







# Educating the gifted student: Eagerness to achieve as a curricular competence

## Educar y formar al alumno talentoso: El afán de logro como competencia curricular

-  Dr. María-Luisa García-Guardia is Professor at the Complutense University of Madrid (Spain) (mluisagarcia@ccinf.ucm.es) (<https://orcid.org/0000-0002-9818-6602>)
-  Dr. Raquel Ayestarán-Crespo is Associate Professor at the Francisco de Vitoria University in Madrid (Spain) (r.ayestaran.prof@ufv.es) (<https://orcid.org/0000-0003-1066-3257>)
-  Dr. Josefa-Elisa López-Gómez is Lecturer in the Business Economics Department at the Carlos III University of Madrid (Spain) (jolopezg@ing.uc3m.es) (<https://orcid.org/0000-0003-0003-1029>)
-  Dr. Mónica Tovar-Vicente is Assistant Professor at the Francisco de Vitoria University (Spain) (monica.tovar@ufv.es) (<https://orcid.org/0000-0002-6278-175X>)

### ABSTRACT

During the last decades, high intellectual abilities have been revealed as a decisive curricular factor that evidences the need to adapt content to students' characteristics. In Spain, various autonomous communities have designed programs that, through extraordinary activities, seek to respond to this demand and provide talented students with the appropriate context for the development and strengthening of their skills. In the case of Madrid, this proposal includes private involvement of an entrepreneurial nature that has demonstrated the possible connection between the two environments when considering the labor asset, fundamentally oriented to the resolution of projects by adolescent subjects with above average cognitive capacities. This research has examined, by means of a 180° questionnaire completed by 342 subjects (comprised of parents and skilled children, teachers and classmates) in seven Madrid schools, the possibility of identifying the 'eagerness to achieve' competence, considering that its early distinction enables its development in educational contexts and the training of students in order to promote individuals who focus their professional work towards the completion of assigned activities. The results obtained have also made it possible to draw up a generic profile of the talented student by combining his or her own assessments and those of his or her environment, and to recognize their most highly valued inherent aptitudes as well as those least valued.

### RESUMEN

Durante las últimas décadas, las altas capacidades (AACC) se han desvelado como un determinante curricular que evidencia la necesidad de adaptar los contenidos a las características de los alumnos definidos por las mismas. En España, diversas comunidades autónomas han diseñado programas que, mediante actividades extraordinarias, persiguen responder a esta demanda y otorgar a los estudiantes talentosos el contexto propicio para el desarrollo y fortalecimiento de sus habilidades. En el caso de Madrid, esta propuesta presenta una participación privada de carácter empresarial que ha evidenciado la posible conjunción entre sendos entornos al considerar el activo laboral, fundamentalmente orientado a la resolución de proyectos, en el sujeto adolescente con AACC. Esta investigación ha examinado, mediante un cuestionario con naturaleza 180° cumplimentado por 342 personas (padres e hijos habilidosos, docentes y compañeros escolares) en siete centros madrileños, la posibilidad identificativa de la competencia afán de logro al considerar que su distinción prematura permite su trabajo en el contexto educativo y la formación del alumnado en aras a promover a un individuo que orientará su labor profesional hacia la finalización de las actividades asignadas. Los resultados obtenidos han permitido trazar, igualmente, un perfil genérico del estudiante talentoso mediante la combinación de sus propias apreciaciones y de las de su entorno y reconocer a las aptitudes inherentes mejor valoradas al igual que las calificadas de forma contraria.

### KEYWORDS | PALABRAS CLAVE

Quantitative research, gifted students, secondary education, curricular adaptation, competence, talent, abilities, personalized learning. Investigación cuantitativa, altas capacidades, educación secundaria, adaptación curricular, competencia, talento, habilidades, educación personalizada.



## 1. Introduction

Today giftedness has a relevant status in the Spanish educational legislative framework. Starting with Royal Decree 696/1995, of April 28, 1995, curricular adaptations were established for students with special needs (a set that includes, among others, talented students); since 2003, both the defense and the educational adaptations have followed in response to this typology. Among them, the Royal Decree of July 18 regulating the flexibility of the levels and lengths of instruction and its implementation for the region of Madrid, the geographical setting in which this research has been conducted, by means of Order 70/2005, of January 11. In this sense, this autonomous community has advocated for the development of a proposal for the complete and cross-sectional preparation of these students: the Educational Enrichment Program for Gifted Students. An initiative supported by the CEIM Foundation (Business Confederation of Madrid-CEOE), which contributes to the diversification and adaptation of curriculum contents through creation, experimentation and research. Alongside this project, the regulations in force, specifically Organic Law 8/2013, of 9 December, has determined the significance of curricular competencies as synonymous with the acquisition of knowledge corresponding to the educational, personal and working environments in an approach that integrates the European framework where the student is defined as a multidisciplinary and mostly practical individual. This orientation of the teaching-learning process towards the post-compulsory and higher education stages underlines the interest in equipping students with skills, abilities and knowledge that they can apply in professional settings in which the fulfilment of objectives becomes one of their essential actions (Steinbeck, 2011).

However, this contextual reality has hardly been addressed in the literature led by a study of students with high intellectual abilities. In the period starting in the 1950s, when giftedness became an object of study, and in the 1990s, when the leading variable became one of its defining characteristics, only a percentage below 3% of published research delved into the question of the manifesting and constructing union of talented students as individuals with this condition (Matthews, 2004). The 80's and 90's represented a certain conceptual consolidation, since, starting from the emergence of the term 'leadership', the relationship between talent and the corporate environment was established (Riley, Karnes, & McGinnis, 1996; Riley & Karnes, 1994; Chauvin & Karnes, 1983). Moreover, the beginning of the twenty-first century has involved a diversification of analytical perspectives, with results that have proposed a series of innate traits in the talented student: who not only possesses successful intelligence (Sternberg, Grigorenko, Ferrando, Hernández, Ferrández, & Bermejo, 2010; Chart, Grigorenko, & Sternberg, 2008); he/she is also motivated towards achievement and is socially gifted (Artola, Barraca, & Mosteiro, 2005) as well as capable of self-stimulation for problem solving and decision making (Pérez, González, & Díaz, 2006). However, in this profile underlying the leader's condition, emotional and social conditions coexist (assessment of the environment, self-knowledge, communicative abilities, personal and educational relationships) (Sastre-Riba, Pérez-Sánchez, & Bueno, 2018; Feldman, 2015; Freeman, 2015; Sastre-Riba, 2012) which can limit the exponential value of the eagerness to achieve, standardizing the talented individual. Consequently, their differential qualities and aptitudes could be partially projected into performance and work environments in breach of the longitudinal patterns established by the early cognitive theories (Freeman, 2015; Schiltz & Schiltz, 2007). Thus, the state of the art points to a proliferation of analytical methodologies and precepts in response to a general interest in understanding both the highly skilled individual and his or her specific status throughout compulsory schooling.

Within this framework, the understanding of the differential component that could explain the success of certain children and adolescents with high intellectual abilities with respect to both their peers and other subjects of the same age who do not share their defining abilities has become one of its fundamental objectives. On the contrary, the fact that there is no determinant theory that allows the unequivocal categorization of individuals with high intellectual abilities, gifted and talented, among other attributes (the use of these terms interchangeably is common and maintained throughout this study); neither a measurement system that provides fully reliable intelligence indices (Sastre-Riba, Castelló-Tarrida, & Fonseca-Pedrero, 2018; Jiménez, 2000) hinders the development of interconnected research that delves into the cognitive and environmental conditioning factors of the achievement of study subjects.

In this sense, and relative to this paper, the primary objective emerges from this contemporaneity of the examination by understanding that, in effect, highly talented pre-university students possess skills and abilities that, generically, lead them to success. The central research question raises the possibility of identifying the competence that promotes achievement during this educational period; whereas the primary hypothesis points to the validation of a study instrument designed for this analysis (the 180° questionnaire) that would enable an early distinction between these capabilities for the sake of their development and strengthening as well as their subsequent application in the work environment. Therefore, the analytical proposal presented in these pages is offered as a methodological resource

for future applications that maintain their examination focus on talented young people and wish to delve into the influences and effects that workers with these characteristics can exert on the results of their own professional activity.

## 2. Material and methods

### 2.1. Instrument

The measurement instrument used in this research was the 180° evaluation questionnaire, intentionally created in the absence of pre-existing models that examine both the general educational competencies included in the teaching-learning process of students with high intellectual abilities and their correlation with the work scenario. For this reason, the instrument is based on the so-called 360° questionnaire, which is frequently applied in the aforementioned setting, and which offers a stereoscopic view of the employee by associating the valuations offered by subordinates, equals and superiors. The reason for his choice was that, since the opinions of the subjects analysed coexist with those of people around them, the degree of distortion of reality and its consequent appreciation derived from self-description decreases.

Thus, the resulting questionnaire has been validated by 33 evaluators with academic (11), business (11) and mixed (the remaining 11) profiles and is comprised of 42 questions grouped into six thematic blocks (seven for each of them) that address the need to catalogue competency items considered essential for achieving success and covered under the concept of eagerness to achieve. It is worth noting that several of these tenets coincide, in their uniqueness, with capabilities that have been

**Students with high intellectual abilities have a series of competencies that can be self-identified or identified by people in their environment that, if properly analyzed and developed, would stimulate their eagerness to achieve in their academic and professional activity. Teachers can promote this adherence for the sake of training a well-rounded and multilevel employee, while addressing the individualities that define the highly skilled student body.**

the subject of study in recent scientific publications. These highlight, on the one hand, the recognition of their value as generic constituents of the individual with high intellectual abilities and, on the other, the future towards which research seems to be aimed in the pre-adult stage. Thus, the following have been undertaken: 1) Achievement of objectives (Sastre-Riba, 2012), 2) Eagerness to overcome (own or externally established standards), 3) Practical sense (Cáceres & Conejeros, 2011; Sierra, Carpintero, & Pérez, 2010; Lokajicková, Zelenda, & Zelendová, 2008), 4) Perseverance (regardless of difficulties), 5) Creativity and innovation (Castelló, 2014; Sastre-Riba & Pascual-Sufrate, 2013) and 6) Demonstration of confidence (through self-confidence and the coherence, maturity and soundness of one's actions). In turn, each of the questions has been answered following a Likert scale model, with a choice of five closed answers showing the lowest or highest degree of agreement with the statement (being 1=I completely or mostly disagree and 5=I completely or mostly agree).

### 2.2. Participants and procedure

The research involved 38 adolescents ( $n_1$ ) (24 boys and 14 girls) with high intellectual ability, aged between 12 and 16 and enrolled in seven educational centers (public, private and subsidized) in the Autonomous Community of Madrid. Given the age bracket, the different levels of Compulsory Secondary Education were represented as follows: 1st, 13 students (34.2% of the total); 2nd, 8 (21.1%); 3rd, 8 (21.1%) and 4th, 9 (23.7%). Due to the 180° nature of the questionnaire, each participant with high intellectual abilities was accompanied by eight others (the double parental figure  $-n_2-$ , three teachers  $-n_3-$  and three classmates  $-n_4-$ ), resulting in a total sample ( $n$ ) of 342 respondents who completed the study tool consecutively. This is an intentional non-probability segment defined by the selection of participants based on their diagnosis as talented students and/or their acceptance to participate in the study. In addition to geographic limitations, two determining factors restricted the analysis, since, in addition to the fact that many schools that had students with the required profile did not wish to participate, only 1% of these

subjects are recognized as such by the Spanish educational system (Hernández & Gutiérrez, 2014). For this reason, the results set out below, which are more than conclusive, are representative and indicative for the application of the questionnaire in other provinces or on a national scale, depending on the objectives. A partiality that is not exempt from reliability nor does it detract from the internal consistency of the instrument (measured through the Cronbach Alpha coefficient with a value of  $\alpha=0.98$  for the totality of the questionnaire and ranging between 0.87 and 0.97 points in the case of blocks). Likewise, and due to the characteristics of the instrument, various statistical techniques and tests have been used which have given the study the aforementioned reliability: the nonparametric Mann-Whitney U tests have been applied in the comparison between the results of the 38 adolescents because, since they are reduced samples based on sex, they could have hindered the verification of the associated distributions' normality. For their part, Student t-tests of paired samples have been used to contrast the valuation of each of the items by the 342 participants and the total results for each of the six blocks based on the four profiles of respondents, estimating the degrees of association between them using Pearson's correlation coefficients.

### 3. Analysis and interpretation of results

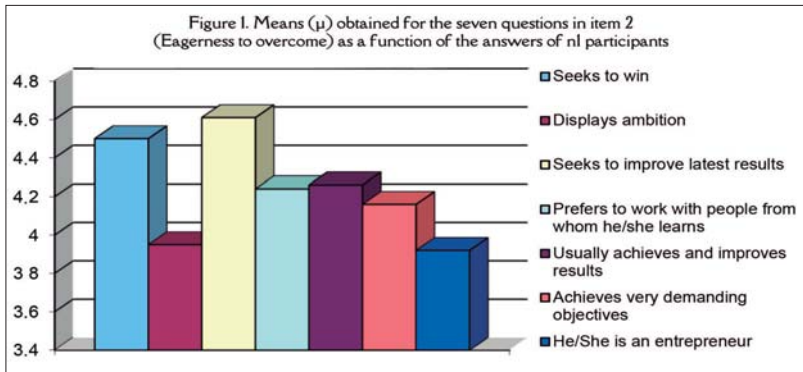
In general terms, the data obtained revealed that high intellectual ability adolescents enrolled in Compulsory Secondary Education have skills and aptitudes that point to the integrative competence of eagerness to achieve and, therefore, to an inherent employment value. The diversification of the competencies into six items and their corresponding evaluative statements also enabled these adolescents to describe their own profile: they define themselves as responsible and autonomous individuals, who are attracted by new challenges, who do their best in activities and are interested in completing the projects in which they are involved (even if this means overcoming obstacles) for those who prefer to collaborate with practical people. On the contrary, they are identified to a lesser extent with deadline compliance, entrepreneurship and ambition, practical and direct resolution of exercises, perseverance and innovation or originality. In the following paragraphs, the most relevant results derived from the completion of the questionnaires by the four participating groups are presented, taking as a comparative reference the group constituted by the subjects under study.

#### 3.1. Competencies with higher degree of identification according to the students with high intellectual abilities and their parents

The responses of  $n_1$  have shown that, of the six structural items, number 2) Eagerness to overcome, is the competence that most accurately classifies them, with the desire to improve their latest results as the precept that obtained the most significant evaluation of the total 42 for this participant profile ( $\mu=4.61$  with a 95% confidence interval, a statistical reference that is established as a constant for most cases). This inference towards surpassing the pre-established standards is also reflected in the remaining six responses of the block: as shown in Figure 1, their respective averages ( $\mu$ ) are around four points, with entrepreneurship displaying a lower correspondence index ( $\mu=3.92$ ). In addition, differences according to gender were observed in the sense that responses by female students display a greater interest in collaborating with people who can act as a source of learning. On the other hand, the self-perception of talented students manifested in this block does not coincide with that of their parents ( $n_2$ , 76 participants) who decrease the appreciative value given to the desire to overcome ( $p$ -value=0.032).

Meanwhile, practicality (item 3) is perceived favorably by talented students who place a high value on the possibility of working with people who actively participate in the implementation and completion of projects ( $\mu=4.58$ ). Within the results obtained in this block and as shown in Figure 2, the statement relating to the transformation of ideas into real facts or concrete actions is the one that has obtained the lowest correspondence value ( $\mu=3.87$ ), perceiving a statistical significance ( $p$ -value=0.100) in the face of the participants' recognition that they take advantage of the opportunities presented to them by acting on them. Again, this data is compared with that obtained in the parental questionnaire, since, before  $\mu=4.37$  of the former,  $\mu=3.88$  of the latter ( $p$ -value=0.002) is presented, highlighting the scarce appreciative coincidence. Another piece of statistical data that has been glimpsed in the case of this item and for this same group of participants is that, although its value is lower than the previous one ( $p$ -value=0.076), it is assumed that, on a daily basis, the aim is to increase one's own productivity.

Item 6) Demonstration of confidence stands as the third best valued by talented students. According to their answers, represented by bars grouped in Figure 3, this competence is evidenced through autonomy ( $\mu=4.55$ ) and the defense of personal opinion in an educated and safe way towards people with authority ( $\mu=4.47$ ); skills and aptitudes that, in general, contribute to the configuration of the profile of the entrepreneurial and successful worker.



On this occasion and contrary to the previous ones, the gender distinction between surveyed students does not reveal significant differences, and appraisal equity is observed. The same happens when the responses of  $n_2$  are contrasted, with only a significant statistical distance emerging ( $p$ -value=0.095) when analyzing the force factor

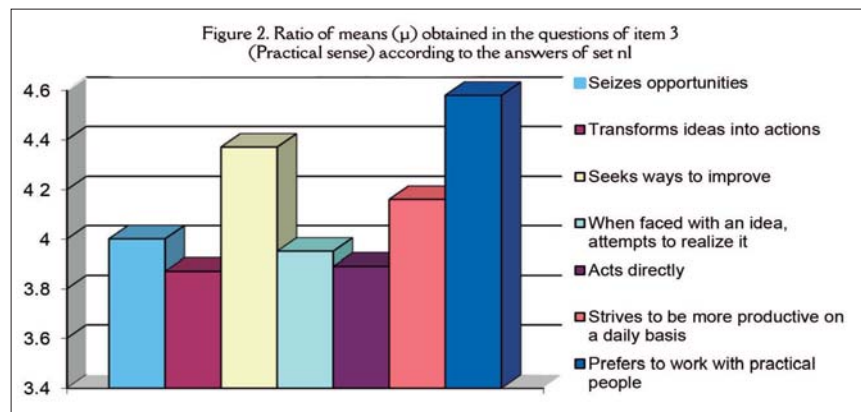
indicators for overcoming situations, resulting in  $\mu=4.13$  in the case of students and  $\mu=3.92$  in the case of their parents.

The representative means of the six items (understood as the highest ones attributed to one or several of the seven precepts that make up each block), defined by differences that are not very relevant to each other, maintain their correspondence with the value 4 in the three remaining cases (1) Achievement of objectives,  $\mu=4.42$ ; 4) Constancy,  $\mu=4.39$  and 5) Creativity and innovation,  $\mu=4.26$ ) revealing a high degree of affirmative perception, as can be distinguished in Figure 4. In this sense, students with high intellectual abilities recognize that they assume responsibilities without delegating to others and act to achieve the objectives regardless of the effort and the obstacles they have to overcome. These aptitudes are related to those that show their commitment to the tasks assigned and their consequent responsibility, and are also linked to the recognition that the challenges they face are attractive to them.

Opposite to the active and resolute identity that these affirmations reflect, the interpretation of the values obtained in these three blocks has also clarified data that point to a subject with high intellectual abilities that does not maintain a constant rhythm of work ( $\mu=3.82$ ) and with little interest in experimentation, while at the same time, is a denier of all routine ( $\mu=3.32$ ). Self-assessments that differ from those made by  $n_2$  ( $p$ -value=0.072), which shows a greater degree of agreement with the statements presented in the block. However, faced with the identified tendency to associate the highest values with the female student sector of the sample, creativity and innovation are presented under the item that has the greatest interest for the opposite sex, especially given the attractiveness of new challenges ( $\mu=4.42$ ,  $\bar{X}=4$  versus  $\mu=4.00$ ,  $\bar{X}=3$ ) and the use of original alternatives for established activities ( $\mu=3.83$ ,  $\bar{X}=4$  versus  $\mu=3.63$ ,  $\bar{X}=3$ ).

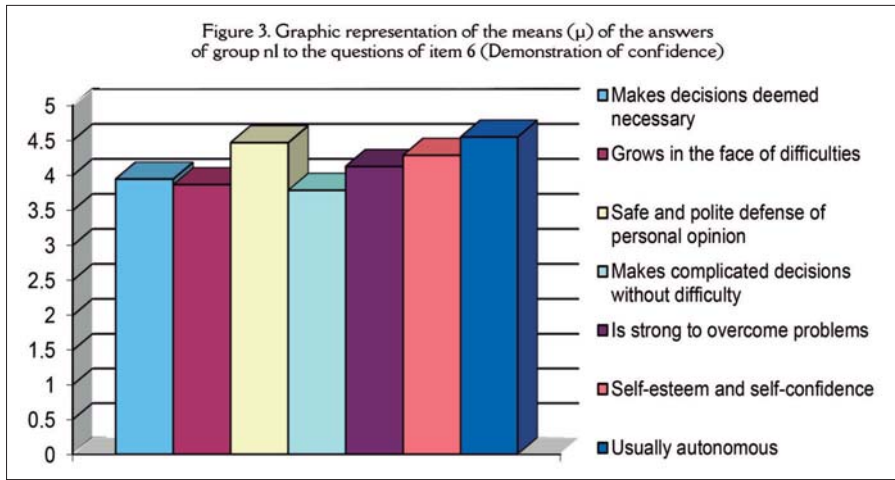
### 3.2. Competencies with a greater degree of identification according to teachers and non-talented students

With regard to  $n_3$  (114 respondents), it should be noted that the answers associated with items 3) Practical sense, 4)



Perseverance and 6) Demonstration of confidence, all corresponded to averages with values between 4 and 5 points (100 percentage value); this has been interpreted as a double confirmation: not only do students with high intellectual abilities display the competencies examined, but these are also identifiable by teachers. At the same time, these three blocks and their accompanying precepts define a future employee in whom the concepts and attributes relating to resolution, proactivity and confidence both in oneself and in one's actions coexist.

For its part,  $n_4$ , also comprised of the 114 classmates of talented students, is the one that shows the greatest value heterogeneity when comparing its results with those of the other three participating profiles. If the blocks 1)



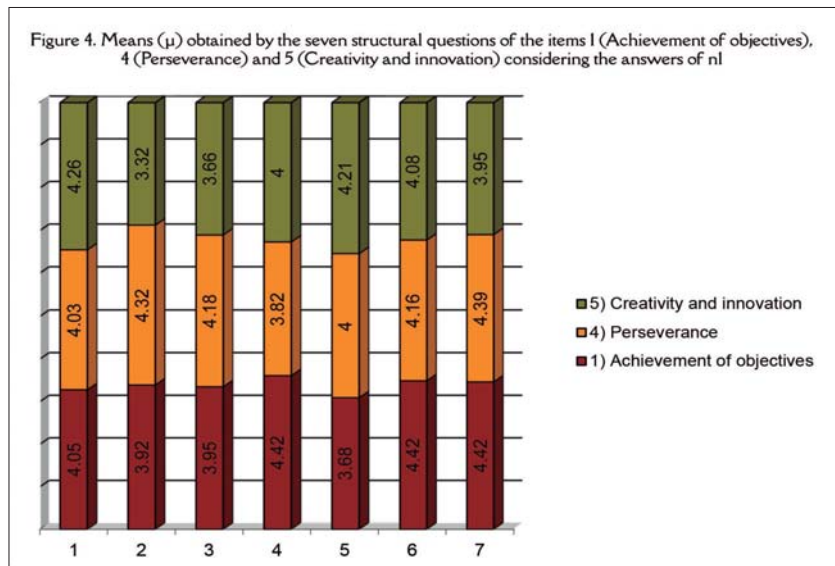
Achievement of objectives and 4) Perseverance, are similarly valued by the students object of study and the participants of the same age, the answers given to the statements of 2) Eagerness to overcome, pose a noticeable distance: opposite to  $n_1$ ,  $n_2$  and  $n_3$ , who have displayed a

greater degree of agreement with the evaluated phrases, the members of  $n_4$  have concentrated their answers in the intermediate values of the Likert scale (3=I agree and 4=I agree enough) reducing the level of coincidence. The same happens with competence 3) Practical sense, obtaining averages that oscillate between 3.63 and 3.93 points (representing 71.42% of the answers) with the exception of two that do so in the next higher spectrum (with values of 4.15 and 4.25 points and representing 28.57%).

This appreciative disjunction, established as a defining trait of regular students (those who do not display high intellectual abilities), was maintained for the most part in their evaluations, assigning lower values to most of the precepts and asserting, for example, that they do not consider their peers with high intellectual abilities to struggle to achieve their goals in such a resolute way (with a  $p$ -value=0.027 opposite  $\mu=4.42$  and  $\mu=4.12$ ), nor do they demonstrate an interest in success and improving their results, a desire to work with people from whom they can learn or an attraction to challenges ( $p$ -value= $<0.001$ ). These lower peer ratings reflect, given the instrument and its nature, the evaluative viewpoint of peers determining a series of numerical results that are relatively distant from the coincidences between parents and teachers.

### 3.3. Degrees of appreciative correlation of the competencies according to the participant groups

The value diversifications explained disappear when the unifying comparative criterion is applied; that is, when the results of all the questions posed for each of the six blocks are added together, maintaining the reference of a gradual scale based on the greater (value 35) or lesser (value 5) degree of agreement. As shown in Figure 5, the resulting  $\mu$  for each of the constituent sets of  $n$  (in which  $n_1$ =students with high intellectual abilities,  $n_2$ =parents,  $n_3$ =teachers and  $n_4$ =classmates) are located in a numerical spectrum ranging from 25.5 to 30.2, reducing the separations that are evidenced when analyzing each of the participant groups individually or comparatively



	<b>1) Achievement of objectives</b>	<b>4) Perseverance</b>	<b>5) Creativity and Innovation</b>
Question 1	Difficulties do not affect him/her	Adamant in the face of unforeseen events	Lure for new challenges
Question 2	Influences occurrences	Alternates when faced with difficulties	Routine scarcity
Question 3	Launches projects	Adamant when confronted with problems	Original alternatives
Question 4	Does not delegate	Constant pace of work	Changes to improve
Question 5	Applies deadlines	Self-esteem in the face of difficulties	Enjoyment of work well done
Question 6	Acts for achievement	Finishes projects	New ideas in the face of challenges
Question 7	Overcomes obstacles	Responsible and reliable	Positive impact in the context

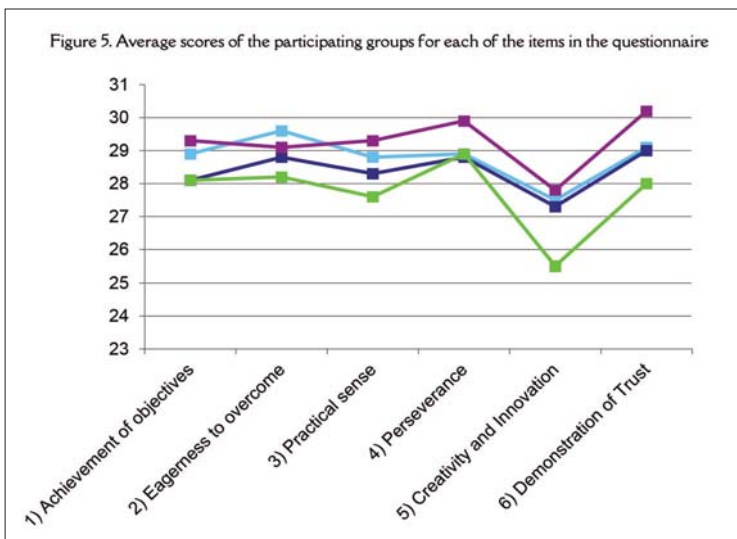
by means of pairs and denoting an internal consistency reflected by a variance of 0.926 points and a mode=5.

In turn, the figure reveals two assessment near-equities: the first, reflected by the line of set  $n_4$  members that imitates in lower values that of  $n_3$ , emphasizing what we propose (the marked distinction and valuation of the competencies examined and the latent eagerness to achieve in the students with high intellectual abilities on the part of their teachers and their opposite evaluation by peers). And the second, that parents and children coincide almost univocally in their answers to the different questions that constitute the instrument employed. Similarly, Figure 5 clarifies what was presented in preceding paragraphs regarding the subject of study: the talented student is considered an individual with an eagerness to overcome that, conversely and when facing established tasks and undertaking innovative ones, lacks creativity.

#### 4. Conclusions and discussion

Firstly, the study reveals the existence of a series of competencies that are understood as qualifiers of the student with high intellectual abilities, both by the members of this group, and by the people in their academic and personal environment. The fact that the questionnaire was based on six structured competence blocks, and seven questions, has made it possible to identify and delve into those skills and aptitudes that demonstrate the existence of the desire to achieve in talented students. The examined teenager acknowledges being responsible and autonomous, as well as practical in finalizing his/her projects and being drawn to new challenges. A series of qualities that define the productive profile required in the global work environment.

However, the life stage of set  $n_1$  in which the study took place and for which we propose its application, involves considering possible factors that may alter both the recognition and the consequent development and reinforcement of these competencies: according to the results, the assessments by adult participants have been almost coincident in all cases, with the responses from same-age respondents differing in their level of concordance. In this sense, the assessment of the people in their environment influences the individual more than his/her own; the subject's own consciousness of the positive or negative assessment by peers can affect him/her at an emotional level, giving rise



to certain actions and responses: the pursuit and maintenance of perfectionism and excellence (which can lead to depressive or suicidal tendencies) (Cross, Riedl, Mammadov, Ward, Speirs, & Andersen, 2018; Gaesser, 2018; Riedl & Cross, 2015; Christopher & Shewmaker, 2010) or the denial of differential capabilities and aptitudes as a search for standardized categorization. For this reason, the emotional factor should be included in future analytical schemes as it is considered to directly or causally affect several of the competencies presented (Ogurlu, Yalin, & Birben, 2018;

Turanzas, Cordon, Choca, & Mestre, 2018), the process of cognitive, professional and personal evolution designed for each of the cases (Ramos, Herrera, & Ramirez, 2010), and even work skills.

The mapping of skills based on this 180° questionnaire reinforces the need to adapt curricula for the educational and training processes of talented students: in spite of the intra- and extracurricular work that is being done to strengthen and consolidate these competencies, there are still no sufficiently stable analytical and methodological approaches that would allow us to address and work with the qualifying uniqueness of the skilled student. The contemporary educational context, an incentive for transversally trained adolescents, points to the need to respond to specific needs by delving deeper into those abilities and competencies that, adhered to and reinforced through the teaching-learning process, will enable them to enter the workplace and effectively perform the tasks assigned to them.

Therefore, having confirmed this appreciative possibility in the educational context of compulsory schooling, although on a regional scale, it is helpful to know that it is not only possible to enhance and reinforce the skills and abilities examined in highly capable students (Sastre-Riba, 2014), but also, that this results in premature training of the successful worker. At the same time, this association between the teaching-learning environment and the professional, is detached from the self-assessments made by each of the participant sets with regard to the proposed competencies: the result is a student profile with high intellectual abilities that has a high desire to achieve and overcome, based on confidence levels both towards his/her own person and his/her activity. The interest in practicality, perseverance and challenges, among others, support them as individuals destined to face new situations applying knowledge and skills previously acquired. For this reason, the possibility of glimpsing these characteristics prematurely is understood as a collateral effect of the productivity that these students could manifest during their professional lives, as argued before, leaving the student exposed to a set of factors and influences that can alter their stated degree.

Related to this, the inclusion of the professional scenario as an analytical variable in future studies is considered appropriate because it allows the verification of the implementation of previously developed competencies and to discern their development and consequent evolution in the new context. This difference invites the design and subsequent application of a cross-sectional review based on an extended chronology (serving as an example the one carried out by Freeman, 2015) which, complementary to the one proposed, could revalidate the assertion that the eagerness to achieve is inherent in adolescents with high intellectual abilities acting as a motivating factor both, in the accomplishment of their academic activities, and in the completion of their professional projects. In this way, and by combining two analytical proposals, it would be ascertained whether their professional work is manifested through those items with which they have identified themselves to a greater degree (autonomy, trust, achievement of objectives, practicality, or overcoming, among others), while at the same time reviewing the influence that the factors commented on previously (such as execution time or competitiveness among workers) can exert on them, as they are specific to that other environment.

To conclude, the education of talented students towards notoriety in the workplace is presented as feasible, as well as conditioned by the identification and consequent deepening of the eagerness to achieve competence that underlies their capable identity. This student profile possesses a series of knowledge, abilities and attitudes that, generically, reinforce his/her condition as a labor asset possessing a multilevel competence and oriented to the attainment of objectives and achievements, as well as leadership. Therefore, and taking into account its inherence, the compulsory educational context proves to be suitable for the development of the process described, with teachers as the source of its implementation, due to their greater degree of objectivity when compared to parents, who, likewise, can promote this process in the family environment, favoring a teaching-learning process that is cross-sectional and not limited to the purely academic context.

However, it should also be borne in mind that each student with high intellectual abilities has an identifying autonomy and displays a series of acquisitive, cognitive and emotional features that require the individualization of their training, so that education of the proposed competencies, and more specifically the eagerness to achieve, corresponds with their own values and abilities, designing a progressive scheme of reinforcement and disposition for their establishment in the subsequent work scenario.

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## References

- Artola, T., Barraca, J., & Mosteiro, P. (2005). *Niños con altas capacidades. Quiénes son y cómo tratarlos*. Madrid: Entha.
- Bisquerra, R., Martínez, F., Obiols, M., & Pérez, N. (2006). Evaluación de 360º: una aplicación a la educación emocional. *Revista de Investigación Educativa*, 24(1), 187-203. <https://doi.org/10.6018/rie>
- Cáceres, P.A., & Conejeros, M.L. (2011). Efecto de un modelo de metodología centrada en el aprendizaje sobre el pensamiento crítico, el pensamiento creativo y la capacidad de resolución de problemas en estudiantes con talento académico. *Revista Española de Pedagogía*, LXIX(248), 39-56. <https://doi.org/10.22550/rep>
- Castelló, A. (2014). Organización del conocimiento y pensamiento creativo. *Educatio Siglo XXI*, 32(2), 19-40. <https://doi.org/10.6018/i/202141>
- Chart, H., Grigorenko, E.L., & Sternberg, R.J. (2008). Identification: The Aurora Battery. In J.A. Plucker & C.M. Callahan (Eds.), *Critical issues and practices in gifted education: What the research says* (pp. 281-301). Waco, Texas: Prufrock Press. <https://doi.org/10.1037/t56441-000>
- Christopher, M.M., & Shewmaker, J. (2010). The relationship of perfectionism to affective variables in gifted and highly able children. *Gifted child today*, 33(3), 20-30. <https://doi.org/10.1177/1076217511003300307>
- Cross, T.L., Riedl, J., Mammadov, S., Ward, T.J., Speirs, K., & Andersen, L. (2018). Psychological heterogeneity among honors college students. *Journal for the Education of the Gifted*, 41(3), 242-272. <https://doi.org/10.1177/0162353218781754>
- Feldman, D.H. (2015). Por qué son importantes los niños prodigio. *Revista de Educación*, 368, 158-173. <https://bit.ly/2Ta1092>
- Freeman, J. (2015). Por qué algunos niños con altas capacidades son notablemente más exitosos en la vida que otros con iguales oportunidades y habilidad. *Revista de Educación*, 368, 255-278. <https://bit.ly/2HkL3Vt>
- Gaesser, A. (2018). Befriending anxiety to reach potential: Strategies to empower our gifted youth. *Gifted child today*, 41(4), 186-195. <https://doi.org/10.1177/1076217518786983>
- Hernández, D., & Gutiérrez, M. (2014). El estudio de la alta capacidad intelectual en España: Análisis de la situación actual. *Revista de Educación*, 364, 251-272. <https://bit.ly/2H6oxS6>
- Jiménez, C. (2000). Evaluación de programas para alumnos superdotados. *Revista de investigación educativa*, 18(2), 553-563. <https://doi.org/10.6018/rie>
- Ley Orgánica 8/2013 (2013). *Ley Orgánica 8/2013 del 9 de diciembre, para la mejora de la calidad educativa*. Boletín Oficial del Estado, número 295, de 10 de diciembre de 2013, 97858-97921. <https://bit.ly/18yHrs1>
- Lokajickova, M., Zelenda S., & Zelendova S. (2008). Multinational activity on the top of opportunities for gifted. The case of the project Talnet International. *Faisca*, 13(15), 93-106. <https://bit.ly/2Nwha6M>
- Matthews, M.S. (2004). Leadership education for gifted and talented youth: a review of the literature. *Journal for the Education of the Gifted*, 28(1), 77-113. <https://doi.org/10.1177/016235320402800105>
- Ogurlu, U., Yalin, H.S., & Birben, F.Y. (2018). The relationship between psychological symptoms, creativity, and loneliness in gifted children. *Journal for the Education of the Gifted*, 41(2), 193-210. <https://doi.org/10.1177/0162353218763968>
- Orden 70/2005 (2005). *Orden 70/2005 de 11 de enero, de flexibilización de la duración de las diferentes enseñanzas escolares para los alumnos con necesidades educativas específicas por superdotación intelectual*. Boletín Oficial de la Comunidad de Madrid, 17 (2005-01-21), 12-25. <https://bit.ly/2IHaxGe>
- Pérez, D., González, D., & Díaz, Y. (2005). El talento: antecedentes, modelos, indicadores, condicionamientos, estrategias y proceso de identificación. Una propuesta desde la universidad cubana y el enfoque histórico-cultural. *Revista Iberoamericana de educación*, 36(4), 1-25. <https://bit.ly/2EriFPq>
- Ramos, A.I., Herrera, J.A., & Ramírez, M.S. (2010). Desarrollo de habilidades cognitivas con aprendizaje móvil: un estudio de casos. [Developing cognitive skills with mobile learning: a case study]. *Comunicar*, 34, 201-209. <https://doi.org/10.3916/C34-2010-03-20>
- Real Decreto 943/2003 (2003). *Real Decreto 943/2003 de 18 de julio, de flexibilización de la duración de los diversos niveles y etapas del sistema educativo para los alumnos superdotados intelectualmente*. Boletín Oficial del Estado, 182 (31-07-2003), 29781-29783. <https://bit.ly/2SBi2rH>
- Real Decreto 696/1995 (1995). *Real Decreto 696/1995 de 28 de abril, de ordenación de la educación de los alumnos con necesidades educativas especiales*. Boletín Oficial del Estado, 131 (02-06-1995), 16179-16185. <https://bit.ly/2XzaF80>
- Riedl, J., & Cross, T.L. (2015). Clinical and mental health issues in counseling the gifted individual. *Journal of counseling & development*, 93(2), 163-172. <https://doi.org/10.1002/j.1556-6676.2015.00192.x>
- Sastre-Riba, S. (2014). Intervención psicoeducativa en la alta capacidad: funcionamiento intelectual y enriquecimiento extracurricular. *Revista de Neurología*, 58(Supl 1), S89-S98. <https://doi.org/10.33588/rn.58s01.2014030>
- Sastre-Riba, S. (2012). Alta capacidad intelectual: Perfeccionamiento y regulación metacognitiva. *Revista de Neurología*, 54(Supl 1), S21-S29. <https://doi.org/10.33588/rn.54s01.2012011>
- Sastre-Riba, S., Castelló-Tarrida, A., & Fonseca-Predero, E. (2018). Stability of measure in high intellectual ability: preliminary results. *Anales de Psicología*, 34(3), 510-518. <https://doi.org/10.6018/analesps.34.3.315181>
- Sastre-Riba, S., & Pascual-Sufrate, M.T. (2013). Alta capacidad intelectual, resolución de problemas y creatividad. *Revista de Neurología*, 56(Supl 1), S1-S10. <https://doi.org/10.33588/rn.56s01.2013025>
- Sastre-Riba, S., Pérez-Sánchez, L.F., & Bueno, A. (2018). Programs and practices for identifying and nurturing high intellectual abilities in Spain. *Gifted Child Today*, 41(2), 63-74. <https://doi.org/10.1177/1076217517750703>

- Schiltz, J., & Schiltz, L. (2007). De l'adéquation d'un test informatisé en mathématiques pour élèves à haut potentiel présentant un fléchissement scolaire à l'âge de la puberté. *Faísca. Revista de altas capacidades*, 12(14), 84-105. <https://bit.ly/2SCt9Ay>
- Steinbeck, R. (2011). El 'design thinking' como estrategia de creatividad en la distancia. [Building creative competence in globally distributed courses through design thinking]. *Comunicar*, 37, 27-35. <https://doi.org/10.3916/C37-2011-02-02>
- Sternberg, R.J., Grigorenko, E., Ferrando, M., Hernández, D., Ferrándiz, C., & Bermejo, M.R. (2010). Enseñanza de la inteligencia exitosa para alumnos de altas habilidades. *Revista Interuniversitaria de Formación del Profesorado*, 13(1), 111-118. <https://bit.ly/2INzhX0>
- Turanzas, J.A., Cordon, J.R., Choca, J.P., & Mestre, J.M. (2018). *Evaluating the APAC (Mindfulness for giftedness) Program in a Spanish sample of gifted children: A pilot study*. *Mindfulness*, June (First online). <https://doi.org/10.1007/s12671-018-0985-1>

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