their decisions has also increased, that is, the scope of action has increased over the 3 years.

- According to our results, we can conclude a connection between the ability to think in different ways (dialectical strength) and to behave towards the world (social-emotional development).

In this report, we present the results in more detail.

Methodology

The background to the procedure, the scientific classification and the description of the methodology have already been described in the report on Intellectual Output 3. For this reason, the focus here will be on describing the changes and further developments in the second run of the executive profiles examined.

The different results of the assessment of the two measurement points are compared here and possible hypotheses of the influencing factors are described. Due to the small total number of participants (N = 37) and the minor change in the procedure (different interviewers and scorers), we can only hypothesise further development. To obtain reliable results, further standardisation of the methodology and a larger number of developmental profiles conducted would be necessary. Ideally, an assessment of an individual's developmental status would be implemented a second time by the same team of scorers and interviewers. Unfortunately, due to personnel changes in the scoring and interviewing team, this was not possible, as mentioned earlier. However, this is crucial for the results because the quality of the interaction between the interviewed person and the interviewer can change the results of the development profiles through the relationship level and quality of the interaction. Unfortunately, the influence of a different interviewer on the results cannot be measured.

In 56% of all profiles, the same person was able to conduct the interview with the manager. More stable results would be obtained if the person constellations could be maintained in 100% of the cases.

In addition, the score ends of the texts were different in almost all cases. Potential effects cannot be estimated for this deviation either. It is also open to question whether this might even have positive effects, since in this case the scorers do not experience any influence (cognitive bias) from the previous profile.

The language (German, English or French) of the interviews conducted could be maintained in almost all cases in the first as well as in the second interview. In small internal experiments, the influence of the language on the results of the profile was tested. Here, in one case of

two measurements at the same time with an interview in one language and a second interview in the other, a different ability of relational and transformative thinking in the cognitive domain could be detected. Therefore, it seemed relevant to eliminate as much as possible this potential influence which could lead to a biased result, so we kept as consistent as possible the language used in the first interview, even if in some cases it was not the native language of the interviewed or interviewing person.

To ensure quality, the scorers' assessments were reviewed by the same person, so that a certain comparability of the scorers' evaluation results can be assumed.

Results

The results of the two study time points open up many possibilities for future research questions. For us, two questions were relevant:

- What patterns of development can we observe over a two-year period? Is there further development in dialectical thinking and in our patterns of relating to the world?
- Can we describe a connection between social-emotional and cognitive development, as Otto Laske and Iva Vurdelja see it?

Patterns in development - further development of the cohort

On the one hand, we were interested in the general development of the cohort compared to the earlier assessment time. Here we asked ourselves: can we detect social-emotional and cognitive developmental steps in the individuals? Are there differences in cognitive and social-emotional growth?

Socio-emotional development

For this purpose, the social-emotional developmental spaces were arranged into a number system so that even smaller shifts could be made visible.

Social-emotional development space	Number
S2	1
S2(3)	2
S2/3	3
S3/2	4

S3(2)	5
S3	6
S3(4)	7
S3/4	8
S4/3	9
S4(3)	10
S4	11
S4(5)	12
S4/5	13
S5/4	14
S5(4)	15
S5	16

In the first study period (CADRA Project Intellectual Output 3, 2021), the average social-emotional development of individuals was 9.58, and thus in the social-emotional development space of S4/3 and S4(3). This is the social-emotional development space where leaders still find it difficult to make decisions based on broad perspectives and their own conscious set of values gained over time (self-authoring, see Report IO3).

In the second study period 1.5 to 2.5 years later (CADRA Project Intellectual Output 4, 2023), the average social-emotional development of the individuals was 10.46, thus in the developmental space between S4(3) and S4. This is the developmental space in which we are still often subject to internal "peer pressure" but can ultimately make our decisions based on our own set of values that have become conscious.

What could be the reason for the observed change in these values? First of all, not all persons from the first measurement participated in the second measurement. Thus, one could assume that the low scores dropped out of the program.

However, this was not the case: We observed an increase in the social-emotional score by at least one point in the majority (>50%) of all development profiles conducted. In individual cases, larger developmental steps could also be detected.

Cognitive development

In the first study period (CADRA Project Intellectual Output 3, 2021), we observed an average dialectical strength of individuals at 38.39. In the second study period 1.5 to 2.5 years later (CADRA Project Intellectual

Output 4, 2023), we observed an average dialectical strength of individuals at 47.46. This, therefore, also increased during the period of the project. This means that the interviewed persons thought, or perceived, in a more decided, clearer and "broader" way in the interviews conducted with them than they did 1.5-1.5 years earlier (2021 - 2023).

There may be different reasons for this. First, it could be possible that the greater cognitive strength is related to the social-emotional development that has also changed. We observed this relationship in the first run and also examined it in the second cohort. We discuss the more modest results in the second run below.

Furthermore, many individuals whose development was studied and assessed by us were engaged in the topic of development in adulthood, dialectical thinking and factors of social-emotional development and actively worked on their cognitive development in the given period. This was one of the goals of the three-year Erasmus+ funded CADRA project: to investigate, capture, and describe needs, methods, and factors for development in adulthood among leaders. We suspect that, as intended, this has contributed to an increase in dialectical strength.

A third possible factor is based on the assumption that development occurs throughout the lifespan and this contributes to us 'maturing.'

Relationship between cognitive and social-emotional development

Furthermore, we asked ourselves the question: Can we assume that individuals with advanced social-emotional development also have broader cognitive abilities and vice versa?

For this purpose, we recorded the cognitive (referred to in this report as 'dialectical') strength for all profiles. We represent this in a numerical value from 0-100, which is higher if a person shows a greater diversity of thinking at a higher intensity. . We can therefore consider dialectical strength as a measure of cognitive development. The greater the dialectical strength, the more pronounced the cognitive development.

Dialectical strength was again related to social-emotional developmental stage, as in the first run. In the following tables, social-emotional development is shown on the X-axis and dialectical strength on the Y-axis:

Data from IO3

Data from IO4

Data from IO3 and IO4 combined
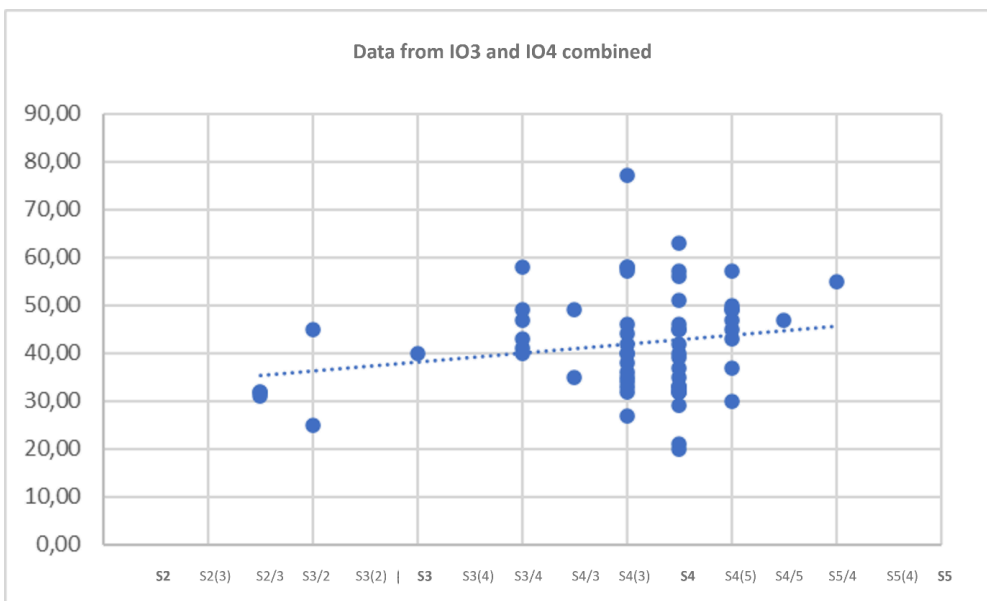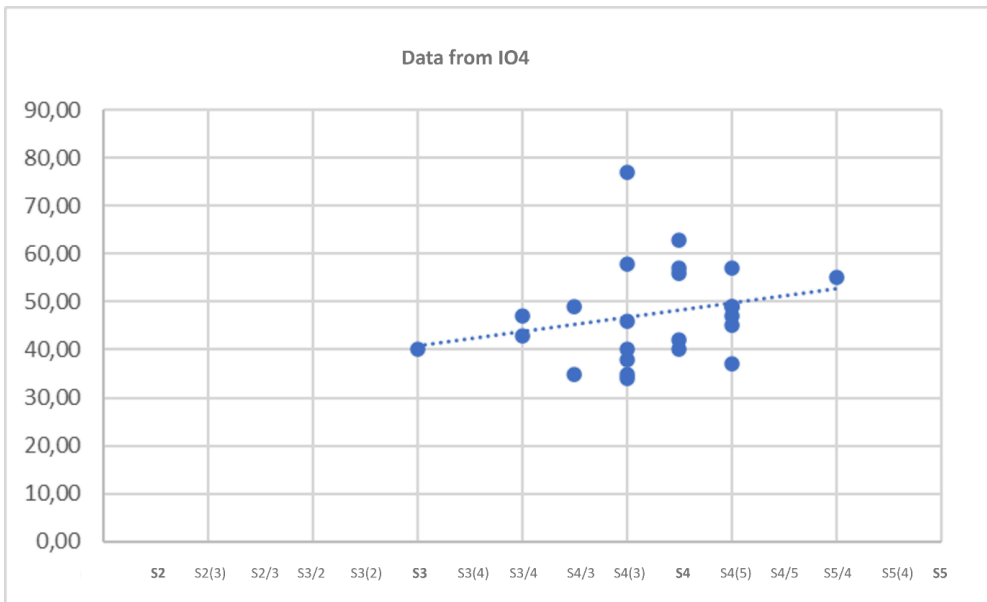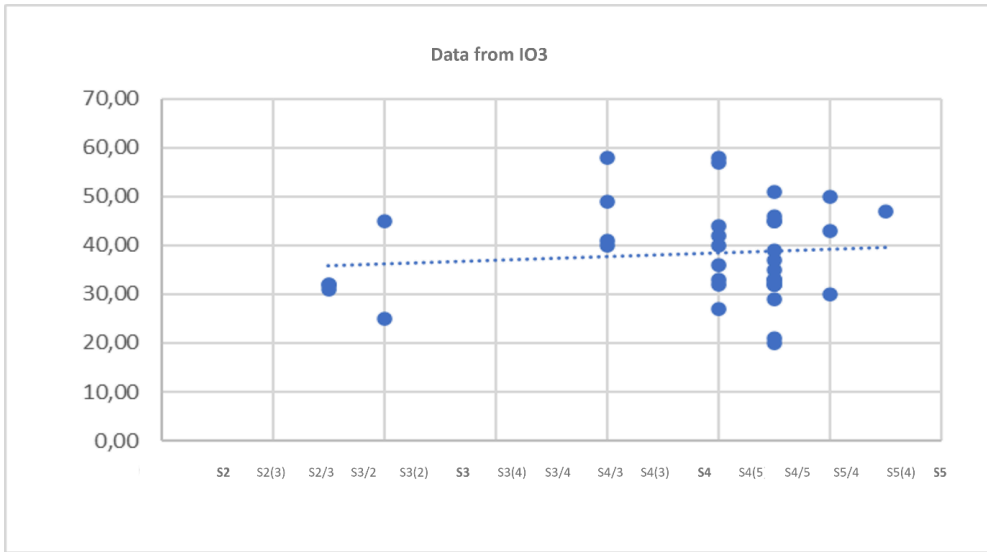
As can be seen on the graphs, there appears to be a slight correlation between dialectical strength and social-emotional development.

Nevertheless, especially in the area of the social-emotional space around the threshold of "self-authoring" (S4), (cf. Kegan 1994), a large dispersion in dialectical strength is apparent.

The failed context is slightly lower than we expected.

Recommendations for further investigations

Due to the minor changes in the procedure (different interview ends and score ends), the assessments at both points in time are only comparable to a limited extent. For more accurate results, it would be necessary to repeat the development profiles with the same interviewer. The positive or negative influence of constant or changing scorers would also have to be considered.

Two years is a relatively short period of time in adult development, although a lot has happened in those years. In our studies, only limited progress in social-emotional development was observed in most cases. In order to better understand this process and, if necessary, to be able to identify larger developmental shifts, it would be advisable to give people more time and therefore to set the measurement points further apart. One would then make a further assessment of development after five years, for example, and could thus ascertain whether longer periods enable, or result in, greater social-emotional change.

For further validation of the methodology, it would also make sense to test the influence of the native language on the results of the profile. This factor was kept largely stable in our studies. Developmental shifts compare well in a consistent language, but due to linguistic and thus cognitive barriers, a profile in a non-native language might tend to appear different. This must be taken into account in further comparisons.

Exciting individual observations

When dealing with such an intensive method as the Cognitive Development Framework (CDF) over a longer period of time, one inevitably repeatedly comes across exciting observations which, due to their rare occurrence, cannot be a result of this investigation, but are worth mentioning and investigating further:

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Major developmental steps on the social-emotional scale
The greatest developmental progress in the social-emotional space (2 points and more) was observed in individuals who already had a comparatively higher dialectical strength. Thus, it could be hypothesized that greater dialectical strength (meaning, specifically, a better ability to think things through from multiple perspectives) promotes social-emotional development in adulthood. Since these are only three profiles, this phenomenon would have to be considered again and separately in a larger group.

Conclusion

According to our observations, simply studying adult development using Otto Laske's Constructive Developmetal Framework and the other frameworks and methodologies we used in the CADRA project, has an impact on cognitive and social-emotional development.

We have seen that people show altered cognitive capacities depending on the language in which they are currently speaking or thinking. We also found a slight correlation between the ability to think multi-perspectively and the ability to relate to the world (between dialectical strength and social-emotional development). A single observation was that cognitive strength in terms of dialectical thinking favors social-emotional development. At this point, we invite further research, recommending that the method be further standardized and a larger number of participants (N) be chosen for more certain results.

We emerge from this project with a greater number of open-ended questions.

What commonalities do people exhibit who seem to have a special capacity for transformative and relational thinking?

What ways of thinking are the least demonstrated, and what does this mean for leadership and leadership development?

What social and cultural influences can be found in the ways people think and behave toward the world?

Can we identify patterns that connect people, which show major developmental steps?

The topic is highly charged from our perspective. Gregory Bateson is credited with the phrase: "The great problems of this world are grounded in the difference between the way we think and the way nature works." So if we thought more extensively, better, differently, more naturally, could we solve the great problems of this world?

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