# MOTIVATIONAL QUALITY IN THE INTEGRAL HUMAN DEVELOPMENT (DHI) METHODOLOGY



# MOTIVATIONAL QUALITY IN THE INTEGRAL HUMAN DEVELOPMENT (DHI) METHODOLOGY

T. Enríquez<sup>1</sup>, P. Alonso-Stuyck<sup>2</sup>, J. Fernández-de-Castro<sup>1</sup>

<sup>1</sup>Universidad Panamericana (MEXICO) <sup>2</sup>The London School of Economics and Political Science (UNITED KINGDOM)

#### Abstract

In the broad context of healthy lifestyle development programs, this article highlights the Integral Human Development (DHI for its acronym in Spanish, see translator's note) model due to its richness and novelty. First, we describe four of the challenges that the DHI methodology faces. Second, we present the results of the assessment performed over its effectiveness, its implementation, and its four pedagogical components: motivation, reflection, perseverance in Specific, Attainable, and Measurable goals (CAM goals for its acronym in Spanish), and good environment. This assessment consisted of a quantitative and a qualitative analysis of the results on the application of a tool developed for this study (with proven reliability and construct validity) to a sample of 66 teachers from 5 schools where the DHI model had been implemented for more than one year through the Integrated Training Operating System (SOFI, for its acronym in Spanish, see translator's note). The pedagogical component good environment is relevant in the DHI methodology; therefore, we examine such methodology with the perspective of a new concept called motivational quality. This concept is now presented and refers to the proportion of intrinsic, extrinsic, and transcendent motivation that motivates behavior. The conclusion is that a greater proportion of transcendental motivation contributes in a particularly effective way to the permanence of habit and, therefore, to the development of healthy lifestyles.

Keywords: healthy lifestyles, habits; integral human development; motivation, motivational quality.

Translator's Note: The acronym for the term "Desarrollo Humano Integral" is maintained in Spanish. Additionally, the acronym SOFI is also kept in Spanish, as it refers to both a civil association incorporated under the same name and to a methodology (Sistema Operativo de Formación Integrado).

#### 1 INTRODUCTION

There is a need in socio-educational spheres to promote healthy lifestyles during the early stages of life, to prevent the development of unsafe lifestyles before reaching adolescence, which is a sensitive period. This task is not always effective because the motivational quality is neglected, among other reasons.

The civil association *Desarrollo Humano Integral* A.C. (DHI) [1A] has created a model for the formation of healthy habits. In this article, we set out the main variables used in this model to confront four of the many challenges in the formation of habits. We also present the new concept of *motivational quality* as a tool that differentiates levels of motivation, calling for the identification of possibilities for intervention for the purpose of incorporating healthy habits into the lifestyle more effectively.

The purpose of this study is to determine if the DHI model affects the development of *motivational quality*, considering that the nature of the DHI model is integrative, as it connects the intellectual and the emotional aspects of the human being, inner disposition and external behavior, the intrapersonal and the interpersonal, and the short and the long term. Considering the above, the hypothesis of this work is that the *integrative* nature of the DHI model increases the probability of successfully facing the process of forming habits, and reduces the risks of abandonment, typical of an emotional, no-effort society.

The methodology proposed by DHI consists of the strategic application of the following four pedagogical components, based on a seven-stage process: *motivation*, *reflection*, *perseverance* in Specific, Attainable, and Measurable goals (CAM goals for its acronym in Spanish), and *good environment*. The DHI model is not an educational program methodology, but a methodological structure (*know-how*) of multiple programs aimed at specific population sectors.

In the school sector, DHI A.C. has implemented the *Integrated Training Operating System* (SOFI Civil Society for its acronym in Spanish) [1B] and a 26-book collection for teachers and students named *Be happy building values* [2]. In the social sphere, in companies, and civil society organizations, DHI A.C.

has developed the *Health Values and Physical Education* program [1C] and its predecessor, *Healthy Habits* [1D].

Since its inception, the DHI methodology has promoted the assessment of its efficiency and effectiveness. Specifically, the SOFI System has been enriched with observations of faculty that have been attained over 37 years of work (1985-2022) in 10 schools located in five cities of Mexico. SOFI has also been *evaluated* at least three times. In the 2003-2004 academic year, the Education Institute of Aguascalientes, a public institute, conducted a pilot test to evaluate the book collection *Be happy building values* in 20 public schools. After eight years (2007-2015), 431,802 copies had been sold in 15 states in Mexico for students from 326 schools. The collection had also reached eight Latin American countries: Argentina, Bolivia, Colombia, Chile, Guatemala, Honduras, Uruguay, and Paraguay.

In 2006-2007, the Ford company commissioned APEL S.C. to evaluate the effectiveness of the *Be happy building values* book collection. This study was carried out in three phases. The first phase measured the transformation experienced in students and the good use of the methodology in 15 public schools. The sample was 4063 students, 121 teachers from 1st to 6th grade of elementary school, and 12 principals, contrasting the results with a control group of three schools. The second phase compared three schools that had been applying the program for four months with a control group of three schools. The third phase evaluated 7377 students, 217 teachers, and 23 principals. The findings record significant improvement in students and the need for a longitudinal study of at least three years to verify the results sought by the DHI model [3].

Finally, in 2018, the *Templeton Character Education in Latin America Awards* rewarded two schools applying SOFI. These awards "seek to recognize character education projects in secondary schools that motivate teachers to become involved in them and understand their value, through the dissemination of good practices" [4].

The wide dissemination of the DHI model deserves attention as a subject of study. Specifically, its school version, the SOFI system, has been examined, and this article presents the results of an assessment, the method used, and the tool created for this purpose. How do teachers evaluate SOFI, with its four pedagogical components, its implementation (operability), and its effectiveness (pedagogical results)? Moreover, on a more conceptual level, do the results of this evaluation show in the model any relation to the increase in the *motivational quality* of the students?

In the results, teachers point out the relevance of the practical level of the pedagogical component called *good environment*—that is, the importance of having personal relationships that favor the acquisition of healthy habits. The relevance of the environment is verified, for example, in its absence: the corrosive effect of a group of students who do not believe in the habits promoted by educational programs. The affective bonds between the pupils and between them and their educators have a direct impact on *motivational quality*. At the conceptual level, the results conclude that a high level of *motivational quality* favors *perseverance* in the exercise of new habits. Furthermore, special attention to *motivational quality* favors the intentional process of the learner and its cognitive-affective system over purely external behavioral results.

# 1.1 Four challenges (handicaps) in developing healthy habits

Over the past decades, numerous programs promoting healthy lifestyles have emerged. With the accumulated experience, pedagogical strategies have been perfected [5]. The tools and ways of assessing their effectiveness have also been refined. The four pedagogical components of the DHI model address the inner aspects of the action detected by Kristjánsson: *reflection* addresses the cognitive aspects, *motivation* addresses the emotional aspects, the sought healthy habits address the attitudes, and *perseverance* treats the external or behavioral aspects [6]. The DHI model seeks to address at least four of the many challenges facing this type of education.

#### 1.1.1 First challenge: overcoming intellectualism

The first challenge is not to lose sight of the influence of affectivity on cognitive aspects. It is said that the door leading to the brain is opened through the heart. Intelligence separated from affections (motivation) does not exist in the individual. To overcome intellectualism, it should be noted that the concepts of healthy habits are dynamic. This is what Kristjánsson exemplifies with the concept of gratitude: it depends on each individual, his/her own sensitivity, and his/her own personal experience [6] (pp. 180-181). This does not imply the denial of the common semantic field, the starting point of communication, and education. Indeed, knowledge of the healthy habit also varies even in the same individual depending on their degree of exercise of that same habit. In the DHI model, *motivation*, fueled

especially by victories in *perseverance* in CAM goals and encouraging a *good environment*, drives reflection.

#### 1.1.2 Second challenge: overcoming scientism

The second challenge we face is that the interest in obtaining pedagogical results in external behavior should not make us forget education in the subjective aspects of behavior, the sphere of motivations. External behavior is usually the privileged object of empirical and statistical studies. The integration of the external and the internal is reflected, for example, in the bio-psycho-social paradigm in which the human and social sciences focus. Furthermore, authentic habits —not mere training for certain behaviors—require the intervention of internal, cognitive, and attitudinal factors, relating to intent and choice [6] (p. 181). On the other hand, pragmatism gives predominance to the results over the flourishing process of the individual. All of which is reflected in the decrease in personalized attention. To face this challenge, the DHI model aims to follow up on each individual so as to maintain the effort and the appropriate individual *motivation* in the process of acquiring healthy habits [1D].

## 1.1.3 Third challenge: maintaining personalized attention

The third challenge is to maintain a personal follow-up process considering individual circumstances, in a context where educational programs are oriented to groups, as is the case in educational and professional institutions. Currently, we can observe a trend towards personalist education. However, it is difficult to find explicit references to personal individuality. For example, Durlak excludes from its meta-analysis groups of students united by their interest in improvement [5] (p. 409). Unlike Durlak's methodological principles, the DHI model has followed, with special interest, people and corporations that intentionally aim to form healthy habits. The 35 years of application of the model offer numerous social groups (sports, business, family, etc.) in which it would be desirable to research and examine the effectiveness of programs developed according to the DHI model, as well as the levels of *motivational quality* it achieves in its users.

#### 1.1.4 Fourth challenge: overcoming short-termism

The fourth challenge faced is maintaining long-term *perseverance* in educational intervention programs. The DHI model tries to come into play in the formation of habits according to a systemic vision. In doing so, it takes into account personal conditions and relationships with others. In a special way, it considers the trajectory of the school years to shape virtues according to the evolutionary stages: temperance in lower elementary school, strength in upper elementary school, and justice in middle school. This explicit focus on certain social and personal skills is a success factor [5] (p. 410). One of DHI's slogans is "motivation is what gets you started; habit is what keeps you going" [1D]. Additionally, the permanence in time of the acquired habit is a sign of flourishment. Durlak's meta-analysis requires a follow-up of six months for a program to be worth studying [5] (p. 409). The DHI method weighs the time dimension of authentic habits and acknowledges the limits of sporadic educational intervention [7].

In summary, the strategy of the DHI model to face these and other challenges is indicated by its very name: Integral Human Development. The adjective *integral* is very appropriate since it seeks in articulated unity, areas that, without an intentional effort, tend to be separated: the intellectual and the emotional, the internal and the external in behavior, the intrapersonal and the interpersonal, and the short and the long term.

## 1.2 Desarrollo Humano Integral: DHI methodology for the formation of habits

#### 1.2.1 Theoretical sources of DHI methodology

Publications on the subject in Anglo-Saxon academic spheres could give the impression that it is an educational phenomenon generated by England and the United States since the 1960s. However, these pedagogical tendencies are linked to the interest in *Virtue Ethics* characterized by the rehabilitation of the practical Aristotelian philosophy, taking into consideration the centrality of the agent and the internal aspects of human action.

The classical tradition shows its performance in modern approaches to character education, such as those of Arthur, Kristjánsson, Carr, and Lickona. It is a source of inspiration for many projects such as: the Center for the 4th and 5th R's [8], the Jubilee Centre for Character & Virtues [9], and the Hope Institute [10].

These institutions have emerged from the development of theoretical and practical models that link neuroscientific, psychological, and philosophical research with pedagogical practice in educational and business spheres. The work of DHI A.C. is the result of a team formed by professionals in philosophy, psychology, and pedagogy, on a model created by an engineer dedicated to education.

#### 1.2.2 DHI methodology: three dimensions of personality and systemic context

In order to face the risks presented by the education of emotions in general, and those of habit formation in particular, it is key to rely on a solid anthropological model. This is why DHI has taken as its starting point the three-fold response system that influences human behavior: expressive, neurophysiological, and mental, which can be situated in the three dimensions of personality. These three dimensions are contemplated in the intervention programs that are applied in various settings. For example in the development of emotional intelligence, the indications of the neurosciences, the application of logotherapy to education, orientation tutorial programs, family intervention therapies, personal development coaching, emerging models of personalist parenting, and pedagogical perspectives based on classical anthropology [11].

When the subject of the analysis is the human person, it is possible to unite the contributions of the various disciplines that address it. Thus, the transcendentals of the human being —truth, good, and beauty— masterfully described by classical philosophy, are inserted in a fluid manner into this tripartite constitution of human action, as Fig. 1 shows.

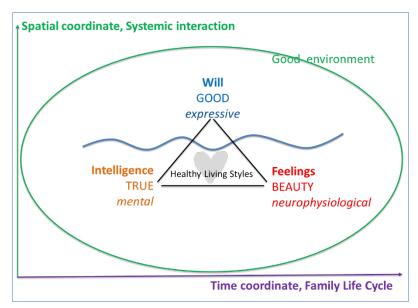


Figure 1. Triple response system in personal dimensions and its OPTIMAL TREND.

The observable aspect of behavior is supported by the non-observable cognitive-affective system in which *motivation* is originally nurtured. Intelligence seeks to question the truth, the will is aimed towards what the person considers good, and tendency to beauty comes in a particular way from feelings instilled with human rationality. Therefore, truth, goodness, and beauty are the pillars of human excellence, as pointed out in the philosophical doctrine of the transcendentals of being rightly. All this is inserted into the space—time ecological aspect of daily life: the age of the learner, the time spent on it, and the environment in which it develops.

Human development is often understood as progress in the conditions of physical well-being, forgetting the development of the inner aspects of the human being. DHI has added the adjective *integral* to the *human development* construct to seek unity in the complexity of the various elements of the human being. As noted, the DHI model is comprehensive in several ways. It integrates the emotional with the cognitive. It integrates the physical, external, expressive, and behavioral dimension with internal, mental, and neuropsychological motivation. It integrates personal development according to individual conditions with the social dimension of the individual and the systemic context. And it integrates specific, attainable, and measurable short-term goals with a long-term horizon of personal flourishing.

The DHI model is based on a model of understanding the structure of the human agency, both in its static dimension (classic theory of operational faculties) and dynamic dimension (temporary

development of those faculties) [7]; it also considers its intrapersonal dimension (act of an individual's freedom) as interpersonal (an act that is influenced and influences others). From these coordinates, the DHI model offers guidance to overcome difficulties in the process of acquiring habits.

The four basic components of the formula coined by DHI rest on an integrative model according to the anthropological structure of the free act. This act originates from appetitive impulse (*motivation*) and rational deliberation (*reflection*) and is expressed externally in the realization of the work (*perseverance* in CAM goals), in the context of personal relationships (*good environment*), as shown in Fig. 2.

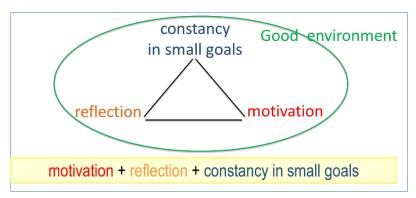


Figure 2. DHI model for the formation of healthy lifestyle habits.

Indeed, from a phenomenological analysis of the inner personal experience, seven stages can be identified, based on the way the four factors interact [7]. For example, at first, when a trigger causes one to desire a healthy habit, there is a significant motivational thrust in emotion (*motivation*), but soon after it declines due to the discouragement produced by realizing how difficult it is to change the external behavior, which requires an increase in the prominence of will (*perseverance*). The help of others (a *good environment*) is essential to maintain effort at all times.

Motivational aspects can be recognized in the four pedagogical elements of the DHI model:

- *Motivation* that relies specifically on affective energy. Emotion involves neurophysiological movement. This affective motivation, together with mental intentionality, unfolds attracted by the beauty of the desirable: that which gives meaning to one's life.
- Reflection, which includes the nurturing of intelligence and cognitive aspects in the search for truth. In this sphere, a certain intellectual *motivation* comes from why an individual seeks the truth and lives the good.
- Perseverance in small goals reachable at will that, through training, consolidate a healthy lifestyle, oriented to integral human development.
- Good environment serves social relationships, in which the individual leaves him/herself to others and receives help from others. Contributing to the good of others, as will be seen, is a transcendental *motivation* for the acquisition of a healthy habit.

# 1.3 Motivational quality

The shaping of personal habits, which impregnate all human dimensions, leads to addressing *motivational quality*, which, as seen below, allows the individual to develop the best version of him/herself—that is, his/her *integral human development*. Motivation is crucial for the creation of habits. The classic psychological concept regarding this construct refers to the activating energy that initiates, maintains, and directs a performance [12]. Without sufficient motivation, the effort required to abandon unsafe behavior and exercise a healthy habit is not sustained.

#### 1.3.1 Three non-exclusive motivation levels

In evolutionary psychology, the trajectory that Kohlberg attributes to moral judgment is based on extrinsic motivations, predominant in childhood towards the internal ones that gradually emerge at the rhythm of the maturation process. This classification is partly comparable to the classic distinction, exposed by the classics, between the *useful* good, the *pleasant* good, and the *honest* good.

- Extrinsic motives refer to a reward for your own benefit. The active energy to perform an action comes from the fact that some benefit will be obtained with it. Thus, the action will be a useful good, that is, done by something different than itself. Some campaigns to promote sports offer some external motives. For example, they advertise: "The first day you attend the gym you will receive \$25 dollars. If you stop attending regularly, you will have to return that first reward." This is a good reason for some to work out, at least for a certain time, with the intention of not losing money.
- Intrinsic motives equate to the honest good. Why perform a certain action? For itself: for something inherent to it: some knowledge, some quality. Ethical habits are honest goods since they are acknowledged for the attraction they themselves exert; that is, they do not need to provide usefulness to be desired. For example, a person who has started exercising daily sees in it something good in itself. He/she no longer needs monetary rewards to do so. He/she has found internal motivation. The same goes for other habits such as sobriety in consumption, courtesy, honesty, and candor: they are attractive habits in themselves.
- The *transcendental* motives are to do good to others. For example, why strive to "reduce, reuse, and recycle" objects? For the benefit, it would yield to new generations. It is a motivation that goes beyond the limits of one's own benefit and seeks the good of one's loved ones. One reason to walk daily may be to provide companionship to a person who needs it. However, a *transcendental motive* —to give a company or to provide a service— does not exclude some intrinsic motivation —the health of the sick individual and the companion— and could even include an external motivation, when for example, the walk allows both to take a special snack.

The triple motivation that is observed with regard to things also presents itself with respect to people. Two levels of social interaction are also distinguished: either they are functional relationships (selfish), or they are personal (selfless). Aristotle recorded the difference between friendship by utility or pleasure and friendship by benevolence. Empirically, the passage from one relationship type to another could be verified. It would be about exploring intentionality, exploring when a relationship is maintained by a certain self-interest (utility or pleasure), but through contact, it can be transformed and sustained by the desire for the well of the friend, by benevolence [13]. In extreme situations, the effectiveness of transcendental motives is demonstrated. For example, Bruzzone, in the application of logo education, has pointed out the importance of transcendental motivation for the shaping of virtues [14].

To Reeve's excellent review of motivation and emotion, which includes various ratings [12], it should be added that, in everyday experience, motivations of various kinds are not given in their purest form. In the motivation to perform a particular action, external, intrinsic, and transcendental components are often mixed. This combined motivation reflects human complexity and allows the coinage of the concept of *motivational quality*, as shown in Fig. 3.



Figure 3. Motivational quality: percentage of extrinsic, intrinsic, and transcendental motivation.

Motivational quality refers to the percentage of each type of motivation —extrinsic, intrinsic, and transcendental— which triggers a specific decision [15] (p. 9). The trigger energy that initiates, holds, and directs a behavior can be composed of at least 3 combinations: an action can be motivated only by elements that are outside of the person, which we know as extrinsic motivation. The action could also be triggered by these elements alongside other factors that remain in the individual itself; in this case, we would talk about intrinsic motivation, added to the extrinsic. Finally, it could be due to the energy from the previous two motivations, plus a transcendental motivation, that is, the intention to seek good for others.

For example, unnecessary expenses can be dispensed with for several reasons compatible with each other: to keep certain savings (extrinsic motivation), to be consistent with the lifestyle with which you have personally committed (intrinsic motivation), and to use those savings for children's education (transcendental motivation). Although outwardly he/she appears to be a saver, his/her motivational

quality would depend on the percentage of each type of motivation that has moved him/her to act. If more weight is given to the transcendental motivation over the intrinsic one, and the latter over the extrinsic one, then the motivation will be of much higher quality. A distribution of 80% + 10% + 10% is not the same as that of 30% + 30% + 40%. Therefore, improving motivational quality would consist in something like subordinating the extrinsic motivation to the intrinsic motivation, and the latter to the transcendent one. These remarks on motivational quality should not lose sight of the complexity and diversity of human situations.

#### 1.3.2 Motivational quality and DHI model

The DHI model for the formation of habits acknowledges that motivation is at the initial moment of mobilization, direction, and maintenance of effort, and must be kept until a new habit is born. Once it has been incorporated into the lifestyle, the person enjoys the behaviors of the habit and performs them with great ease. For example, regarding the habit of walking daily, the individual may start walking for some monetary compensation (*extrinsic* motivation) that comes from a health campaign. Furthermore, the desire of acquiring that healthy habit (*intrinsic* motivation) moves to overcome resistance. However, when the demands are higher, those two levels of motivation are not enough. Perhaps then what keeps the effort is the well-being of a loved one, for example, the health of an elderly mother (*transcendental* motivation). When the habit has been acquired, the person feels incomplete if they do not do it, and even enjoys it.

How the three levels of *motivation* and pedagogical strategy of the DHI model are articulated could respond to the following description: the initial affective assessment of healthy behavior (*extrinsic* motivation) incorporates the logical benefits (*intrinsic* motivation) that are perceived from the intellective realm (*reflection*) and moves the series of decisions (*perseverance* in CAM goals) that ultimately shape the habit. The well-being of a loved one (*transcendental* motivation) or the systemic context formed, for example, by a group of friends (*good environment*), can be crucial in difficult times.

Having revised the DHI methodology for the acquisition of habits as a model that aims to address the challenges of a healthy lifestyle education and having considered the desirability of introducing *motivational quality* as a conceptual tool to distinguish active energies for practical action, we provide an exposition of the empirical assessment of the DHI methodology below.

#### 2 METHODOLOGY

The DHI model in its school version as a SOFI system underwent an empirical study during the 2019-2020 school year aimed at the assessment of its implementation, pedagogical components, and effectiveness from the teachers' perspective. To this end, a concurrent mixed study was developed, in which the quantitative part corresponded to a non-experimental design, cross-cutting with an exploratory and descriptive scope, and the qualitative part through an analysis of teachers' discourse.

Of the 8 schools where SOFI operates, the participation of the 100 active teachers was requested. We received responses to the evaluation tool from 66 teachers from 5 schools; 27 were women (40.9%) and 39 men (59.1%). The average years of experience as teachers in the respective schools was 7.54 years (SD = 6.44), and the average years of experience implementing the SOFI methodology was 1.48 years (SD = 0.82).

To evaluate the SOFI system, an evaluation tool was created. It included three sections. The first section included five identification items. The second section covered 49 items (five-level Likert scale) distributed as follows: D1. Operability (R1-R12), D2. Good environment (R13 - R23), Reflection (R24 - R32), D4. Motivation (R33 - R39), D5. Perseverance in goals (R40 - R44), AND D6. Pedagogical results (R45 - R49). The last section included an open question inviting teachers to describe their thinking regarding the SOFI methodology. This study is added to the constant self-evaluations that SOFI applies and has been prepared by a researcher not belonging to DHI A.C., so there was no conflict of interest. The tool was applied digitally (Google Forms). The access link was shared with the principals, who provided it to the teachers who made up the sample and whose participation was voluntary and informed. All of them were assured through the drafting of the introduction of the tool that the information collected would be used exclusively for research purposes, respecting its confidentiality. After the form was closed, a database was generated, and it was processed in the SPSS 27 (IBM). Analysis began with the reliability review. The results obtained through Cronbach's Alpha coefficient concluded that the tool was reliable ( $\alpha$ (General) = 0.978,  $\alpha$ (D1) = 0.937,  $\alpha$ (D2) = 0.901,  $\alpha$ (D3) = 0.941,  $\alpha$ (D4) = 0.932,  $\alpha$ (D5) = 0.883,  $\alpha$ (D6) = 0.957).

#### 3 RESULTS

The analysis of the results was carried out from different perspectives. First, descriptive have been calculated by dimension. The score range ranged from 1 to 5, with values closer to 5 being a better rating. The averages obtained values close to 4(x(D1) = 3.99, x(D2) = 4.21, x(D3) = 4.17, x(D4) = 4.00, x(D5) = 4.09 and x(D6) = 3.94). The best evaluated dimension was D2 (*good environment*). In addition to this, D3 (*reflection*), D4 (*motivation*), and D5 (*perseverance* in goals) achieved averages equal to or greater than 4, which we can consider as strengths from the teachers' perspective. D1 (operability) and D6 (pedagogical results) obtained scores slightly below 4. This slight score difference is enough to consider them as areas of improvement.

A differentiated analysis was carried out by dimension. To do this, items were classified into three categories with their respective intervals: (a) areas of improvement (less than 4), (b) appropriate aspects (4.01 to 4.23), and (c) strengths (4.24 or more). Those intervals were defined based by the researchers, in order to be able to detect major strengths and areas of improvement. In this sense, it is explained that scores slightly lower than 4 did not represent bad evaluations. However, they were assumed as areas of improvement when compared to the common denominator of items. In the results of the study, Table 1 shows a summary of what is responsible for each dimension, including only strengths and improvement areas.

Table 1. Strengths and areas of opportunity of the DHI-SOFI model, 2020.

Dimensions	Strengths and improvement areas
D1. Operativity	Strengths: R5. School provides sufficient training for teachers to be virtue trainers at all times (4.36) / R9. I perceive that the school directive team assumes the SOFI methodology as a fundamental purpose of the school dynamic (4.27)
	Improvement areas: R11. It is possible for teachers to integrate without difficulty the SOFI methodology with the functions we provide (3.95) / R2. I understand clearly how the pedagogical components of the SOFI methodology are implemented (3.88) / R1. I have deep knowledge of the pedagogical components of the SOFI methodology (3.74) / R7. Parents know the objectives and work manner of the SOFI methodology (3.58) / R8. Parents cooperate with the objectives and work manner of the SOFI methodology (3.47).
D2. Good environment	Strengths: R22. Students acknowledge exemplary actions from their peers regarding the development of virtues (4.27) / R12. The weekly SOFI class is developed adequately (4.33) / R16. Students usually feel appreciated and cared for by their trainers in the school context (principals, tutors, etc.) (4.36) / R19. I provide constant and close support to students in the development of virtues (4.36) / R17. Students usually feel appreciated and loved by their parents (4.44).
	Improvement areas: R23. The SOFI methodology favors the development of the autonomy in students, in such a manner that the required follow-up by their students decreases (3.98) / R14. The development of virtues is visualized by students as an aspect that provides prestige within the group (3.94).
D3. Reflection	Strengths: R25. The SOFI methodology provokes reflection spaces that cause students to be convinced of the importance of acquiring virtues (4.26) / R27. Texts are used to provoke reflection in students (4.35) / R28. Short phrases are pertinently used to provoke deep reflection in students (4.35).
	Improvement areas: R31. It is perceived that the SOFI methodology provokes in students the conviction of helping their friends to develop virtues (3.98) / R32. It is evidenced in the daily school dynamics the collaboration among students for the development of virtues (3.95).
D4. Motivation	Improvement areas: R39. If students are asked about the reasons for seeking to live virtues, their answers express transcendental reasons (love, happiness, helping your neighbor, etc.) (3.94) / R34. An attitude of enthusiasm is regularly perceived in students in the presence of activities and challenges implied in the SOFI methodology (3.92) / R38. Students express with actions and/or words personal satisfaction for the progress they are achieving (3.89).
D5. P. Goals	Strengths: R43. The SOFI methodology provokes students to set accumulative goals throughout the formation process (4.24).
D6. Pedagogical results	Improvement areas: R46. I consider that the SOFI methodology has eased the development of virtues in the students at school (3.97) / R45. The SOFI methodology has significantly contributed with the development of virtues in students (3.92) / R49. Students experience SOFI in such a manner that they manage to transmit interest for the model in their respective families (3.89) / R48. Human relations among the different members of the school (students, teachers, authorities, and parents) have improved due to the SOFI methodology (3.88).

The final section of the tool included an item that invited subjects to express in detail their thinking regarding the DHI-SOFI methodology. Through hermeneutic analysis, 36 codes could be identified, which were grouped into three families: (a) Operational Factors, (b) Teaching Factors, and (c) Pedagogical Results (see Fig. 4).

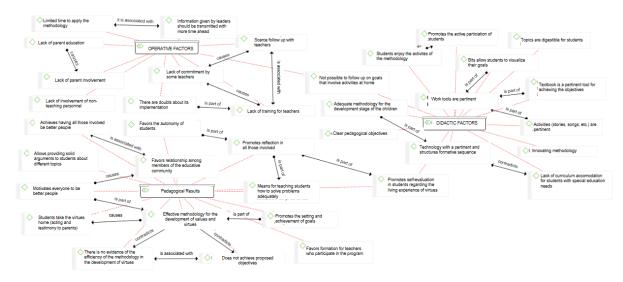


Figure 4. Hermeneutic map of the DHI-SOFI study, 2020.

The code with the greatest rooting was "Effective methodology for the development of positive habits", which allows us to presume that, from the perspective of the teaching staff, there is a positive general vision regarding the effectiveness of the methodology. At the same time, it was identified, in "Didactic factors" and "Pedagogical results," that codes with positive evaluations predominated. In contrast, "Operational Factors" had a higher proportion of codes with negative valuation.

#### 4 DISCUSSION

The order of importance given by teachers to the four components of the DHI formula prioritizes *good environment*, followed by *reflection*, *motivation*, and finally *perseverance* in small goals. The integrative vision of the evaluated model can help overcome the four challenges that healthy habit development programs often face, as previously described, for several reasons:

- The DHI model links the emotional and intellectual dimensions since the affection of teachers perceived by students stimulates them toward *reflection*. The emotional side of the relationships, the follow-up, and the affection of the trainers lead to the motivation to think. These results suggest that the gateway inside the individual is affective and is often a prerequisite for the use of reason. This avoids both the risk of intellectualism (trying to form habits using only cognitive strategies) and *emotionism* (relying only on feelings or emotions when setting a personal improvement goal).
- The fact that perseverance in CAM goals has remained as the last of the valued components of the formula recalls the need not to separate the inner attitude from the external behavior. The cognitive-affective system supports the transformation of healthy living habits. This fact leads us to remember that healthy lifestyles belong to the whole person and is not a mere transformation of external behavior.
- Prioritizing interpersonal motivations, the link between teacher and education, implies the importance of transcendental motivation over other types of reasons. This refers to the proposal of the motivational quality construct, a combination of three types of motivations that act simultaneously in different proportions. It can be observed that transcendental motivation, which is directed at others, has greater weight than intrinsic motivation, the internal component of reflection. This appreciation for the personal, the teacher-student meeting, indicates that the DHI model is based on a personalized education, which avoids the risk of an exclusive group consideration of the results.
- It also promotes the long-term permanence of healthy lifestyles. As *motivational quality* increases in durability, the proportion of transcendent and intrinsic motives, in turn, also increases. The

pedagogical component of *perseverance* in the fulfillment of Specific, Attainable, and Measurable goals (CAM goals) leads to the experience of "small victories", which is a very important source of motivation since it makes the "it can be done" conviction essential to advancing in the acquisition of the habit. In addition, it promotes cumulative goals throughout the formative process (R43). It is interesting that none of the items to measure the performance of this pedagogical component presented low levels of assessment.

The importance of reflection in *motivational quality* is worth noting. Teachers expressed a high grade for the indicator of the relevant use of pedagogical resources to promote the maintenance of seeking to acquire positive habits, as the DHI model causes spaces for *reflection* that lead to the formation of convictions (R25). They specifically underlined the good use of simple texts (R27) and short sentences (R28). *Reflection* is a pedagogical component that contributes to motivation in general (extrinsic, intrinsic, and transcendental). At this point, perhaps we should examine, in greater detail, the composition of the types of motivation included in the pedagogical component of reflection, because certainly, the motor force that pushes the desire to acquire a habit can come from the interest in obtaining some utility (health, for example), from the pleasure that the habit entails (the pleasure of daily walking, for example), from the appeal of the habit itself (for the prestige of being an athlete, for example), or from helping others (as when one accompanies someone who needs it to maintain his or her heart health, for example).

It is significant that the component best evaluated by teachers is a *good environment*, that is, the type of personal relationships—colleagues, educators, family members—that favor the acquisition of healthy habits. Specifically, they have pointed out, as qualities of the model, the presence of appreciation and affection on the part of the trainers towards the students (R16), the frequent and close monitoring of education by educators (R19) and parents (R17), and the good example of their peers (R22). A good relational environment encourages looking at others, instead of into oneself, to transcend, a priority component of *motivational quality* and the integral development of one's personality.

In relation to the *operability* of the model, the indicator "adequacy and relevance of training and education resources for teachers, managers, and trainers" stands out. They are again factors that contribute to a *good environment*. Indeed, teachers perceive that managers assume the DHI model as the fundamental purpose of school dynamics (R9) and therefore provide sufficient training for teachers to be habit-formers at all times (R5).

The areas of improvement of the DHI model are elements evaluated slightly lower than the strengths and reflect the desire that the ideal version of the model is completely fulfilled in everyday practice.

- First, teachers considered that the *operability* of the DHI model could be improved if they had more knowledge of the pedagogical components (R1, R2, and R11), as well as parents (R7 and R8) so that they could integrate them into their respective roles without difficulty.
- Secondly, the development of positive habits (R45 and R46) would score better if there were an improvement in human relations between members of the school (R48), or if the students lived the model in such a way, and became so enthusiastic about it (R34) that they would spontaneously transfer it to their respective families (R39).
- Lastly, it would be better for the students to express their personal satisfaction to a greater extent (R38)—that is, if the intrinsic *motivation* is verified. Teachers record that transcendental *motivation* is not the one that is most prominent in students' motivations (R39), and it could increase enthusiasm for the challenges of the DHI model (R34).

It is noteworthy that the three areas of improvement include the three groups of people involved in the educational process: parents, educators (featured characters of the "institutional climate"), and students.

On the other hand, the qualitative evaluation coincides with the quantitative one: both positively value the DHI model. Limitations, on the other hand, are found—explicitly pointed out in the open responses—in operational factors. From their responses, we can see that teachers, while acknowledging that principals support the model and provide means for its implementation, feel that they still need more training and follow-up on their work, as well as more parent involvement.

## 5 CONCLUSIONS

The DHI model seeks to guide educators and institutions to effectively overcome the challenge of children form habits, youth, and adults, as part of a set of educational projects supported by specialized research in key areas of philosophy and psychology.

Its systemic approach promotes *motivational quality* by influencing the intelligence, will, affections, and context. *Motivational quality* is a concept that also considers the person in an integral manner. In this sense, it would be interesting to develop a meta-analysis of such educational projects from the three-dimensional personality perspective: cognitive, emotional, and behavioral, and from the systemic context in which the individual develops. When the individual learns to harmonize these personal dimensions in a real context, he/she acquires the internal governance of all his/her faculties that translate into psychosocial adjustment and reliable, long-term relationships. Due to the intention of *perseverance*, typical of the DHI model, it is also recommended that a longitudinal study be carried out regarding its effectiveness, in order to give continuity to the pedagogical validation. This matches the opinion of teachers who have applied DHI's methodology for the formation of healthy lifestyles, as they see it as a guide to their educational work. Integrating the three dimensions of personality into the systemic context and promoting *motivational quality* makes it a model of human excellence.

#### **ACKNOWLEDGEMENTS**

To the creator of the model, Alejandro Salas Cacho, and the support he provided in using the DHI files and SOFI infrastructure to apply the study to the participating schools.

#### **REFERENCES**

- [1] Desarrollo Humano Integral, A.C. Accessed 1 December, 2021. Retrieved from [1A] http://www.desarrollohumanointegral.org/ [1B] https://www.sofi.mx/; [1C] http://www.saludvaloresydeporte.org/ [1D] https://www.facebook.com/habitossaludables.mx
- [2] L. Iñigo, Para ser feliz forjando valores (26 vols.). México: Publishing House Edumás, 2010.
- [3] M. Toledo and C. Torrero, "Evaluación del desarrollo del programa 'Forjando valores' de la empresa educativa Más (EDUMÁS, S.C.) en escuelas piloto Ford." México, 2007.
- [4] University of Navarra, "2018 Templeton Prizes for Best Practice in Character Education in Latin America," Retrieved from https://www.unav.edu/en/web/premios-templeton
- [5] J. A. Durlak et al., "The impact of Enhancing Students's Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions," *Child Dev.*, vol. 82, no. 1, pp. 405–432, 2011, doi: 10.1007/s10972-014-9381-4.
- [6] B. Morgan, L. Gulliford, and K. Kristjánsson, "A new approach to measuring moral virtues: The Multi-Component Gratitude Measure," *Pers. Individ. Dif.*, vol. 107, pp. 179–189, 2017, doi: 10.1016/j.paid.2016.11.044.
- [7] Desarrollo Humano Integral, "Etapas del proceso de adquisición de un hábito," Guadalajara, 2013. Retrieved from https://www.unav.edu/documents/8554517/0/adquisicionhabito.pdf.
- [8] Center for the 4th and 5th R's. Accessed 1 December, 2021. Retrieved from: http://www2.cortland.edu/centers/character/.
- [9] U. of Birmingham, "The Jubilee Centre for Character & Virtues," 2012. Accesed 1 December 2021. Retrieved from https://www.jubileecentre.ac.uk/.
- [10] U. Samford, "The Hope Institute," 2016. Accesed 1 December 2021. Retrieved from https://www.hopeinstitute.org/.
- [11] P. Alonso-Stuyck, "Estilos educativos parentales. Forjando tejedores de relaciones", in *Antropología cristiana y ciencias de la salud mental*, (M. Lafuente, M. Álvarez, M. Echavarría, eds.), pp. 401-418, Madrid: Dykinson, 2021.
- [12] J. Reeve, Understanding motivation and emotion, 7. Hoboken, New Jersey: Wiley, 2018.
- [13] D. E. Papalia and G. Martorell, Experience Human Development. New York: McGraw-Hill, 2015.

- [14] D. Bruzzone, *Afinar La Conciencia. Educación y búsqueda de sentido a partir de Viktor E. Frankl.* Buenos Aires: San Pablo, 2011.
- [15] P. Alonso-Stuyck, "Relationship Weavers; integrating resources," *In press*, 2022.