Character and learning habits: definition and measurement proposal

Carácter y hábitos para el aprendizaje: definición y proyecto de medición

Ignasi de BOFARULL, PhD. Assistant Professor. Universitat Internacional de Catalunya *(ibofarull@uic.es).*

Abstract:

This work examines how students' character, habits, and mindset influence teaching-learning processes. Until recently character education was a matter of moral and civic education, but recent research into non-cognitive skills and social-emotional learning reflects how these personality traits give steadiness to school teaching-learning processes. Neuroscience here emphasises the value of executive functions: attention, inhibitory control, and planning are moments where the student unfolds her learning. Classical intelligence (IQ) focuses on analytical understanding, a specific moment; character intelligence focuses on the volitional processes that create the intellectual work that begins in the classroom and ends with planning of study at home. The first objective is to define non-cognitive skills, executive functions, and character, related frameworks that are present in school and family life. After this, the second objective is to assess how the social-family environment affects these processes. The third objective, in parallel with carrying out the study, is to propose tools to measure these strengths in elementary school: BFQ-N and BRIEF 2. If character education models for learning are proposed, tools should be offered to measure it intended to test the success of the programmes. The conclusion identifies a major initiative: universities, schools, and educational agents should think about a new integrated model of education for their students based on this convergence between character and classical intelligence. School failure and dropout have academic explanations but also family and personal ones. This complex and changing third millennium requires robust and flexible skills to face the challenges of a society that has still not shown us where it is going.

Keywords: character, habits, non-cognitive skills, executive functions, social and emotional learning, attachment, mind-set, whole education, 21st century skills.

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Resumen:

Este trabajo estudia cómo influye el carácter, los hábitos y la actitud del estudiante en los procesos de enseñanza-aprendizaje. Hasta hace poco la educación del carácter constituía un asunto de educación moral y cívica. Ahora, las nuevas investigaciones sobre las habilidades no-cognitivas y el aprendizaje socioemocional reflejan cómo estos planos de la personalidad dan consistencia a los procesos de enseñanza-aprendizaje escolares. Las neurociencias subrayan aquí el valor de las funciones ejecutivas: la atención, la tenacidad y la planificación son momentos donde el estudiante despliega su aprendizaje. La inteligencia clásica (coeficiente intelectual, CI) pone el acento en la comprensión analítica, un momento puntual; la inteligencia del carácter pone el foco en los procesos volitivos que fraguan el trabajo intelectual que empieza en el aula y acaba en la planificación del estudio en el hogar. Una vez definidas las habilidades no-cognitivas, las funciones ejecutivas y el carácter, marcos emparentados entre sí y presentes en la vida escolar y familiar, el segundo objetivo ha sido valorar cómo el ambiente socio-familiar interviene agudamente en estos procesos. El tercer objetivo ha sido, siempre en paralelo con el despliegue del estudio, proponer las herramientas que midan estas fortalezas en la educación primaria: BFQ-N y BRIEF 2. Si se proponen modelos de formación del carácter para el aprendizaje se deben ofrecer herramientas para su medición orientadas a testar el éxito de estos programas. La conclusión apunta a una iniciativa de calado: la universidad, la escuela y los agentes educativos deben pensar un nuevo modelo de educación integral de sus estudiantes desde esta convergencia entre carácter e inteligencia clásica. El fracaso y el abandono escolar tienen razones académicas, pero también familiares y personales. Este tercer milenio, complejo, cambiante, necesita habilidades robustas y flexibles para hacer frente a los retos de una sociedad que no nos desvela aún a dónde va.

Descriptores: carácter, hábitos, habilidades no-cognitivas, funciones ejecutivas, aprendizaje socio-emocional, apego, actitud, educación integral, habilidades para el siglo XXI.

1. Character skills

When a child is born, it has a biologically-shaped temperament that will be moulded over time into a character which is the product of habits acquired and shaped by its family, school, and social environment. The purpose of school is, in our opinion, for students to develop a character that is the sum of habits acquired in repeated actions that are cognitive, ethical, and behavioural in nature. We frame this objective in the later years of early-childhood education and in all of primary education. We refer to learning habits that should take root at the cerebral and neuronal levels. As James realised as long ago as the late nineteenth century (James, 1899; Alcover & Rodríguez, 2012), habits form new and more agile and supple learning-behaviour

thanks to neuroplasticity, a modification of the neuronal networks and of the physical structure of the brain. The result is that the student will establish a second nature, a new cognitive and behavioural functioning that can fix thinking skills of the highest level which will in turn be able to continue learning.

These concepts of habit and character are anchored in a Western tradition that began with Aristotle's philosophy, in particular the *Nicomachean Ethics* (Malikail, 2003; Bernacer & Murillo, 2014), and which is still of great importance today. Training habits as the basis of education is a thread running from Aristotle to neurosciences, passing through James's insights. Good character, in short, is built on the habits and strengths that enable us to carry ourselves correctly through life, achieving our family, career, and civic goals. Furthermore, a good education in citizenship should not ignore the fact that committed, participatory, and critical citizens who can build a quality democracy must be educated to have a good character (Althof & Berkowitz, 2006). Citizenship without civic virtues, in Aristotelian terms, can endanger the sustainability of a model of society. We are, therefore, speaking of integrated education (Gervilla, 2000).

Personality psychology has been describing these processes for decades. We intend to define and propose a means of measuring how character, habits, and personal strengths affect the learning process at school. We say learning process as learning at school is sequential and it is not just in class that it develops (or deteriorates) but also in family and social settings, while studying, and in the planning of tasks. At present it has to compete with distracting digital activity such as social media (Chen & Yan, 2016).

What is currently happening in school life is that people often forget how character influences learning. The Real Academia Española dictionary defines character as «strength and nobility of spirit natural to someone, resolve, energy.» Character is a personal motor that constantly regulates the *cognition-deliberation-decision-action* sequence (Vigo, 2012). And the moment of deliberation-decision is not just a rational step but is also a choice loaded with the emotions, beliefs, and attitudes in play (Damasio, 1996). In brief (and returning to the pedagogical aspect of James), schools must train students in the skill of knowing-deliberating-deciding-acting and in so doing must take into account the most intelligent emotions, beliefs, and attitudes based on rooted and wise habits that tactful teachers can awaken (Thoilliez, 2013). In the USA, when discussing character education, the *head, heart, hands* trinity is cited (Lickona, 1991). The best thing for teachers and students is to be motivated to study a discipline or task in depth. Doing this in an abstract way and merely through a sense of duty is less appealing. Although a sense of duty can sometimes support passion and motivation, as the final objective is deeply exciting. Every day teachers confirm that students' personal strengths, positive working habits, intrinsic motivations, and self-regulation are positive-

ly reflected in their marks. And indifference, inattention, and impulsiveness, in contrast, lead to academic failure. At a more technical level, it is known that these character skills, acting in different personality areas are, when they converge, partly conditions that make better learning possible:

> Throughout this paper we use the term character skills to describe the personal attributes not thought to be measured by IQ tests or achievement tests. These attributes go by many names in the literature, including soft skills, personality traits, non-cognitive skills, non-cognitive abilities, character, and socio-emotional skills. These different names connote different properties (Heckman & Kautz, 2013, p. 3).

2. Self-regulation and executive functions

We now return to the relationship between habit, learning, and neuroplasticity. The sciences of neurodevelopment place great emphasis on this: self-regulation is a vital part of learning and as time passes is also part of a balanced and emotionally stable life (Shonkoff, Boyce, & McEwen, 2009). Self-regulation, also known as inhibitory control, is a basic ability to be able to cope in almost all areas of life. At the same time it is one of the foundations of the executive functions (EF from now on) that form the basis of character skills (Diamond, 2013; Diamond & Lee, 2011). EFs depend for their functioning on the prefrontal cortex, the initial and substantial development of which occurs in the first three months of life (McEwen, 2016). EFs (working memory, inhibitory control, and flexible thinking-behaviour) could be defined as a set of higher-order cognitive-behavioural competences that reason and analyse the different pieces of content at school (and in almost all life contexts). These decisions are often then turned into tasks that must be carried out in short-, medium- and long-term plans. EFs also continue to operate there: in planning and achieving objectives at school, in the family, and in life (Diamond, 2014). To measure character and learning skills in general we propose a tool that evaluates personality overall in these school ages: BFQ-N (part 6). This will be considered below. Nonetheless, there is a questionnaire that specifically measures EF with great precision. We propose a research project to evaluate character skills which, on those lines, seeks triangulation from different perspectives and consequently uses converging instruments. Therefore, we suggest using BRIEF 2 to specifically measure EFs (Gioia, Isquith, Guy, & Kenworthy, 2000).

> BRIEF (behaviour rating inventory of executive function) is a scale comprising two questionnaires, one for parents and another for teachers, designed to evaluate EFs in the home and the school respectively (Soprano, 2003, p. 45). See Table 1.

The Spanish version of BRIEF 2 gives the school's perspective, together with the family's, between the ages of 5 and 18. We should recall that in this piece, as stated above in the opening lines, we aim to evaluate EFs at the end of early years education and above all in primary education (Maldonado-Belmonte, 2016).

TABLE 1. Areas of the executive functions explored by the BRIEF scale.

Inhibition	Ability to control impulses and stop engaging in behaviour at the appropriate moment.
Shift	Ability to make transitions and tolerate changes, flexibility to solve problems and move focus of attention from one topic to another when needed.
Emotional control	The influence of EFs on the expression and control of emotions.
Initiative	The ability to initiate a task or activity without being made to do so. This includes aspects such as the ability to generate problem-solving ideas, responses, or strategies independently.
Working memory	The ability to hold information in mind with the aim of completing a task, recording and storing information, and creating objectives. Working memory is essential for carrying out multiple or simultaneous activities, such as arithmetic calculations or following complex instructions.
Organization and planning	These are important for problem solving. Organization involves the ability to order information and identify the main ideas or the key concepts in learning tasks or when trying to communicate information, either orally or in writing. Planning involves setting an objective and determining the best route to achieve it, often through a series of appropriately ordered steps.
Organization of materials	Another aspect of organization is the ability to order items in one's environment and also to maintain order in work elements, toys, cupboards, desks, and other places where things are kept, as well as being sure that the materials needed to do a task are actually available.
Monitoring	This has two aspects: a. The first refers to the habit of monitoring one's own performance while carrying out a task or immediately after completing it in order to make sure the proposed target has been attained adequately. b. The second aspect, which the authors call self-monitoring, reflects the child's awareness of how her behaviour affects others.

Source: Adapted from Soprano, 2003, p. 45.

3. Cognitive and non-cognitive skills and measuring them

Having reviewed the literature on character skills, we will now consider how they are measured. It is widely known that learning at school is not restricted to a pre-set curriculum; it does not just involve the analytic and cognitive incorporation of competences, subjects, and objectives by the students. The function of school is not just to obtain the stark qualifications every student gets and which are summarised in the evaluation by their teachers who certify their command of the curriculum content. Learning and intelligence, understood in the classical sense, are measured by the countless existing tests that establish what we know as the intelligence quotient (IQ). But this strictly academic cognitive intelligence is not all there is. There are also non-cognitive skills — personality, character— that support and underpin academic intelligence, forming a new more comprehensive intelligence. To discuss non-cognitive skills as the basis of academic intelligence seems to be a contradiction. The personality and character features that have an effect on non-cognitive

skills are also cognition although this is in its most volitional and behavioural aspect. However, this name captures everything that is not included in what is strictly referred to as cognitive skills: «non-cognitive is, of course, a misnomer. Every psychological process is cognitive in the sense of relying on the processing of information of some kind» (West et al., 2016, p. 149).

In English these skills are also referred to as soft-skills because of their malleability. These skills can, therefore, be shaped; they are not fixed. They are teachable skills that can be cultivated and measured using various instruments. Therefore, we are facing two types of skills —they could also be called intelligences— that are at the base of learning. The first type (IQ) is more cognitive, analytic, and comprehensive to put it simply. The second type, however, goes beyond what has always been understood as cognitive parcels and they promote good learning outcomes by improving habits: habits and attitudes such as perseverance, concentration, and focus on study as well as positive beliefs in one's own ability that have a significant motivational impact. This is not a new not-just-cognitive type of intelligence that has only been theorised but instead it is a new way of understanding intelligence that can be observed and can be measured in terms of personality and character traits.

For some time now it has been possible to quantify these features from the age of 17, and one of the most important instruments —among others— for doing so is the big five personality questionnaire (BFQ) (John & Srivastava, 1999). In any case, our interest is learning and the study of character intelligence and social-emotional intelligence at the end of early years schooling and in primary school in particular (5-12 years). To this end, there is a Spanish version of BFQ for students aged from 8 to 17. This is the BFQ-N, a questionnaire that presents the psychometric requirements when the informants are the children themselves (Carrasco-Ortiz, Holgado-Tello, & Del Barrio-Gandara, 2005). In the sixth section, the factors and aspects measured by the BFQ are considered in greater depth.

4. Socio-family environment, educational achievement, and achievement gap

These teaching-learning processes at school are often based on skills and personality features that predate school and continue in parallel during school years. They are rooted in the family and social environment (Bronfenbrenner, 2009). An environment where the role of the parents and closest carers stands out (Moullin, Waldfogel, & Washbrook, 2014). If children's family environments are unstable, stressful, and chaotic, these character skills might be harmed (Perry, 2009), for example, in the areas of impulsiveness and attention difficulties. In contrast, the homes that are best organised, affectionate, and most predictable facilitate the future students' learning from the first months of life. Thanks to their order, predictability, cohesiveness, and healthy habits, these families facilitate the acquisition of routines and skills along with high academic performance

(Hanscombe, Haworth, Davis, Jaffee, & Plomin, 2011). Nonetheless, these studies should not make us think that high incomes are the primary variable that facilitates the emergence of character skills. It may be the case that the interactions, order, and consistence in the home are found in the attitudes of families with an economic level that is not high but instead is medium or medium-low (Tough, 2014 and 2016). At the same time, there may also be high-income homes that are so chaotic that learning becomes difficult among other reasons because the cultivation of the executive functions has deteriorated (Vernon-Feagans et al. 2016). The family environment and learning in pre-school and school years is shaped by various psychological perspectives and conceptual frameworks. We will consider the ones we regard as most relevant. One clear example of this social-family root that could shape learning is the attachment link which is located in the parental nucleus (in parent-child interactions) and is shaped in the first two years of life. In any case, its subtle and profound reality continues to be present throughout a person's life cycle. Galán-Rodríguez gives a very incisive definition of attachment:

> Bowlby proposed a relational concept of the human being (the child enters the world primed to establish a close connection bond with a caregiver figure) supported by a very interesting conceptual framework. The contributions by Ainsworth made it possible to expand attachment theory (conceptually and academically), thus consolidating what appeared to be a productive and promising line of work (Galán-Rodríguez, 2010, p. 581).

This bond with the mother, or the attachment figure, can be decisive and will set the secure or insecure personality of the future student (Bowlby, 1969; Ainsworth & Marvin, 1995). The child will acquire security and confidence in herself and the world, which will be very valuable when she starts school.

Another conceptual framework is the linguistic and attributive style generated by the family and social setting surrounding the child which can be encouraging or discouraging. We refer to the linguistic codes (elaborate or restricted) the child learns at home (Bernstein, 1989) and in her closest settings. Codes that then unfold —positively or negatively— in a way that is imperceptible but constant in the school.

This is where the achievement gap appears. The absence of the following factors can be decisive (National Academies of Sciences, Engineering, and Medicine, 2016, p. 81):

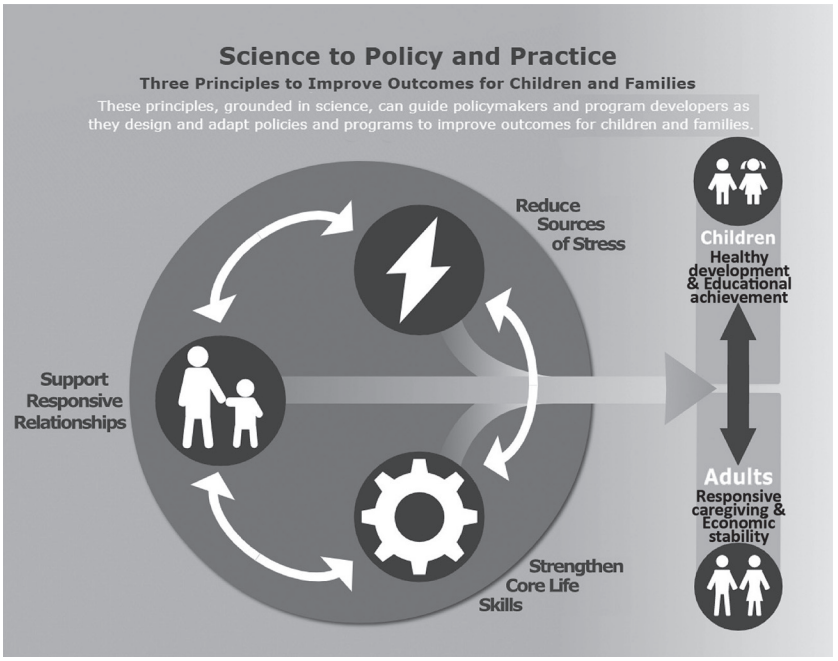
- A healthy life (nutrition, hygiene, sleep).
- Secure attachment.
- Order, cohesion at home, predictability.
- Limits and affectionate discipline.
- Rich linguistic interaction.
- Calmness and family availability in interactions with adults.
- Educational, cultural, reading sensitivity.

Here are a few examples to illustrate the previous statements: going to public libraries with the children from an early age, joint (non-digital) play at home (Shaheen, 2014), excursions focussing on

nature, and a belief in and support of the school from home (Tough, 2016) are in the reach of any pocket.

Therefore, fighting against the achievement gap involves: a) training families in matters such as parent-child interactions; training them in b) reinforcing key life skills (including EFs); and c) reducing stress in the lives of children and families (Center on the Developing Child at Harvard University, 2017). See Graph 1.

GRAPH 1. Three Principles to Improve Outcomes for Children and Families.



Source: Center on the Developing Child at Harvard University, 2017.

School plays a vital role but academic failure starts imperceptibly at home in the first months of life. It is again worth noting that there are families on low incomes with great sensitivity towards education and families with high incomes but very little sensitivity in this area. More than a high income, what a home needs is economic stability. And in the view of some scholars, more sobriety than opulence in their daily consumption. The social-achievement gap focusses more on a proactive family climate than on income and resources, as shown in Graph 1. However, if material resources fall below a certain poverty threshold, no family environment can overcome this adversity. Severe material deprivation is therefore a very influential stress factor.

Bourdieu (1986), a sociologist of education, has studied these structural and structuring constraints closely with his concept of *habitus*. Non-cognitive skills

are part of this great humus that is *habitus,* established by one's social origin. This concept is considerably more complex than what is understood by habit. It comprises aesthetic and cultural perceptions, sensitivities, and inclinations. The leisure (Palmero-Cámara et al., 2015; De Bofarull, 2005) of the privileged classes also has an impact on *habitus*. *Habitus* resides in a culture that is converted into enlightened actions, choices, and attitudes. One of Bourdieu's studies is called *La distinction. Critique sociale du jugement* (1979). To summarise a little, it could be said that there is an ideal social-family *habitus* to integrate knowledge from school which is normally present in families with high levels of culture and income. At the other extreme there is a limited *habitus,* inclined towards being less refined, which is found in families with less prestigious cultural levels and lower incomes, which, because of its simplicity and shortcomings, does not facilitate the absorption of knowledge at school by children. The «language» of school content and subjects is often incomprehensible and distant for these latter families. Children who come from a more prestigious *habitus* understand the language of school perfectly.

Early childhood and primary schools sometimes work on improving these underlying conditions —restricted linguistic and cultural *habitus* and attachment— through the teaching and learning processes implemented, even if it is sometimes very difficult to undo them when they are deep-rooted. We reiterate that it is often the case that students lack these basic skills, and compulsory schooling assumes they will be present (Kautz, Heckman, Diris, Ter Weel, & Borghans, 2014). This is where several variables in school failure and dropout can be found: in families' internal attitudes, beliefs, perceptions, and involvement with children at an early age. The influential PISA reports have, since 2012, started considering the existence of these skills as part of their task of evaluating 15-year-old students in OECD countries: *Students' Engagement, Drive and Self-Beliefs* (OECD, 2013). And this is perhaps the first step towards different countries regarding the student not as an abstract being who learns but as a complex, diverse person with different needs and backgrounds in different areas: cognitive, psychological, social, and material. These material needs often combine with acute and stressful adversities (unemployment, lack of job security, illness, single-parent families, etc.) that have not just grown but multiplied in recent years given the instability —political, economic, workplace, family— the West has been experiencing since the 2008 crisis.

5. Social and emotional learning and self-regulation

In this direction, for several years schools have been promoting education in values that can overcome shortcomings in the social, cultural, educational, and emotional areas that specific students bring from their social-family environment and that can hold back the students' academic development. In recent years, education in values has been

developed using a solid framework from the English-speaking world: social and emotional learning (SEL). Social and emotional learning (Durlak, Dymnicki, Taylor, Weissberg, & Schellinger, 2011; Álvarez-Hevia, 2018) is an umbrella term that once again includes skills that go beyond classical intelligence and which help to lay the foundations for learning from different personality features.

Social and emotional learning is an important step forward in moral education; it helps improve the atmosphere in class and at school and its results can be measured using the Big Five questionnaire mentioned above (John & Srivatava, 1999). Social and emotional learning comprises five core competences: 1) self-awareness; 2) self-management; 3) social awareness; 4) relationship skills; and 5) responsible decision-making. It has proved very effective in the USA and has had a very good cost-benefit ratio (1:11 per dollar invested) when applied in schooling (Elias et al., 2015). Nonetheless, it is very important to note that the application of this conceptual framework requires systematic integration where a) the home and community, b) the school, and c) the class play an interdependent role. The development of character, habits, and self-regulation is only possible if these educational agents converge. In other words, a calm, opportune, and organised social and emotional learning can only grow from these competences. See Table 2 and Graph 2. We will allow them to define themselves and will note the points that overlap with the objectives of this study:

> Social and emotional learning (SEL) is the process by which children and adults acquire and correctly apply the necessary knowledge, attitudes, and skills for understanding and managing emotions, setting and achieving positive goals, feeling and showing empathy for others, establishing and maintaining positive relationships, and taking responsible decisions (CASEL, 2017, p. 3).

Emotional intelligence will also be the basis of more reflexive and ethical decisions at school and in life.

6. The big five: personality dimensions

Non-cognitive intelligence and its close relative emotional intelligence, based on character skills and the cultivation of cognitive-behavioural habits, therefore comprise a broad spectrum of competences, skills, and strengths that must work together to direct the cognition-deliberation-decision-action process. The present study focusses on the worlds of school and family (although it has other applications: professional, occupational, community, etc.). These competences and habits must be integrated to achieve results as they do not work if there are just some of them but not others. People advance in character skills if they progress in most areas of each one of them. The Big Five questionnaire measures these strengths and detects shortcomings in them in five personality factors, from different perspectives and in their respective aspects (Table 3). Heckman and Kautz (2012) provide an approximate outline of what non-cognitive skills are and their effects.

TABLE 2. Conceptual framework for systematic social and emotional learning.

Homes and community associated with the school + Schools with SEL practices in all areas + Classes where SEL is applied in the curriculum	Self-awareness	Identifying emotions Accurate self-perception Recognizing strengths Self-confidence Self-efficacy
	Self-management	Impulse control Stress management Self-discipline Self-motivation Goal-setting Organizational skills
	Responsible decision making	Identifying problems Analysing situations Solving problems Evaluating Reflecting Ethical responsibility
	Relationship skills	Communication Social engagement Relationship building Team work
	Social awareness	Perspective taking Empathy Appreciating diversity Respect for others

Source: CASEL, 2017, p. 3.

GRAPH 2. Systemic Social and Emotional Learning.

Source: Casel, 2017, p. 3.

These researchers have shown that students (and workers, etc.) who have these skills display high performance levels at school and at work, not just in the technical-academic area but also in a good and decisive character that can manage challenges and difficulties, both material and relational based on reasonable emotional stability. This table gives an overview of the main personality traits that are so closely related to character skills, to non-cognitive skills. The table below provides a brief (and limited) definition of these fields and at the same time helps us understand their study, implementation, and evaluation. Table 3.

TABLE 3. The Big Five Domains and their facets.

Big Five Personality Factors	**American Psychology Association Dictionary Description1**	**Facets (and correlated trait-adjective)**	**Related traits**	**Analogous childhood temperament traits**
Openness to experience	«The tendency to be open to new aesthetic, cultural, or intellectual experiences».	Fantasy (imaginative); aesthetic (artistic); feelings (excitable); actions (wide interests); ideas (curious); and values (unconventional).		Sensory sensitivity; pleasure in low-intensity activities; curiosity.
Conscientiousness	«The tendency to be organized, responsible, and hardworking».	Competence (efficient); order (organized); dutifulness (not careless); achievement striving (ambitious); self-discipline (not lazy); and deliberation (not impulsive).	Grit, perseverance, delay of gratification, impulse control, achievement striving, ambition, and work ethic.	Attention (lack of); distractibility; effortful control; impulse control/delay of gratification; persistence; activity.

Extroversion	«An orientation of one's interests and energies toward the outer world of people and things rather than the inner world of subjective experience; characterized by positive affect and sociability».	Warmth (friendly); gregariousness (sociable); assertiveness (self-confident); activity (energetic); excitement seeking (adventurous); and positive emotions (enthusiastic).		Surgency; social dominance; social vitality; sensation seeking; shyness; activity; positive emotionality; and sociability/affiliation.
Agreeableness	«The tendency to act in a cooperative, unselfish manner».	Trust (forgiving); straightforwardness (not demanding); altruism (warm); compliance (not stubborn); modesty (not showoff); and Tender-mindedness (sympathetic).	Empathy; perspective taking; cooperation; and competitiveness.	Irritability; aggressiveness; and wilfulness.
Neuroticism/ Emotional Stability	Emotional stability is «predictability and consistency in emotional reactions, with absence of rapid mood changes». Neuroticism is «a chronic level of emotional instability and proneness to psychological distress».	Anxiety (worrying); hostility (irritable); depression (not contented), self-consciousness (shy); impulsiveness (moody); vulnerability to stress (not self-confident).	Internal vs. external; locus of control; core self-evaluation; self-esteem; self-efficacy; optimism; and Axis I psychopathologies (mental disorders) including depression and anxiety disorders.	Fearfulness/ behavioural inhibition; Shyness; Irritability; Frustration; (lack of) soothability; sadness.

Source: Adapted from Heckman & Kautz, 2012 and John & Srivastava, 1999.

7. Conclusion: learning to think in a more complex future

To summarise, in the world of education it has been apparent for years that it is not enough to have cognitive intelligence (measured by the intelligence quotient), but that it is also vital to emphasise the non-cognitive intelligence that must form its foundation: character skills. These character skills will consequently be present all through life: in secondary school, in higher education, in professional life, in social life, and also as the basis of a stable family life.

Research from the English-speaking world has found that character skills are the basis of human capital (the skills and capacities that create value in the professional world and lead to individual improvements for employers, businesses, a country's productivity, etc.) (Heckman, 2011). But character, good character is also the basis of civic life understood as the result of various aspects working in concordance: the consistency of family life (which always has social returns); participation by citizens; civic virtues; the absence of crime; and its members overcoming psycho-social pathologies (Nucci, Krettenauer, & Narváez, 2014).

We are in the early years of a century which is starting with challenges and increasing complexity in many fields: a new era —the fourth industrial revolution— that demands a new education for a new type of citizen in a changing world. This century requires adaptable and skilled personalities who can manage complexity. Accordingly, many experts speak of *21st Century skills* (National Research Council, 2012) to emphasise levels of operative intelligence that are as central as critical thinking, decision-making, and problem-solving skills in the line of executive functions. These skills emphasise the competence-based focus and are in demand from international organisations such as the OECD (Ananiadou & Claro, 2009). It is no longer enough to cultivate strategic skills but new citizens must also be equipped with decisive internal attitudes, agile mentalities, and flexible world views.

The mindset —attitudes and beliefs— is therefore embedded in character skills. This is the field of interior convictions, attributive styles, and psychological tone that can either encourage work and intrinsic motivation or can discourage and paralyse. The self-determination theory of Deci and Ryan (2000) who have studied intrinsic motivation fits into this sphere very well. It is also the field of self-efficacy as studied by Bandura (1997). Children, students, and future citizens must incorporate visions of themselves and of the world that enable them to gain in competence, autonomy, and relational capacity without being intoxicated by a sometimes alienating and destructive setting.

Some areas of content from digital media can have a negative effect and also have a distracting and anxiogenic effect (Hoge, Bickham, & Cantor, 2017) through various devices, especially through excessive use of mobile phones and social media. Distractions, lack of attention, and

lack of concentration in the classroom and when studying are ever more acute difficulties education must confront (Scherer & Hatlevik, 2017).

Nonetheless, the prospects for change are encouraging. This is a teachable field. One good example is the studies into passion and perseverance —or grit— carried out by Duckworth (2013). This is a broad topic with different ramifications we cannot consider here. The need for silence, the ability to calm oneself, the ability to enter into the interior of the self to concentrate, be fully attentive, and channel stress could also be included. Our students can be highly stressed, even when very young, and it is important that they attain the stabilising rest that favours learning as Kabat-Zinn (2003) has studied in the broad sphere of mindfulness. Character, attitude, resilience, and inner peace are the preconditions for the best educational attainment. In these final lines we consider psychological stability as one of the foundations of learning that results in overcoming anxiety, fear, sadness, low self-concept, and continuous change in emotional stability. Part of this field can again be measured by the Big Five Questionnaire (BFQ) in its neuroticism/emotional stability personality factor.

The main aim of this work is to put the importance of character intelligence at the centre of the educational agenda. It is necessary to invite educational agents into the debate about these topics. We believe that character intelligence is somewhat neglected; it is not just moral training but also intellectual training. The first step towards promoting character skills is to establish whether they really influence educational achievement and emotional well-being. The corpus of research into this topic is small but promising (Khine & Areepattamannil, 2016; Roberts et al., 2015). In conclusion, there are various measurement instruments in this field — Big Three, MPQ, Big Nine— but in here we have proposed one of the most comprehensive and thoroughly tested: the Big Five Questionnaire in its version for schools and for the Hispanic world, the BFQ-N mentioned above. We also have the BRIEF-2 instrument, also validated for the Spanish-speaking world and for early-years/primary use. BRIEF-2 is intended to evaluate EFs (executive functions) that we believe are at the core of character skills. This triangulation that opens doors for the voices of families as BRIEF-2 has one version for teachers and another for parents.

Notes

[1] These definitions come from the *Dictionary of the American Psychological Association* (VandenBos, 2015).

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Author's biography

Ignasi de Bofarull holds a degree in Geography and History from the Universitat Autónoma de Barcelona and a PhD in Humanities from the Universitat Internacional de Catalunya. He currently holds the positions of Associate Professor of Family Sociology and Education at the UIC Faculty of Education, Researcher at the UIC Institute

for Advanced Studies of the Family and Director of the research group of the Generalitat de Catalunya called Parentalitat, Igualtat i Conciliació.

https://orcid.org/0000-0003-4896-1997

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