

# Interaction of Potential and Effective Entrepreneurial Capabilities in Adolescents: Modeling Youth Entrepreneurship Structure Using Structural Equation Modeling

Lilia Angélica Campo (✉ [licampo@unisimonbolivar.edu.co](mailto:licampo@unisimonbolivar.edu.co))

Universidad Simón Bolívar: Universidad Simon Bolivar <https://orcid.org/0000-0002-1472-0362>

Paola Amar

Universidad Simón Bolívar: Universidad Simon Bolivar

Enohemit Olivero

Universidad Simón Bolívar: Universidad Simon Bolivar

---

## Research

**Keywords:** Entrepreneurship, Entrepreneurial Skills, Personal Attributes, Social Skills, Entrepreneurship Training.

**Posted Date:** May 20th, 2021

**DOI:** <https://doi.org/10.21203/rs.3.rs-537148/v1>

**License:** © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

---

## Abstract

This article emphasizes entrepreneurial skills in adolescents, in order to determine the relationship between entrepreneurial skills (dependent variable) and the key factors for their development: personal, social, and educational (independent variables). It has an empirical–analytical design which is explanatory in nature. After the design, validation, and application of the evaluation instrument, the estimation was carried out using Structural Equation Modeling (SEM). The results show great impact of potential entrepreneurial capacity on effective entrepreneurial capacity, determined by the direct effect of personal traits and life skills, the family as a moderating element, as well as the mediating role of entrepreneurship training processes. The complex nature of entrepreneurship is highlighted, which is influenced by multiple factors as possible boosters for the success of entrepreneurial initiatives.

## Introduction

Entrepreneurship is understood as the set of characteristics and traits of an individual that, when interacting with each other, generate a unique behavior, driving them to creative ideas and changes, assuming risks and allowing them to achieve a differentiating or successful performance. Clarysse, Tartari, and Salter (2011) define entrepreneurial capacity as the ability to perceive, assimilate, and take advantage of opportunities that, when integrated, favor transformation and innovation actions that are differentiating and unique.

In this context, the main essence of these potential entrepreneurial capabilities allows an individual to detect, recognize, and absorb opportunities to be able to generate behavior oriented to the materialization of ideas in a real environment of economic development (Tarrats-Pons, Mussons Torras, and Ferràs Hernández, 2015; Díaz–Casero, Hernández–Mogollón and Roldan, 2012, Shane and Venkataraman, 2000, Clarysse, Tartari, and Salter, 2011); boosting their ability to perceive and analyze such initiatives for the exploitation of new ventures, with deep commitment that leads them to use all their resources to respond in a timely manner to the idea discovered and thus makes the entrepreneurial activity a reality, as pointed out by Cabana-Villca, Cortes-Castillo, Plaza-Pasten, Castillo-Vergara, Álvarez-Marín (2013). The aforementioned argument imports elements that are key to strengthening entrepreneurial potential, such as personal traits, social skills, and attitudes toward risk (Alvarez and Busenitz, 2001), which in turn strengthen the identification process to face opportunities within an environment by assessing risks and situations of uncertainty (Koellinger et al. 2007). This construct has been raised as a trend that articulates with authors and researchers such as Timmons (1994), Busenitz, and Barney (1997), Palich and Bagby (1995), Lezana and Tonelli (1998), Shane and Venkataraman (2000), Volery and Mazzarol, (2015), Thrane, Blenker, Korsgaard, and Neergaard, 2016), Eckhardt and Shane, (2003), Fillion and Gilles (1996), Loli et.al. (2010), Leite (2000), Zahra and Garvis (2000), Barba-Sánchez & Atienza-Sahuquillo (2011) and Varela and Bedoya (2006), which is related to the ability to transform and break with routine that has been described by authors such as Varela and Bedoya (2006), Zahra and Garvis (2000), Barba-Sánchez & Atienza-Sahuquillo, (2011), Lezana and Tonelli (1998), Fernández-Mesa, A, Alegre-Vidal, J, & Chiva-Gómez, R, (2012).

### *Entrepreneurial Skills and Factors Associated with their Development*

The concept of potential and effective entrepreneurial skills has been based on the interaction of internal and external elements that play in the entrepreneur's actions. In this regard, Shapero and Sokol (1982) establish as determinants of entrepreneurial intention the perceived desirability, perceived feasibility, and behavior in risk situations; addressing the relationship of situational and sociocultural conditions that make an entrepreneurial event occur as a result of situational impulse on the person whose perceptions and values are in turn determined by their experiences and sociocultural representations, which is also supported by Soria-Barreto, Zuniga-ara and Ruiz-Campo, (2016); Tarrats-Pons, Mussons Torras, and Ferràs Hernández, (2015), and by Elfving, Brännback, and Carsrud, (2009).

After Shapero's theory, a new approach arises by Ajzen (1991), who proposes the Theory of Planned Behavior, in which the attitude toward oneself, a certain degree of social influence, and the degree of self-control over the results obtained are established as determinants of entrepreneurship. This is taken up by Soria-Barreto, Zuniga-Jara, and Ruiz-Campo, (2016); Tarrats–Pons, Mussons Torras, and Ferràs Hernández, (2015) and by Elfving, Brännback, and Carsrud, (2009).

Along the same lines, Krueger and Brazeal (1994) proposed an entrepreneurial potential model (EPM) where credibility plus entrepreneurial intention determines the potential capacity, which is converted into action by the occurrence of a triggering event, which can be both positive and negative. The ideas of Shapero (1982) and Azjen (1991) were considered to generate this model, and elements from both authors were integrated such as perceived viability and desirability; incorporating the notion of credibility, necessity, and viability of behavior, in this case, entrepreneurial behavior. Similarly, the concept of self-efficacy developed by Bandura (1986) and to which Davidson (1995) included skills, need, opportunity, values, and attitudes related to the entrepreneurial concept as such was also incorporated (Soria-Barreto, Zuniga-Jara and Ruiz-Campo, 2016).

Thus, potential and effective entrepreneurial capabilities will depend on personal subjective and/or social factors resulting from the interaction of cultural, familial, work related, and economic elements, which positively or negatively affect the way in which the person faces the possibility of entrepreneurship. Also, credibility plus entrepreneurial intention will determine the entrepreneurial potential that directly impacts entrepreneurial intention and also develops the ability to recognize a new opportunity (Durán-Aponte and Arias-Gómez (2016); Krueger and Brazeal (1994); Clarysse, Tartari, and Salter (2011)).

In general terms, while one strand of researchers tends to emphasize individual traits such as experience and opportunity recognition skills as critical explanations of entrepreneurial activity, other studies have predominantly focused on social environmental factors to explain entrepreneurial behavior. As Clarysse, Tartari, and Salter, (2011) argue that while the mainstream entrepreneurship literature attributes a central role to individual differences followed by social context in explaining the trend to become an entrepreneur, the ability to recognize opportunities is the determining variable in the concept of entrepreneurship, unlike Shane and Venkataraman, (2000) who consider individual differences to be the most important element in becoming an entrepreneur.

Moreover, the systemic entrepreneurship theory proposed by Tarrats-Pons, Mussons Torras, and Ferràs Hernández (2015) integrates constructs related to training; personal variables; competencies and skills that are related to the knowledge acquired and the competencies developed, as opposed to the recognition of opportunities in their context and which can be positively or negatively influenced on entrepreneurial intention and are added to variables such as age, gender, family references, and socioeconomic profile.

The theoretical contributions described above show that although previous models developed on the subject of entrepreneurial skills have focused mainly on the adult population, we cannot ignore the fact that the creation of entrepreneurial subjects begins with the identification of those potentialities that are waiting to be developed from an early age, in order to generate a change in the medium- and long-term. Therefore, this research makes a theoretical contribution by trying to correct an existing gap, generated by prioritizing the study of entrepreneurial skills in the adult population or in university training processes, seeking with this study to answer the research question: How do potential and effective entrepreneurial skills interact in the adolescent population?

Thus, the aim of this article is to interpret how potential and effective entrepreneurial capabilities in adolescents are related to the key factors for their development: personal, social, and educational; and thus contribute to the literature by analyzing how personal traits are connected and complemented by social skills to form the basis of potential entrepreneurial capabilities, while at the same time delving into the degree of influence that sociocultural and educational factors have as mediating elements on the process of transforming entrepreneurial capabilities from potential into effective.

## Methods

### Design

An empirical-analytical, explanatory, non-experimental, transactional study based on correlational/causal designs, from the temporal perspective was prepared where the design is contemporary and bivariate; with respect to the amplitude and organization of the data. This research work sought to correlate entrepreneurial capacity (dependent variable) with the key factors for the development of entrepreneurial capabilities (independent variables).

### Participants.

The population and sample consisted of 1,579 adolescents with an average age of 16 years, selected through a stratified random sampling method; 685 were female and 894 were male, with an age range between 13 and 19 years.

The following aspects were taken into account as inclusion criteria: being 13 years old at the time of instrument application and, in case of being of legal age, still studying in basic secondary education; being enrolled in an educational institution; currently studying in secondary education, with no differential approach or positive or negative discrimination related to physical features, age, sex, and sexual, ethnic, or religious preferences.

### Instruments of Measurement

To study entrepreneurial capabilities, an instrument was designed to assess personal and academic information, academic training, occupation of the family group, previous participation in entrepreneurship, or previous conceptions and entrepreneurship training. The instrument has a Likert scale to evaluate personal factors and is made up of 39 items grouped into 5 personal factors, with six anchor adjectives, ranging from never to always. The rating of the items ranges from 1 to 6, where 1 is the lowest score and 6 is the highest; with the possibility of a total attitude score of 234 points (See Table 1).

The Likert scale designed to evaluate the categories organized for the entrepreneurial capabilities was given to six expert peers for validation and then applied to a pilot group. Subsequently, 257 adolescents, i.e., 16.27% of the sample, participated in the pilot validation.

The six anchor adjectives were designed in even numbers in order to avoid the fact that the evaluated person is oriented to an intermediate value, thus reducing objectivity and precision in the evaluation process. Values 1, 2, and 3 show unfavorability toward the profile in question, while ratings 4, 5 and 6 show favorability.

### Procedure and Data Processing.

After the collection and validation of information carried out in educational institutions, the methodology was identified for (I) variable operationalization to be used in the model to be proposed, based on the items or responses of the respondents, with the construction of composite indicators; and (II) modeling the structure of youth entrepreneurship, through a Structural Equation Model.

After completing the steps of developing a conceptual framework and selecting the indicators-items, Cronbach's Alpha was used to identify the suitability of items for grouping in a composite indicator to then perform a process of weighting the information and a principal components analysis (PCA) based on polychoric correlations, considering that the PCA expresses as a natural method of aggregating the sum of rankings, without presenting any obstacle in this research. As all items were in the same scale (Likert) and dimensionality was maintained, normalization was not necessary in order to use conventional PCA based on Pearson correlation coefficient.

Subsequently, in order to measure the effect and relevance of the elements associated with the characteristics of the family environment and potential entrepreneurial capacity on effective entrepreneurial capacity, as well as the mediating effect of sociocultural factors and entrepreneurship training, an econometric approach known as the Structural Equation Model (SEM) was used.

To develop the SEM, the validity and reliability of the measurement model was analyzed. Firstly, it was confirmed that the measurement indicators were correctly measured and secondly, the interactions between different constructs of the theoretical model were analyzed.

In this study, manifest variables will be understood as the following: locus of control, coping skills, attitude toward opportunities, cognitive skills, social skills, the questions asked to the respondents about their family environment, sociocultural factors, and participation in training sessions for entrepreneurs. On the other hand, the latent variables (constructs) will be as follows: Personal Traits, Life Skills, Sociocultural Factors, Entrepreneurship Training, Effective Entrepreneurship, and the second-order construct potential entrepreneurship.

## Results And Discussion

The results of the measurement model show that the constructs used have a high degree of reliability and corroborate the validity of the instrument designed.

Table 2 shows the descriptive statistics of the variables included in the modeling process and the conclusions of the factor analysis of the loadings of measurement variables for the first-order constructs. In this regard, the findings show that the indicators used for the creation of the variables used in the structural model are considered reliable, after the elimination of indicators that did not meet the evaluation criteria. Therefore, Table 3 shows the total scope of the questions asked for each of the constructs.

Based on the structural analysis of the interaction model of potential and effective entrepreneurial capabilities in adolescents, a positive direct effect of life skills of 0.305 and of personal traits of 0.716 on potential entrepreneurial capabilities was observed, with a 99% significance (See Table 4).

The potential entrepreneurial capacity directly affects effective entrepreneurial capacity, positively and with a 95% significance, showing a direct effect with a coefficient equivalent to 0.321. In turn, potential entrepreneurship has a positive direct effect of 99% significance on entrepreneurship training equivalent to 0.180 and on sociocultural perception of 0.321. On the other hand, family factors show a direct effect of 0.107 on effective entrepreneurship with a 99% positive significance. Similarly, entrepreneurship training positively influences effective entrepreneurship, showing a direct effect of 0.128 on effective entrepreneurship, with a 99% significance. Thus, the analysis of potential entrepreneurial capacity showed an indirect effect equivalent to 0.023, of a positive nature, and 99% significance on entrepreneurship training and thus, on the effective entrepreneurial capacity (See Table 4).

In the case of the relationship between effective entrepreneurship, entrepreneurship training, and potential entrepreneurship, there is a mediation effect equivalent to 0.23, which is a partial measurement, i.e., it is not the only thing that affects the relationship between potential and effective entrepreneurship, since there is a direct effect between them equivalent to 0.054. This mediating effect shows that the direct effect of potential entrepreneurship on effective entrepreneurship is also positively affected by entrepreneurship training, significantly increasing the total effect between both constructs.

Conversely, there is no mediation by sociocultural perception on the relationship between potential and effective entrepreneurship, since sociocultural perception does not show a significant direct effect of sociocultural perception on effective entrepreneurship. However, there is a negative indirect effect of -0.006 of the way in which sociocultural conditions are perceived on the effect of potential entrepreneurship on effective entrepreneurship, showing that the way in which sociocultural factors are perceived decreases effective entrepreneurship in a non-significant way.

Moreover, the positive direct effect of family factors on effective entrepreneurship is also evident, equivalent to 0.107, with a 99% significance. At the same time, a moderating role of family factors on the interaction between potential and effective entrepreneurship is observed. This can be interpreted in terms of the fact that the more optimal the family conditions are, the stronger the positive difference on effective entrepreneurship will be.

As a model conclusion in terms of the main variables, the direct effect of the potential entrepreneurial capacity on the effective entrepreneurial capacity is 0.054, while the indirect effect of the former on the latter is 0.023, because both effects are positive in nature. The sum of these two direct and indirect effects is equivalent to 0.077, to which the indirect effect of the sociocultural perception on the effective entrepreneurial capacity equivalent to -0.006, as it is negative, must be subtracted.

Finally, there was a total effect equivalent to 0.071 of potential entrepreneurship on effective entrepreneurship, which is positive with a 99% significance (See Table 4).

Based on the structural analysis of the interaction model of potential and effective entrepreneurial capabilities in adolescents (Figure 1), a direct and positive effect of personal factors composed of traits and life skills on potential entrepreneurial capabilities was observed, thus motivating them to take risks and recognize opportunities, to believe in themselves, and in the possibility of creating and transforming their ideas into successful projects. Therefore, the positive evaluation of capabilities is an important element in previous models of entrepreneurial capabilities, such as the contributions of Ajzen (1991); the EPM of Krueger and Brazeal (1994), and the systemic entrepreneurship theory raised by Tarrats-Pons, Mussons Torras, and Ferràs Hernández (2015).

Similarly, potential entrepreneurship positively affects the sociocultural perception and entrepreneurship training; in such a way that a high potential entrepreneurship capacity makes a more positive perception of the sociocultural factors and entrepreneurship training received in the educational institutions. In turn, entrepreneurship training showed a positive and direct effect on the effective entrepreneurial capacity, which is consistent with what has been proposed by several authors such as Bosma, Jones, Autio, and Levie, (2008); Naude, Gries, Wood, and Meintjies, (2008), and Blanchflower, (2004). According to them, entrepreneurship training processes give rise to greater possibilities of generating entrepreneurial initiatives by increasing the willingness to discover opportunities and the potential for innovation.

A partial mediation effect is also observed between potential entrepreneurial capacity, entrepreneurship training, and entrepreneurial capacity. This mediating effect shows that entrepreneurship training processes favor the promotion of skills and capabilities, thus stimulating innovation potential and increasing the possibility of perceiving and evaluating their own potential capabilities and subsequently turn them into entrepreneurial intentions, which is consistent with the theoretical approaches on the importance of socialization spaces and teaching-learning processes associated with entrepreneurship training.

Moreover, family factors showed a direct effect on effective entrepreneurial capacity, also observing a role of family conditions that can generate a positive difference on effective entrepreneurial capacity. Since personal traits and life skills are complex characteristics developed gradually, and affecting the potential capacity for entrepreneurship, which in turn is enhanced by the training processes to determine how far the adolescent can go, entrepreneurship training ends up being a key element to achieve the implementation of entrepreneurial ideas, desires, or initiatives.

On the other hand, there is no mediation by sociocultural perception on the relationship between potential and effective entrepreneurship. However, the existence of a negative indirect effect shows that the way they perceive their sociocultural reality does not significantly reduce effective entrepreneurship.

Finally, we showed the direct and positive interaction between potential and effective entrepreneurial capacity. The latter is determined both by the basic personal capacity and by theoretical knowledge, but also by procedural and strategic knowledge acquired through training spaces.

## Conclusions

In response to the question posed at the start of this work, we found that potential entrepreneurship has a direct and positive effect on effective entrepreneurship, an interaction which is mediated by the educational processes in which adolescents are immersed, and although there is no mediation by sociocultural perception, they are also determined by the surrounding family conditions.

Thus, the way in which adolescents perceive the entrepreneurship training received has a significant influence on effective entrepreneurship, while their perception of culture as a facilitator of the successful development of entrepreneurial initiatives does not significantly affect effective entrepreneurship.

Thus, the modeling of the youth entrepreneurship structure, by means of SEM highlights the complex nature of the interaction of potential and effective entrepreneurial capabilities in adolescents, showing the effect of multiple personal, cognitive, family, educational, and cultural factors.

Since the transition from a potential entrepreneurial capacity to an effective one is considered a long term process, the early development of an entrepreneurial culture that allows the development of potentialities and reduces the fear of failure, while constructively addressing the training processes, the sociocultural factors of the family system, and improving the adolescent's perception of his or her culture as favoring successful entrepreneurship, is key.

Based on the foregoing, the development of entrepreneurship skills in adolescents requires the generation of articulation processes between different actors: family members, educational institutions, the community in general, government entities, and the productive sector. In this regard, the entrepreneurship training processes go beyond the goal of stimulating the generation of business ideas, and should be oriented toward the development of skills for proposal generation and recognition of new opportunities, in order to define the relevant scenarios to develop projects, lead, and adapt work teams, through know-how spaces that stimulate their full potential.

It is precisely because of the complexity of this study subject matter that the research approach does not conclude at this point of analysis, giving rise to a new line of work. In this regard, the pending tasks are to expand the study to other regions of the country in order to study the influence of cultural differences and public policies on the development of entrepreneurial skills in adolescence. Similarly, it is of interest to complement this first approach with technological tools that facilitate an approach to the adolescent population with a view to developing their potential, which in turn will become sources for future research. The results should also be submitted to the competent authorities in order to establish alliances with the entities responsible for the creation of public policy.

## Abbreviations

SEM: Structural Equation Modeling. PCA: Principal Component Analysis.

## Declarations

**Availability of materials y data:** The data used in the framework of this research, which were analyzed, are available upon reasonable request.

**Conflict of interests:** The authors have no conflicts of interest.

**Funding:** This research did not receive external funding. **Author contributions:** LC has developed the model and wrote the original draft. While PA supported the construction of the original draft and EO helped during technical problems with the manuscript. All authors approved the final paper.

**Acknowledgments and credits:** We are very grateful to the Universidad Simón Bolívar for providing excellent conditions for the development of this study. This article is a product of the doctoral research model for the development of entrepreneurial skills in adolescents from 13 to 19 years old. Case of the Department of Atlántico.

### Information About the Authors:

CAMPO- Ternera, Lilia: Psychologist, PhD in Administration. Master in Psychology. Specialist in Clinical Psychology. Educational, and Social Synapse Research Group. Research and Social Innovation Center, Simón Bolívar University, School of Law and Social Sciences, Barranquilla, Colombia. Orcid [0000-0002-1472-0362](https://orcid.org/0000-0002-1472-0362) Email: [licampo@unisimonbolivar.edu.co](mailto:licampo@unisimonbolivar.edu.co)

AMAR- Sepúlveda, Paola: PhD in Industrial Engineering with emphasis on innovation and knowledge management, Vice-Director of Research and Innovation, Research Group Innovation and Entrepreneurship Management. Vice-Director of Research, Extension, and Innovation, Universidad Simón Bolívar, Barranquilla, Colombia. Orcid: [0000-0001-7346-2589](https://orcid.org/0000-0001-7346-2589) Colombia. Email: [pamar@unisimonbolivar.edu.co](mailto:pamar@unisimonbolivar.edu.co)

## References

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. Recuperado el 8 de mayo de 2017 de: [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
2. Álvarez, S. y Busenitz, L. (2001). The entrepreneurship of resource-based theory. *Journal of management*, 27, 755–775. Recuperado el 7 de mayo de 2018 de: <http://journals.sagepub.com/doi/pdf/10.1177/014920630102700609> <https://doi.org/10.1177/014920630102700609>
3. Bandura, A. (1986). *The social foundations of thought and action*. Englewood Cliffs: Prentice Hall.
4. Barba-Sánchez, V; Atienza-Sahuquillo, C. (2011). Reasons to create a new venture: A determinant of entrepreneurial profiles. *African Journal of Business Management*, 5(28), 11497-11504. Recuperado el 22 de octubre de 2015, de: [http://www.academicjournals.org/app/webroot/article/article1380620515\\_Barba-Sanchez%20and%20Atienza-Sahuquillo.pdf](http://www.academicjournals.org/app/webroot/article/article1380620515_Barba-Sanchez%20and%20Atienza-Sahuquillo.pdf) DOI: 10.5897/AJBM11.1131
5. Blanchflower, D. (2004). Self-employment: More may not be better (NBER Working Paper No.10286, February). Cambridge: National Bureau of Economic Research. Recuperado el 7 de mayo de 2018 de: <http://www.nber.org/papers/w10286.pdf>. DOI 10.3386/w10286
6. Bosma, N; Jones, K; Autio, E; Levie, J. (2008). Global Entrepreneurship Monitor: 2007. Executive Report. Londres: London Business School. Recuperado el 7 de mayo de 2018 de: <https://www.babson.edu/Academics/centers/blank-center/global-research/gem/Documents/gem-2007-executive-report.pdf>.
7. Busenitz, L; Barney, J. (1997). Differences between entrepreneur and manager in large organization: biases and heuristic in strategic decision-making. *Journal Business Venturing*, 12, 9-30. Recuperado el 19 de marzo de 2017 de: <https://www.sciencedirect.com/science/article/abs/pii/S0883902696000031> [https://doi.org/10.1016/S0883-9026\(96\)00003-1](https://doi.org/10.1016/S0883-9026(96)00003-1)
8. Clarysse, B; Tartari, V; Salter, A. (2011). The impact of entrepreneurial capacity, experience and organizational support on academic entrepreneurship. *Research Policy*, 40, 1084–1093. Recuperado el 25 de junio de 2017 en: [elsevier.com/locate/respol](http://elsevier.com/locate/respol). DOI: 10.1016/j.respol.2011.05.010
9. Díaz- Casero, J Hernández- Mogollón, R; Roldan, J. (2012). A structural model of the antecedents to entrepreneurial capacity. *International Small Business Journal*, 30(8) 850–872. Recuperado el 25 de junio de 2017 de: <https://journals.sagepub.com/doi/abs/10.1177/0266242610385263?journalCode=isbb> DOI: 10.1177/0266242610385263
10. Durán-Aponte, E; y Arias-Gómez, D. (2016). Actitud emprendedora y estilos emocionales. Contribuciones para el diseño de la formación de futuros emprendedores. *Gestión de la Educación*, 6, (2), 83-102. Recuperado el 25 de junio de 2017 de: [https://www.researchgate.net/publication/305696049\\_Actitud\\_emprendedora\\_y\\_estilos\\_emocionales\\_Contribuciones\\_para\\_el\\_diseno\\_de\\_la\\_formacion\\_de](https://www.researchgate.net/publication/305696049_Actitud_emprendedora_y_estilos_emocionales_Contribuciones_para_el_diseno_de_la_formacion_de) DOI: 10.15517/rge.v1i2.25490
11. Eckhardt, J. & Shane, S. (2003). Opportunities and Entrepreneurship. *Journal of Management*, 29(3), 333-349. Recuperado el 14 de marzo de 2017, de: <http://journals.sagepub.com/doi/abs/10.1177/014920630302900304> <https://doi.org/10.1177/014920630302900304>
12. Elfving, J; Brännback, M; Carsrud, A. (2009). Toward A Contextual Model of Entrepreneurial Intentions en: A.L. Carsrud, M. Brännback (eds.), *Understanding the Entrepreneurial Mind*, 23 *International Studies in Entrepreneurship* 24, DOI 10.1007/978-1-4419-0443-0\_2, Springer Science + Business Media, LLC 2009 DOI: [https://doi.org/1007/978-1-4419-0443-0\\_2](https://doi.org/1007/978-1-4419-0443-0_2)
13. Fernández-Mesa, A; Alegre-Vidal, J; Chiva-Gómez, R. (2012). Orientación Emprendedora, Capacidad de Aprendizaje Organizativo y DeSESpeño Innovador. *Journal of technology management & innovation*, 7(2), 157-170. Recuperado el 25 de junio de 2017 en: <https://dx.doi.org/10.4067/S0718-27242012000200013>
14. Filion, J; Gilles, R. (1996). *Escuela de Altos Estudios Comerciales (HEC)*. Montreal: Librería Universitaria.
15. Koellinger, P. D., Minniti, M. & Schade, C. (2007). Seeing the World with Different. *Oxford bulletin of economics and statistics*. Recuperado el 14 de abril de 2017, de: <https://webcache.g.ooglesusercontent.com/search?q=cache:HTQ964USwj4J:https://repub.eur.nl/pub/37308/KMS-Final.pdf+&cd=2&hl=es&ct=clnk&gl=es> DOI: 1111/j.1468-0084.2011.00689.x
16. Krueger, N. F. Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18, 91-104. Recuperado el 14 de abril de 2017, de: <http://cemi.com.au/sites/all/publications/Krueger%20and%20Brazeal%201994.pdf> <https://doi.org/10.1177/104225879401800307>
17. Leite, E. (2000). *O Fenómeno do Empreendedorismo (2ª ed.)*. Brasil: Edicoes Bagaco.
18. Lezana, A. G. R; Tonelli, A. O (1998). Comportamento do Empreendedor. In: MORI, F. Empreender: identificando, avaliando e planejando um novo negócio. Florianópolis: Escola de novos empreendedores.
19. Loli, A; Dextre, E; Del Carpio, J; La Jara E. (2010). Actitudes de creatividad y emprendimiento en estudiantes de la universidad nacional de ingeniería y su relación con algunas variables socio demográficas. *Revista de Investigación en Psicología*, 13(2), 139-151. Recuperado el 14 de abril de 2017, de: <http://revistasinvestigacion.unmsm.edu.pe/index.php/psico/article/view/3722> DOI: <https://doi.org/10.15381/rinpv.13i2.3722>
20. Naude, W., Gries, T., Wood, E. y Meintjies, A. (2008). Regional determinants of entrepreneurial startups in a developing country. *Entrepreneurship & Regional Development*, 20 (2), 111-124. Recuperado el 7 de mayo de 2018, de: <https://doi.org/10.1080/08985620701631498>
21. Palich, L. & Bagby, D. (1995). Using cognitive theory to explain entrepreneurial risk-taking: challenging conventional wisdom. *Journal of Business Venturing*, 10, 425-438. Recuperado el 3 de abril de 2016 de: <https://www.sciencedirect.com/science/article/abs/pii/S088390269500082J> [https://doi.org/10.1016/0883-9026\(95\)00082-J](https://doi.org/10.1016/0883-9026(95)00082-J)

22. Shane, S; Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226. Recuperado de: <https://doi.org/10.5465/amr.2000.2791611>
23. Shapero, A; Sokol, L. (1982). The social dimensions of entrepreneurship. In: Kent C, Sexton L and Vesper K (eds.) *Encyclopedia of Entrepreneurship*. Englewood Cliffs, NJ: Prentice Hall, 72–90. Recuperado el 8 de mayo 2018 de: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1497759](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1497759)
24. Soria-Barreto, K; Zuniga-Jara, S; Ruiz-Campo, S. (2016). Educación e Intención Emprendedora en Estudiantes Universitarios: Un Caso de Estudio. *Formación Universitaria*, 9(1), 25-34. Recuperado el 15 de marzo de 2017 de: <http://www.scielo.cl/pdf/formuniv/v9n1/art04.pdf> DOI: 10.4067/S0718-50062016000100004
25. Tarrats-Pons, E; Mussons Torras, M; Ferràs Hernández, X. (2015). Del modelo del evento emprendedor al modelo sistémico de emprendimiento. *3C Empresa*, 22 (4), 124– 135. Recuperado el 25 de julio de 2017 de: <https://www.3ciencias.com/wp-content/uploads/2015/05/DEL-MODELO-DEL-EVENTO-EMPREDDEDOR-AL-MODELO-SIST%89MICO-DE-EMPREDIMIENTO1.pdf> DOI: <https://doi.org/10.17993/3cemp.2015.040122.124-135>
26. Thrane, C; Blenker, P; Korsgaard, S; Neergaard, H. (2016). The promise of entrepreneurship education: Reconceptualizing the individual–opportunity nexus as a conceptual framework for entrepreneurship education. *International Small Business Journal*, 34(7), 905–924. Recuperado el 30 de enero de 2017 de: <http://sagepub.co.uk/journalsPermissions.nav> DOI: 10.1177/0266242616638422
27. Timmons, J.A. (1994). *New Venture Creation: entrepreneurship for the 21st century*. Chicago: Irwin.
28. Van der Sluis, J., Van Praag, M; Vijverberg, W. (2008). Education and entrepreneurship selection and performance: a review of the empirical literature. *Journal of Economic Surveys*, 22 (5), 795-841. Recuperado el 14 de abril de 2017 de: [http://econpapers.repec.org/article/blajecsur/v\\_3a22\\_3ay\\_3a2008\\_3ai\\_3a5\\_3ap\\_3a795-841.htm](http://econpapers.repec.org/article/blajecsur/v_3a22_3ay_3a2008_3ai_3a5_3ap_3a795-841.htm) <https://doi.org/10.1111/j.1467-6419.2008.00550.x>
29. Varela, R. Bedoya, O. (2006) modelo conceptual de desarrollo empresarial basado en competencias. *Estudios gerenciales*, 22(100), 21–47. Recuperado el 25 de junio de 2017 en: <http://www.scielo.org.co/pdf/eg/v22n100/v22n100a01.pdf> DOI:10.18046/J.ESTGER.2006.198
30. Volery; Mazzarol, T. (2015). The evolution of the small business and entrepreneurship field: A bibliometric investigation of articles published in the International Small Business Journal. *International Small Business Journal*, 33(4), 374–396. Recuperado el 15 de febrero de 2015 de <http://journals.sagepub.com/doi/pdf/10.1177/0266242613516139>
31. Weber, E. U; Milliman, R. A. (1997). Perceived Risk Attitudes: Relating Risk Perception to Risky Choice. *Management Science*, 43, 123-144. Recuperado el 14 de abril de 2017 de: [http://www.communicationcache.com/uploads/1/0/8/8/10887248/perceived\\_risk\\_attitudes-\\_relating\\_risk\\_perception\\_to\\_risky\\_choice.pdf](http://www.communicationcache.com/uploads/1/0/8/8/10887248/perceived_risk_attitudes-_relating_risk_perception_to_risky_choice.pdf)
32. Zahra, S.A. y Garvis, D.M. (2000). International corporate entrepreneurship and firm performance: the moderating effect of international environmental hostility. *Journal of Business Venturing*, 15, (5-6), 469-492. Recuperado el 14 de abril de 2016 de: <https://www.sciencedirect.com/science/article/abs/pii/S0883902699000361>

## Tables

**Table 1:** *Items Distributed by Components Associated with Personal Characteristics and Individual Attributes related to Entrepreneurial Skills Assessed in the Instrument.*

PERSONAL FACTOR	Direct Items	Reversed Items
Social Skills	4-5-8-11-13-37	
Attitude toward Opportunities	1-19-23-28-31-32	36
Cognitive Skills	3-6-9-22-27-35	12-29-33
Positive Self-Assessment and Continuity	14-15-16-18-20-24-25-30	
Coping Skills	2-10-17-26-38-39	7-21-34

Source: Prepared by the authors

**Table 2 :** *Results of the Measurement Model.*

Indicators	Factor Loadings Indicator Reliability	Construct Reliability	Convergent Validity	Discriminant Validity
<i>Family Factors</i>		0.739	0.397	0.144
FF_AF_1	0.797 ***			
FF_AF_2	0.779 ***			
FF_AF_3	0.591 ***			
FF_FAG_1	0.392 ***			
FF_FAG_2	0.387 **			
<i>Sociocultural Perception</i>		0.700	0.287	0.332
F_SC_1	0.501 ***			
F_SC_3	0.518 ***			
F_SC_5	0.509 ***			
F_SC_8	0.603 ***			
F_SC_9	0.644 ***			
<i>Training for Entrepreneurship Training</i>		0.815	0.525	0.187
F_E_1	0.760 ***			
F_E_2	0.702 ***			
F_E_3	0.766 ***			
F_E_5	0.664 ***			
<i>Personal Traits</i>		0.937	0.831	0.385
A_C	0.923 ***			
A_F_0	0.919 ***			
C_E	0.892 ***			
<i>Life Skills</i>		0.923	0.856	0.367
H_S	0.918 ***			
P_L	0.931 ***			
<i>Effective Entrepreneurial Capacity</i>				0.059
CE_E	1.000 ***			

Significance 99% \*\*\*, 95%\*\*\*, 90%\*

Source: Authors' calculations

**Table 3:** Total Scope of the Questions Asked for each of the Constructs.

Construct	Factor Loadings Indicator Reliability	Construct Reliability	Convergent Validity	Discriminant Validity
<i>Potential Entrepreneurial Capacity</i>				
Life Skills	0.305 ***			
Personal Traits	0.716 ***			

Significance 99% \*\*\*, 95%\*\*\*, 90%\*

Source: Authors' calculations

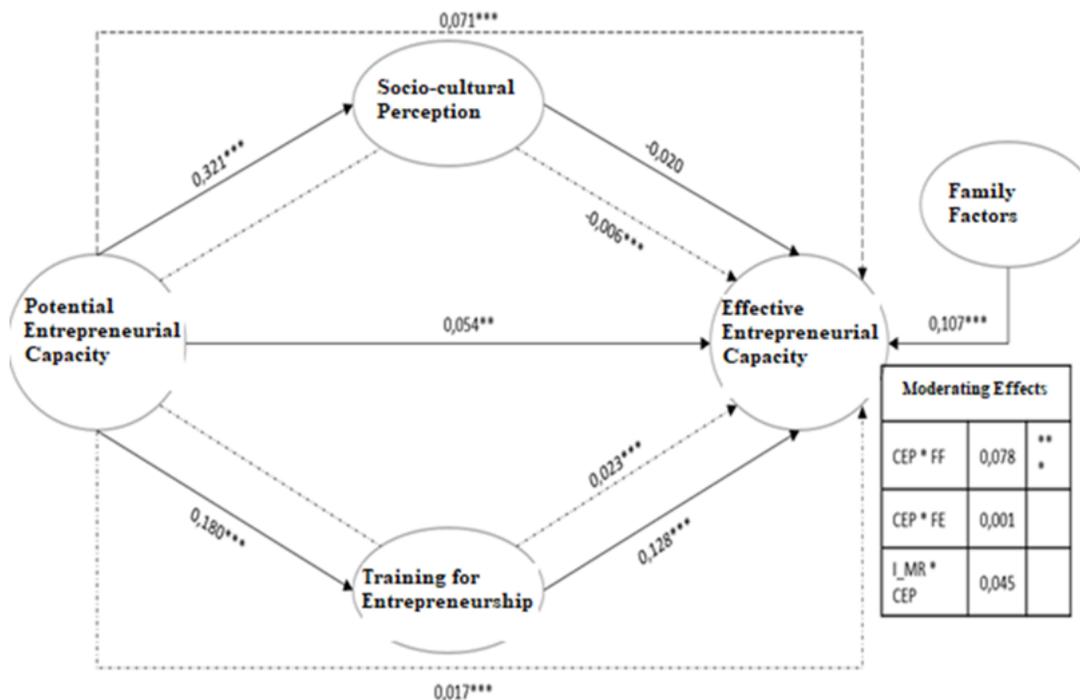
**Table 4:** Structural Model

TraPath			Coefficient		Est.Standard Error
<b>Total Effects</b>					
Potential Entrepreneurial Capacity	-	Effective Entrepreneurial Capacity	0.071	0.006	*** 0.026
	>				
<b>Direct Effects</b>					
Life Skills	-	Potential Entrepreneurial Capacity	0.305	0.000	*** 0.006
	>				
Personal Traits	-	Potential Entrepreneurial Capacity	0.716	0.000	*** 0.006
	>				
Potential Entrepreneurial Capacity	-	Effective Entrepreneurial Capacity	0.054	0.035	** 0.026
	>	Entrepreneurship Training	0.180	0.000	*** 0.026
	>	Sociocultural Perception	0.321	0.000	*** 0.026
Family Factors	-	Effective Entrepreneurial Capacity	0.107	0.000	*** 0.023
	>				
Entrepreneurship Training	-	Effective Entrepreneurial Capacity	0.128	0.000	*** 0.025
	>				
Sociocultural Perception	-	Effective Entrepreneurial Capacity	-0.020	0.528	0.034
	>				
<b>Indirect Effects</b>					
Potential Entrepreneurial Capacity	-	Entrepreneurship Training → Effective Entrepreneurial Capacity	0.023	0.000	*** 0.005
	>	Sociocultural Perception → Effective Entrepreneurial Capacity	-0.006	0.000	*** 0.004
<b>Moderating Effects</b>					
Potential Entrepreneurial Capacity * Family Factors	-	Effective Entrepreneurial Capacity	0.078	0.002	*** 0.026
	>				
Potential Entrepreneurial Capacity * Entrepreneurship Training	-	Effective Entrepreneurial Capacity	0.001	0.948	0.025
	>				
Sociocultural Perception * Potential Entrepreneurial Capacity	-	Effective Entrepreneurial Capacity	0.045	0.122	0.027
	>				

Significance 99% \*\*\*, 95%\*\*\*, 90%\*

Source: Authors' calculations

## Figures



**Figure 1**

Structural Model Specifying Results. Significance 99% \*\*\*, 95%\*\*\*, 90%\* Source: Prepared by the authors