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IMPORTANCE PURPOSE IN LIFE IN REDUCING AGGRESSIVE RESPONSE IN ADOLESCENCE

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KEY WORDS

Sense of Life
Aggressive Behavior
Reactive
Aggressive Behavior
Adolescence

ABSTRACT

In order to study the Purpose in Life related to the Aggressive Behavior, we applied the translated version of "Life Purpose Test" by Crumbaugh and Maholich and the Violent Behavior Scale (CA) by Little on 771 subjects, of which 354 were men and 409 were women, with ages between 11 and 17 years, all of them students schools belonging to the province of Valencia. The results are congruent with the initial hypothesis; The Purpose in Life is negatively correlated to the subject´s Aggressive Behavior, so that people having a high level of Sense of Life will less involved in aggressive behavior.

Introduction

During adolescence, a person faces different changes among which figures the search for an identity and finding a meaning to one's life. This research supposes an important psychosocial adjustment that, frequently, is made difficult because of the implication of the adolescent in aggressive acts (Cava, Buelga, Musitu & Murgui, 2010). So, it is important to examine the relationship between finding a meaning and aggressive behaviour, above all taking into account the shortage of investigation literature which connects both factors.

Viktor Frankl defines the meaning of life in the context of the named logo therapy as "psychotherapy focussed on the meaning and as such, wishes to aid the fight for a meaning, maybe the most human of all human ambitions" (Lukas, 1983:10). But logo therapy is also a therapeutic method, a general conception of a person (Noblejas de la Flor, 2004), having as a principal motivation the search for a meaning to life. The meaning of life is defined as the capacity to guide oneself correctly, to be self-responsible and to look for a self-improvement project (Magaña, Zavala, Ibarra, Gomez & Gomez, 2004), which also positively affects a person's mental health (Rodriguez, 2007).

More recent work emphasized the search for meaning as an important psychological construct separate from meaning in life. They define the search for meaning in life as the strength, intensity, and activity of people's desire and efforts to establish and/or augment their understanding of the meaning, significance, and purpose of their lives (Steger, Kashdan, Sullivan & Lorentz, 2008). On the other hand, Martinez (2011), defines the meaning of life, the affective-cognitive perception of values that invite the person to act in one way or another in specific situations or life in general, and giving the person coherence and identity.

In the last decades several instruments have attempted to measure the meaning of life and the aggressive behavior during adolescence. In a review of Martinez, Trujillo, Diaz Del Castillo & Jaimes (2011), found results in that line. By *Life Purpose Questionnaire* (Damon, Menon & Cotton Bronk, 2003), Melton & Schulenberg (2008) conclude that the meaning of life is negative correlated to depression, anxiety, drug, alcohol and aggressive response. Moreover, Debats (1990) support the negative correlations between the purpose in life and negative and hostile behavior in a sample of universitary students based on the *Life Regard Index* (Francis & Hills, 2008).

It is usually considered that the meaning of life presents four different aspects (Noblejas de la Flor, 1994): Perception of sense, which includes questions about the capture of reasons to live life and the evaluation of this in general: Experience of meaning, due to which the questions included feeling one's personal existence to be full of good things having a more positive attitude towards daily life: Objectives and Tasks, which includes questions connected to the position of objects connected to concrete actions in life and the responsibility we feel towards these, and Dialectic freedom-destination which considers questions like the tension between freedom and man's destination in life and facing up to death as the inevitable destination.

Besides, in recent years there has been an increasing interest in the study, evaluation and treatment of aggressiveness. For Cangas, Gazquez, Perez-Fuentes, Padilla & Miras (2007) in the Spanish context, approximately 40% of school children see or participate daily in aggressive behaviour. For Cosi, Vigil-Colet & Canals (2009) this increase produces a big social impact in the educational, work and family fields.

This aggressive behaviour is defined as a physiologic answer, of human nature, which encourages the individual to act violently for the survival of the species (Benítez, Medranda de Lázaro & Montón, 2006). We highlight, depending on the type, of manifests aggressiveness, which implies a direct confrontation with other to harm them with strike, insults and threats and, relational aggressiveness indirect, which includes damaging interpersonal relationships with another person avoiding direct confrontation with the victim (Card, Stucky, Sawalani & Little, 2008; Gómez, Gala, Lupiani, Bernalte, Miret, Lupiani & Barreto, 2007; Griffin & Gross, 2004).

And depending on the behaviour, Little, Brauner, Jones, Nock & Hawley (2003) distinguish between pure aggressiveness, produced naturally and spontaneously in the person directly approaching the objective; reactive aggressiveness, connected with the behaviour that implies a defensive response due to a third party's provocation, and finally instrumental aggressiveness, deliberate behaviour that implies a behaviour in order to obtain an objective.

The investigation of aggressive behaviour has concentrated principally in the relationship between this with different variables adjustment indicators. Literature confirms a strong and constant union between the adolescent's psychosocial adjustments and aggressive response, either in aggressors (Cava, Buelga, Musitu & Murgui, 2010; Estevez, Murgui, Moreno & Musitu, 2007).

So, negative relationships of reactive aggressiveness have been found with family self-esteem and satisfaction with life (Buelga, Musitu, Murgui & Pons, 2008; King, Huebner, Suldo & Valois, 2006), the family climate (Decker et al., 2007; Jaureguizar & Ibabe, 2012; Estévez, Murgui & Musitu, 2009; Gómez, 2010) and the relationship of determined factors of upbringing (Tur-Porcar, Mestre, Samper & Malonda, 2012).

In particular, reactive manifests aggressiveness is associated with the presence of mood problems such as depression and anxiety in adolescence (Card & Little, 2006; Fite et al., 2010), which would put these adolescents at risk of drug use (Fite et al., 2012; Pardini, Lochman y Wells, 2004), finding the point of union between the two levels of impulsivity that characterize this type of aggression (Moeller, Barratt, Dougherty, Schitz & Swann, 2001).

Never the less investigation between reactive aggressiveness and obtaining a meaning is scarce. So, some studies analyze the relationship between both variables. Martinez et al. (2011) found that the lack of a sense of life is directly related to increased aggressive response in the adolescence. Different studies show that, by one hand, adolescence is characterized by conformism and lack of goals and objectives, as well as destructive behaviors, frustration and unhappiness (Risco, Cabaco & Urchaga, 2011) and, on the other hand, it is a period characterized by the search for meaning and answers about life and existence (García Ramos, 2009).

In this sense, Anderson & Bushman (2002) find a positive relationship between aggressive conduct and personal factors such as a lack of empathy, impulsive behaviour, irritability and a positive reaction towards aggression. On their side, Magaña et al. (2004) obtain a positive relationship between a lack of sense in their lives and emotional maladjustment with feelings of boredom y desperation that, on occasions, produce aggressive behaviour.

In this way, the main objective of this investigation is the analysis of youth's aggressive response or reactive aggressiveness, both manifest and related, combined with a lack of meaning in their lives during adolescence, and the existence of sex differences in both variables.

Method

Participants

Out of 715 participants in the investigation, 10 of them did not complete the trials totally, so their information was not considered in further analysis. The sample was made up to 40% masculine. The students were between 11 and 17 years old and studying from 1st to 4th of E.S.O.

10 schools were chosen, at random from the city of Valencia and it's metropolitan area, nevertheless, two of them refused to participate. The investigation team contacted the management of the rest of the schools to inform them about the objectives of the investigation. From the eight interested schools, one finally declined to participate because the trials could not be carried out within the school programme. From seven centres, three were Public and the rest Private and Concerted.

Instruments

The following scales were administered.

Purpose of Life Questionnaire (Crumbaugh y Maholik, 1969; Noblejas de la Flor, 1994) made up of 40 items that evaluate the meaning of life and the void that exists in the human being. It is composed by 4 factors: Perception of purpose (My life..."; alpha de Cronbach = .87); Experience of purpose ("My life...", alpha de Cronbach = .64); Goals and Tasks ("regarding the realization of objectives in life...",alpha de Cronbach = .77), and Dialectic fate/freedom (Regarding death I am ..."; alpha de Cronbach = .69).

Scale of Violent Conduct at School (Estevez, Murgui, Musitu y Moreno, 2008; Little, 2003). Describe the adolescent's level of aggressiveness regarding his companions with a 4 point scale (1= never; 4= always). For this investigation the factors of reactive aggressiveness were used, both manifest (for example "When somebody hurts me, I hit him", alpha de Cronbach= .78), or reaction (for example, when somebody makes me angry, I treat them with indifference or I stop speaking to them"; alpha de Cronbach = .62).

Results

In the first place a MANOVA was carried out to see if differences existed due to gender in the four aspects of meaning achievement: perception of purpose-goals and tasks- experience of purpose-dialectic fate/freedom. The results showed significant statistical differences between the two genders (Wilks = .976; $F_{4.712}$= 3.558; p< .01).

The results of the ANOVA showed differences in: dialectic fate/freedom (F1.715= 6.795; p< .01) and the men scored over women. No significant differences in perception of purpose were found (F1.715= .241; p> .05); experience of purpose (F1.715= .080; p> .05) nor in goals and tasks (F1.715= .225; p> .05).

The MANOVA calculated with the two types of reactive aggressiveness showed gender differences (Wilks = .788, F2, 714 = 84.881, p < .01), although the result of individual ANOVA show significant statistic differences exist between the two genders in the aggressive variable reactive manifest (F1.715= 148.338; p< .01), but not in relational reactive aggressiveness (F1.715= .026; p> .05) (see table 1).

Table 1: Means (dt) for Men and Women of Reactive Aggressiveness and Factor of Purpose in Life

	Men	Women
Perception of Purpose	5.44 (1.65)	5.40 (1.65)
Experience of Purpose	5.08 (1.38)	5.06 (1.37)
Goals and Tasks	5.37 (1.31)	5.34 (1.29)
Dialectic fate / freedom	5.10 (.58)	4.92 (.61)
Reactive Manifests Aggressiveness	1.97 (.62)	1.42 (.46)
Reactive Relational Aggressiveness	1.88 (.50)	1.88 (.51)

Source: Senabre, Murgui and Ruiz, 2011.

Then, the correlations between PIL factors and two types of reactive aggressiveness for men and women were calculated (table 2). For males, the relationship between manifests aggressiveness and PIL factors were not significant. For women, unless the relationship with the dialectic fate / freedom, all were significant (goals and tasks, experience of purpose and perception of purpose).

In respect of relational aggressiveness in the male group only the dialectic fate / freedom had a significant relationship and, in women, dialectic fate / freedom, experience of purpose and goals and tasks.

Table 2: Pearson Correlation between Reactive Aggressiveness, Manifests and Relational, and Purpose in Life for Men and Women

	Perception of Purpose	Experience of Purpose	Goals and Tasks	Dialectic fate /freedom
Reactive Manifests Aggressiveness	-.014 (-.194**)	-.060 (-.202**)	-.097 (-.244**)	-.048 (-.041)
Reactive Relational Aggressiveness	-.024 (-.051)	-.063 (-.103*)	-.042 (-.138**)	-.135* (-.116*)

* p < . 05; ** p < . 01

Source: Senabre, Murgui and Ruiz, 2011.

Then, by the stepwise procedure, each type of aggression is returned on variables whose correlations with aggression had been significant. The variables were entered in descending order of the magnitude of their correlations. Table 3 shows the result of the last step for each type of aggression shown.

Table 3: Regression Equation of Reactive Manifests Aggressiveness and Reactive Relational Aggressiveness for men and women

Reactive Aggressiveness:		Manifests	Relational	
		Women	Men	Women
Goals and Tasks	B (S.E.): Beta (t):	-.073 (.015) -.244** (-4.887)	-- --	-.061 (.036) -.088 (-1.683)
Dialectic fate /freedom	B (S.E.): Beta (t):	-- --	-.089 (.036) -.135* (-2.428)	-.039 (.018) -.117* (-2.227)

* p < . 05; ** p < . 01

Source: Senabre, Murgui and Ruiz, 2011.

So, while for men any aspect of PIL was a significant predictor, in the case of women, are the goals and tasks that are related to aggressive behavior manifested reactive (b= -.244, p < .01). Goals and tasks also was significant when predicting reactive relational violence but ceased (but remains in table 2 by approaching significance) in incorporating the dialectic fate / freedom (b= -.117, p < .05). With respect to male, dialectic also significant (b= -.135; p < 0.05). All other variables were not incorporated into the equation for any of the steps.

In order to check the capacity of prediction of the different variables to obtain a meaning for the aggressiveness manifest and reactive relational a regression has been carried out, considering aggressiveness as a dependent variable and establishing each factor of meaning achieved as independent variables. Regarding the regression equation it was significant regarding direct aggressiveness (F4.705=8.707; p<. 01) and, for indirect aggressiveness (F4.699=4.362; p< . 05).

Discussion

This investigation has analysed the relationship existing between meaning achievement and aggressive behaviour reactive of the adolescent. The results show that a relationship exists directly between both variables, which suggest that when the motives reduce to live one's own life adolescents feel more involved in violent behaviour. These results are in line with those obtained by Mestre, Tur, Samper y Latorre (2004) which obtained a positive relationship between lack of meaning in their lives and emotional lack of adjustment, feelings of boredom and desperateness which on occasions produce aggressive behaviour.

The results of the study also manifest the existing relationship between each one of the factors on achieving a meaning and direct aggressiveness and indirect reactive, which indicates that when the motives are reduced to live one's own life and the value of this, when one has poor personal experience regarding well lived situations, when one has no or due to a situation objectives or goals in life and, the questioning about the meaning of life demises and one faces death as an inevitable destination, adolescent become more involved in direct and cove frustration to find a meaning to life leads to a void existence, characterized by an increase in aggressive reactions. Recent works confirm the relationship between the aggressive response and the search a purpose in life in adolescence (Magaña et al., 2004). In the same line, Gambini (2005) confirm that reaching a meaning is a primary factor in the construction of the self-identity for the young adolescent, where he/she is more vulnerable to the signs of his own weakness, or in the way of irrational ideas and lack of control over his impulses. Actually, Mestre et al. (2010) find that violent behaviour is related to the lack to the lack of emotional control, which characterizes the response to the reactive aggressiveness.

Regarding the gender role, we note the gender as a discriminating factor, showing males to be more aggressive than females, with a higher grading in the subfactor which evaluates the tension between freedom and man's destiny and the facing up to death as an inevitable destination. Other results show that women obtain a much higher note in the factors that achieve a meaning in adolescents (Gallego-Perez et al., 2007). Other research confirm that no differences between genders in regard to the achievement of meaning of life (Längle, Orgler y Kundi, 2003).

In relation with the aggressive response, gender is shown as a discriminating factor, by showing that the male is more aggressive than response the female in behaviour which implies a direct confrontation towards others as a defensive response to a provocation which implies a particular situation which implies a strong emotional state which overflows the c capacity of the individual. Results coinciding with others confirm those males are more aggressive than women (Archer, Ireland & Power, 2007, Tappter y Boulton, 2004). Various studies coincide to show that direct verbal aggressive behaviour and /or physical are more frequent among males (Cava, Musitu y Murgui, 2007; Little et al., 2003).

Regarding the achievement and aggressive behaviour, we have dug deeper using a regression analysis, which permits us to conclude that the absence of targets and objectives permits us to foresee reactive aggressive behaviour directly and indirectly. Maybe, the lack of objectives to fight for and a lack of maturity in the way one faces life and death leads to a state of frustration which implies a high emotional state which when it overflows makes him react in a violent way. Recent work shows as frustration to find the meaning of life leads to existential vacuum, characterized by increased aggressive reactive (Chetan Arvind, 2009).

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ASSESSMENT

Basic Concepts, Thoughtful Decisions

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KEY WORDS

Assessment
Evaluation
Formative assessment
Summative assessment
ELT
EFL

ABSTRACT

Institutions from basic to higher education in Mexico that offer courses of English as a Foreign Language rely heavily on the administering of assessment, usually a formal type of assessment. However, the literature shows how important it is the involvement of other types of assessment in the classroom for effective language learning to take place. For instance, assessment for learning, which consist of a continuous assessment where learners receive feedback so greater learning occurs, what is more, it enables teachers to modify their teaching ways as they reflect on the learners' progress. To show how assessment is carried out in our context, this research project focuses on a case study within the CAADI from FOD in the UANL.

1. Understanding assessment

1.1. Difference between assessment and evaluation

Assessment and evaluation, especially in the ELT field, are often used indistinctively, and aiming the same purpose: the obtaining of grades that show what students have learned. In this sense, it is imperative to mention that even though assessment and evaluation can serve that purpose through the implementation of tests and examinations, assessment should be more directed to providing feedback to learners so that they know what they are capable of doing, linguistically speaking, and to know how to achieve better competencies in the English language. Therefore, the concepts of assessment and evaluation must be well defined so that they can be differentiated.

The evaluation seeks a number, grade or level, being the final result of a process. Parker, P., Fleming, P., Beyerlein, S., Apple, D. and Krumsieg, K. (2001, p.01) point out that evaluation "is a judgment or determination of the quality of a performance, product, or use of a process against a standard." There are a number of objectives for evaluation to take place, for instance, to determine the language level of a student, to observe what students have achieved at the end of the course in terms of content, to see how well learners can manage one of more language skills, among others.

On the contrary, assessment serves another purpose; it requires some type of accompanying or guidance through a process, in this case, the language learning process. It is the task of the teacher to let the learners know where they stand, how much they are progressing as well as how to reach the desirable language objective, and assessing students properly can help to do so.

Cameron, L. (2001, p.214) ascertains this idea when stating: "assessments can motivate learners, help teachers plan more effective lessons, inform the improvement of instructional programs, and support further learning with feedback" (Cited in Yoneda, 2012, p.42). This shows that assessment delivers a win-win situation, where instructors, learners and institutions obtain the desirable objectives. Cameron (2001) also notes that assessment must be a collaborative act between teacher and student, and that it must support the aims of the lesson (p.42). Such statement displays a relationship where the teacher guides the learners by providing positive but real feedback to learners, and using the assessment to modify his teaching ways to obtain better language skills on learners. In other words, assessment is a dynamic system where teacher, students and the lesson plan are involved. Teachers should make clear for learners not only what aspects of the language to improve, but also how they are doing in the process.

Indisputably, evaluation and assessment are two different processes with dissimilar purposes. However, both aim to improve learners' language skills. Moreover, these learning tools should not be seen as conflicting, but instead, as balancing resources that will support principally learners, as well as instructors and therefore, institutions. The following chart provided by Parker et. al (2001, p. 2) clearly illustrates and summarizes the differences between these two concepts (assessment and evaluation):

Table 1: Differences between assessment and evaluation

	Assessment	Evaluation
Purpose	To improve future performance	To judge the merit or worth of a performance against a predefined standard
Setting Criteria	Both the assessee and the assessor choose the criteria.	The evaluator determines the criteria
Control	The assessee - who can choose to make use of assessment feedback	The evaluator - who is able to make a judgment which impacts the evaluatee
Depth of analysis	Thorough analysis by answering questions such as why and how to improve future performance	Calibration against a standard
Response	Positive outlook of implementing and action plan	Closure with failure or success

Source: Parker et al. (2001, p. 2).

1.2. Types of assessment

Over the years experts in the field of education have broken paradigms on how and why to assess learning and learners by developing, proposing and implementing a variety of ways in the area of assessment with the solely purpose of assisting both, teachers and learners to attain language learning objectives. These types of assessment have evolved over time from the teachers and researchers' reflection on the necessity of achieving greater learning in their own contexts, which happens to be similar to others, consequently, these are likely to be adapted to circumstances where situations are alike. Having a wide range of types of assessment can make it easier for teachers to put into practice such an essential procedure, resulting in a beneficial teaching-learning process. The two types of assessment that will be developed along this theoretical framework are: assessment for learning (formative assessment) and assessment of learning (summative assessment).

1.2.1 Assessment for learning

When speaking of assessment for learning, it means that the focus of this is in the process, and sometimes it is referred to as formative assessment. That being said, let us recall that a feature of assessment is delivering feedback to learners. In the same line of thought, Jones (2005, p.1) remarks that "the principal characteristic of assessment for learning is effective feedback provided by teachers to learners on their progress. The value of feedback is dependent on two factors: the quality of feedback, and how learners receive and ultimately use it." Hence, to be capable of offering adequate feedback, teachers need to be trained since most teachers are unaware of such practice. Moreover, learners need to know what to do with it –feedback-, once again, teachers must be trained to train students so they are capable of managing the information provided to reach their desirable level of English, in this case.

Assessment for learning is about conducting pertinent action while the teaching-learning process is occurring, not only until the end of the course. Noyce and Hickey (2011) mention the importance of assessing learners this way, stating that this is done "…in order to give useful feedback and make timely changes in instruction to ensure maximal student growth." (Cited in Alvarez, L., Ananda, S., Walqui, A., Sato, E., & Rabinowitz, S., 2014, p.03). Implementing this type of assessment will aid instructors to identify possible difficulties learners are facing, and consequently modify their ways of teaching in time to achieve greater benefits for language learning.

1.2.2. Principles of assessment for learning

Carrying out assessment for learning as well as any other type of assessment might be a challenge for instructors, especially when they are not aware of the procedures to follow to enhance their teaching practices within the terms of such assessment. To cope with this problematic Alvarez et al. (2014, p. 3-4) suggest six principles for effective assessment –for learning-, and they will be described next:

1. Promotes student learning: It must be clear that this type of assessment fosters the assessing of students learning on a continuous basis, and by doing so learners are able to actually appreciate their results and whether they have attained the short-term objectives, being involved in the process.
2. Elicits evidence of learning through a variety of tasks: Assessment for learning can be executed in different manners for the teacher to gather information about students learning and students learning progress. Shavelson (2008) establishes that such tasks can be planned or opportunistic, and he proposes that tasks can be:

Table 2. Types of Tasks Instructors Can Implement under Assessment for Learning

Type of task	Description	Example
On-the-fly	Formative assessment occurs in response to an unexpected "teachable moment"	To address a misconception evidenced by a student comment, a teacher might pose an impromptu question to identify the source of the misunderstanding.
Planned-for interaction is purposeful	A teacher designs ways to identify the gap between what students actually know and what they should know.	A teacher might pose prepared-in-advance tasks to students which are tied to the learning goals.
Curriculum-embedded	Formative assessments are inserted at specific points in a unit	A teacher might engage students in the solution of a novel problem that weaves student understanding of concepts introduced in that unit before deciding whether to proceed to the next unit

Compilation based on information cited in Alvarez et al., 2014, p.3

Analyzing the content of the previous table provides a general insight of great support for teachers to know when to assess, having in mind that such assessing is to be done through the teaching-learning process. From the different tasks teachers will obtain different outcomes that can be used as evidence of the learning process and/or as information to make adjustments to the teaching practice.

3. Changes the roles of teacher and students: Unlike any other ways of teaching and assessing, assessment for learning is student-centered. Teacher acts as the guide, and will clearly state the purpose of the class, the outcome of it, as well as providing effective feedback. As for the learners, according to Shavelson (2008) "not only perform tasks that provide evidence for their current learning, but they are involved in self-assessment." (Cited in Alvarez et al.: 2008, p.4). It has been stated before how much students are in need to be trained so they can be part of this assessment model and be able drive their learning experience based on teachers' feedback and his own reflection once having an outcome and the feedback provided by the instructor.
4. Uses learning progressions to anchor learning goals and monitor learning: As students reach short-term objectives and teachers observe such progressions, new objectives are set and teachers can plan according to the learners´ needs to become proficient in the aspects of the new language aimed within the objectives. By monitoring students learning and being aware of the their progression and needs,

teachers can implement instruction strategies to support learners on the expected language learning.
5. Results in meaningful feedback and adjustments to improve instruction for students: One of the main features of assessment for learning is feedback, which must be clear enough for students to know where they are and where they need to be, providing the necessary tools to help them cope with such situation timely. Moreover, within this principle, Heritage (2013) depicts the importance of the teachers´ intervention to help students develop greater languages skills "Learning opportunities for students are created based on an assessment of what students have learned and what they have misinterpreted." (Cited in Alvarez et al., 2014, p. 4). This is, instructors take into account both what they observe what students have learned as well as the flaws they perceive throughout the language sessions.
6. Enables students to become self-regulated and autonomous learners: Undoubtedly assessment for learning implies a variety of perquisites to those involved in the teaching-learning process. One of these advantages is that during the assessing procedure students gain enough confidence and knowledge to become autonomous learners.

This type of assessment offers efficient language learning experience if conducted properly, taking into account the principles and adequate strategies to carry it out within English language classrooms. On the one hand, teachers must set the goals, define the tasks for students, give clear feedback to learners and be able to adjust their teaching practice along the course. On the other hand, students will be capable of developing metacognitive skills that will allow them to monitor their language learning progress and develop their own ways to acquire more of it.

1.2.2. Assessment of learning

Unlike the prior type of assessment, summative assessment usually comes at the end of the course, and it operates as a tool for the teacher to determine a grade based on students' results but also to analyze how much students have learned until that moment. Moreover, Ezir (2013, p. 41) claims that summative assessment "is used to communicate students' abilities to external stakeholders." This indicates that learners' achievements are useful to further persons other than the teachers and students, in order to improve the overall teaching and learning practice. Stakeholders are, according to Gall, Gall and Borg (2005, p. 453) "individuals who are involved in the phenomenon that is being evaluated or who may be affected by or interested in the findings of an evaluation." These can range from students themselves, those involved in the making of the curricula of the program to the people connected with the education policies matters and employers. The information obtained from the students' summative assessment delivers significant information to the stakeholders for their own purposes; and for the language classroom those scores are useful to realize "students' progress with regard to a course and/or standard" (Wisconsin Center for Education Research, 2009), hence, it may be inferred that summative assessment is a type of standardize assessment since in the end, it measures language learners' skills against an established content criterion.

Due to this, some researchers such as Garrison and Ehringhaus (n.d., p. 01) affirm that "it can only help in evaluating certain aspects of the learning process" data extracted from this type of assessment can give a valuable insight of the efficacy of the program and its content, although it may not show the actual students' learning nor their abilities to manage the language adequately.

In our context prevails the summative assessment as the most dominant way to assess students through quizzes or exams (mid-term and final) and without much more implication of teachers in the teaching duties. Instructors are driven by the institutions to focus and look for high numbers or grades, or at least to have students passing with the minimum required. As a consequence, there are a vast amount of cases where learners are in classes that do not correspond to the language level they actually have attained; and this might be the result of employing summative assessment as the only way to assess students.

1.3. Techniques for assessing

To accomplish competently any type of assessment instructors can make use of different techniques that will help them obtain the data that is required for their own purposes. There are plenty of resources educators and researchers have developed to support teachers to attain the outcomes they are pursuing; teachers should select the ones that are appropriate not only with his teaching ways but more importantly, according to the type of assessment(s) they are to put into practice in the language classroom, having always as target an efficient language learning experience. The Waterloo Region School District School Board (2013, p.13) even suggests that "Teachers may develop with students the criteria they will use to assess learning, helping students understand the evidence of learning required to demonstrate knowledge and skills. " This can be carried out as long as it fulfills the language necessities students need to cover and master, and if the type of assessment allows it. This theoretical framework will only focus on certain techniques of assessment: observation and tests.

1.3.1. Observation

Observation is an assessment technique that has been in use in the classrooms. Although it may seem simple, observation requires beforehand preparation since this technique follows a series of steps to follow through which should be anticipated to assess students well and compile the required outcomes from it. Maxwell (2001, p. 01) asserts that "teacher observation is capable of providing substantial information on student demonstration of learning outcomes at all levels of education." If this technique is implemented correctly it can provide objective and valuable information about students learning status. There are two possible scenarios in which observation may arise suggested by Maxwell (2001).

The previous chart illustrates how observation can be planned (planned observation), where teachers ahead of time on the kind of activities that could provide outcomes teachers will expect from students, and based on the observation of those, assess them. Furthermore, the chart provides information about how observation can be unplanned as well (incidental observation); the classroom interaction will certainly present situations where teachers can take advantage of, in order to assess students and generate some sort of language reflection and/or knowledge of it. It is important to point out that there are different aspects that teachers may be observing to assess learners, Maxwell (2001, p.04) mentions that some of these aspects can be events, performances, activities, or artifacts. That is to say, observations may be aimed at the process, at the product of such process or both, as Maxwell (2001, p. 05) describes "An artefact is something constructed by the student, for example, a worksheet, a piece of writing, a painting, a composition,— in other words, a product of an activity that shows evidence of the work done in it. Teacher observation is not primarily concerned with the artefact itself but with the way in which the artefact was produced" It should be noted that although the author mentions the artefact or product is not the main point of observation, it could also be used.

Table 3. Types of Observation

Type of Observation	Characteristics
Incidental observation	Occurs during the ongoing (deliberate) activities of teaching and learning and the interactions between teacher and students. In other words, an unplanned opportunity emerges, in the context of classroom activities, where the teacher observes some aspect of individual student learning. Whether incidental observation can be used as a basis for formal assessment and reporting may depend on the records that are kept.
Planned observation	Involves deliberate planning of an opportunity for the teacher to observe specific learning outcomes. This planned opportunity may occur in the context of regular classroom activities or may occur through the setting of an assessment task (such as a practical or performance activity)

Source: Compilation based on information by Maxwell (2001)

Depending on the type of observations that will be carried out, as well as what is to be observed, teachers can utilize different evidences that will support them to assess students based on the information obtained.

When teachers focus on observing the processes they will be able to gather data (evidence) to assess learners through a variety of means. Maxwell (2002, p.8) lists two main ways of collecting such evidence: the direct record and the written record. As for the direct record, teachers can collect the evidence using 'traces', which refer to visual recordings as audios, videos and photographs; these tools are of great help for teachers to observe details they might have not perceived during the actual class. And the written records, that are gathered using observation sheets where descriptions in the form of comments about students' performance are made and the use of checklists or rubrics, additionally teachers can create logbooks where they record in written form incidents occurred in the classroom; to avoid bias instructors should write them immediately so they print significant and valuable details.

On a daily basis teachers do observe their classrooms situations and students, but if they become more methodical and reflective in their ways of observing, they will be able to assess students in such way that it will have a major and positive impact in the students' language learning. Nowadays there are plenty of technological tools that can easily support teachers to carry out this observation technique.

2. Background of assessment in Mexico

For Ramirez (2013) in *Diez años de investigación en enseñanza de lenguas extranjeras,* out of all research work done in Mexico from 2000 to 2011, only 4% corresponds to the subject of assessment. Furthermore, a first approach to recent articles in some of the foremost international magazines on applied linguistics and ELT revealed evidence that such matter (assessment) has not been broadly studied. In the magazines *Applied Linguistics*, *Foreign Language Annals*, *The modern Language Journal*, *Annual Review of Applied Linguistics*, *ELT Journal*, *Recall* and *Language Teaching* it can be seen how authors share their insights on traditional topics, and others which can be catalogued as novelty, but then again, the subject of assessment is not noticeable. And throughout a revision of the indexes of such magazines edited in 2014 and 2015, three articles associated with assessment could be found, though none of them directly related to the established proposal.

According to the *English Proficiency Index* from *EF Education First* (Forbes Mexico, 2013) in the last six years the level of English in Mexico dropped from moderated to low. The described situation presents a problematical outlook for the country as it limits its current capability as well as its future economic development. Economic and cultural globalization requires more competitive human resources – internationally speaking.

The report *Sorry. El Aprendizaje de inglés en México* (2015) reads that we have an English failing system, in which diplomas, grades, and certifications are given and yet there is no guarantee of real learning; this is the reason why it is imperative to find solutions for such unfortunate situation. Moreover, this report assures that it is vital for English teachers to have the necessary tools to implement successful methodologies for better teaching ways.

A probable deficiency lays on how teachers are trained in terms of assessment, and in the malpractice of teachers when assessing inside a classroom. Lopez (2010) declares that the lack of training or formation hinders “assessments to be used in a constructive manner so it facilitates the teaching and learning process.”

2.1. Context

The Universidad Autónoma de Nuevo León (UANL) is an institution of higher education situated in San Nicolás in the state of Nuevo León, Mexico. It is one of the most important universities in Mexico, especially in the northern part of the country. The UANL offers studies at high school level, as well as undergraduate, Master and Doctoral programs that benefit the academic growth of the individuals from the region and others who attend this university from other states and countries.

2.1.2. Self-Learning Language Centers

To contribute with the professional and academic development of students and other individuals, and being aware of the importance languages have nowadays, especially English, the UANL offers English courses in its Self-Learning Language Centers (CAADI in its Spanish acronym). The objective is to “encourage foreign language learning through its Language Centers and Self-Learning Language Centers (CAADI) which support learners to reach language competence” (UANL, 2008). Any person who is willing to learn English or any other language available in the CAADI can enroll in it, students from the university or non-students.

CAADIs are established in the different schools that belong to the UANL and throughout the different campuses, for example in the School of Medicine, School of Psychology, School of Philosophy, School of Engineering, and so on. Each one of these CAADIs vary their target, some of these, for instance, accept only teenagers and adults, others allow from small children to adolescents, students from their own schools.

The current research project is being carried out in the CAADI from the School of Sports Organization (FOD for its Spanish acronym). This center has English courses on Saturdays, and it is aimed to infants, children and teenagers; its main objective is for students to be communicatively competent in the English language. This CAADI offers eight different levels: Introductory 1, Introductory 2, Basic 1, Basic 2, Basic 3, Intermediate, High, and Advanced level. As a complement and at the end of the last level, students have the option of joining a conversation course to put into practice their oral and communication skills.

The function and mission of the CAADI from FOD, according to their web page (UANL, 2016) are:

Function: The CAADI is in charge of teaching English with a communicative approach in which learners develop their language abilities for the oral and written communication.

Mission: Provide quality second language (English) courses, supporting the education of the students in terms of their linguistic competence, utilizing technological tools.

Although the CAADI from FOD claims to teach English as a second language, let us remember that in Mexico and consequently in Monterrey, English is learned as a foreign language since English is not spoken in the context as a first or main language.

The eight levels taught specifically in this CAADI range from true beginners to B2 level. Students attend every Saturday morning, for three hours, and over a period of five months. Teachers are not asked to use certain methodology as long as they comply with the developing of the learners’ communicative competences that they are supposed to achieve.

Furthermore, students are assessed mainly by exams, in the case of the High level, eight exams (one per unit) throughout the five months, in addition to the mid-term exam and the final one. Participation and homework are taken into consideration for the students’ final marks, although the impact is not significant compared to the emphasis and priority given to the quizzes and exams. Teachers are asked to design exams (assessment of learning) that cover the reading, writing and listening skills as well as grammar and vocabulary. Only in the mid-term and final exam, oral exams are added. At the end of the course, the average of each student will be obtained mostly from those exams, since these represent eighty percent of their entire grade, in addition to twenty percent assigned to homework and participation in class. The minimum required to pass to the next level is 75.

3. Methodology

It is vital for any type of research to follow certain scientific procedures to have trustworthy results that show the reality of the studied situation, and therefore, to make it valid. Scholars or researchers can select different research approaches; the two and most common lines are the quantitative approach and the qualitative approach, what is more, both methodological approaches are generally present and used in a vast amount of research, although one of them tends to have more weight depending on the objective that has to be reached.

3.1. Qualitative Research

Within the XIX century the anthropology thought convenient to employ observation as a privileged way of conducting research, interpret discourses and practices as well as ways of living of population of different cultures, which happened to be very dissimilar to the modern societies.

That being the case, qualitative research is a different approach that lets scholars have an in-depth insight of the participants thoughts that will reveal the results of the research, making it a more humanistic approach, and consequently, preferred by an important and privileged sector: the social sciences researchers. Creswell (2014) states that this type of research

> ...is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant's setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data. (p.32)

Evidently, this type of approach seeks to answer the questions or hypothesis of the study by analyzing the people involved in it and reflect on their context and the data gathered with certain tools that refer to the individuals' behavior, thoughts, discourse, among other features. Qualitative research can seem subjective but supporting evidence with an adequate theoretical framework bias can be avoided, and it should be noted that such method not less valid than quantitative research.

3.1. Action-Research

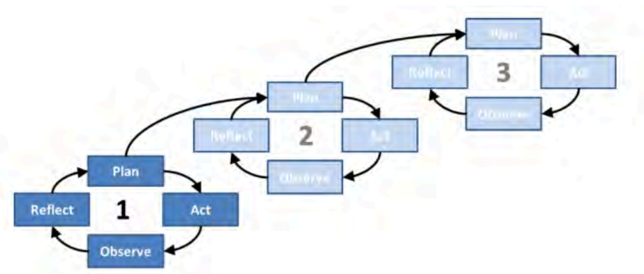
Inside the prior general classification of methods for conducting research, there are others of particular features that allow to develop in-depth research to reach very specific objectives, for instance, there is the comprehensive method, hermeneutic method, dialectical materialism, discourse analysis, action-research, among others. Traditionally, it is known-within the social sciences- that researchers should not intervene in the reality and environment that is being studied, the task of the researcher is to explain such reality so that s/he or other scholars take the obtained information and knowledge so they are able to change or modify the observed reality. However, social science research requires somehow a way of carrying out certain experimentation or testing on small groups, to verify how a variable has an influence on others. Furthermore, it is of vital importance the ethical commitment researchers should have towards the studied communities where they seek to solve the social problem(s) detected.

When addressing the educational or school context rather than the social one, the action-research method allows researchers and teachers to carry out research in a specific context and try to solve problems of it: the classroom. For the case of this concrete research project, the action-research method, which is part of the qualitative approach, is relevant since it meets the characteristics to solve the problematic sought.

Action-research is vital because "it allows withdrawing conclusions about the educational reality, contributing in a direct or indirect way to the improvement of the teaching quality". (Blández, 1996, p.21) Such method allows teachers to understand their very own classroom, identifying what is to be changed in order to better their teaching, influencing practices that will lead learners to more efficient learning. Moreover, the research results can help other teachers in similar conditions by providing a reference of the context and issues studied in conjunction with proposals that may work to a certain extents in those similar contexts. This way, in words of Blández, action-research "reinforces professional motivation...and reinforces in its participants the interest to better their teaching practice." (1996, p. 25)

Action-research is then, a scientific and dynamic procedure that intervenes directly in specific educational contexts where teaching/learning issues can be observed and analyzed to take the pertinent action to enhance better teaching practices, thus improving learning in the classroom. Such procedure can and should be done a number of occasions until attaining the expected results; therefore, action-research can be seen as a "spiral" procedure. Rose et al. (2015) schematize such procedure in the following manner:

Figure 1: Action-research process



Source: Rose et al. (2015).

The process, as it was mentioned before, requires plenty of observation of the problematic in the classroom, and then one can reflect on what has been observed in order to plan the necessary strategies to act accordingly. This cycle can be repeated several times to finally cope with the targeted issue and achieve the desired outcomes. Hence, action-research "creates a reflexive faculty" (Blández, 1996, p.26).

To understand better how action-research is conducted and its implications, Kemmis and McTaggart (1988) list, in a simplified and clear manner, what is involved:

- Develop a plan of critically informed action to improve what is already happening,
- act to implement the plan,
- observe the effects of the critically informed action in the context in which it occurs, and
- reflect on these effects as the basis for further planning, subsequent critically informed action and so on, through a succession of stages. (p.10)

For the current research project action-research has been selected since the phenomenon to be studied occurs in the English language classroom, and in words of Burns "action-research is contextual, small-scale and localized –it identifies and investigates problems within a specific situation…it is evaluative as it aims to bring about change and improvement in practice"(1999, p.30). The event to be observed has to do with how assessment is implemented and whether it has an impact on the teaching strategies, and in a later stage of the research project, generate practices that may lead to better teaching practices in terms of assessment.

Action-research in its early stage required reflection on the ongoing phenomenon in the classroom, and later two techniques for gathering data were used: interviews and participant observation, as it has been stated before, this has occurred in the first stages, a subsequent phase, and based on the previous information, is to elaborate a plan of action to intervene in the solving of the targeted issue.

3.2. Interview

An interview "is a conversation kept between two or more people, one who is the interviewer who attempts to gather information through more or less structured questions from the other person." (Blández, 1996, p.77) If the interview is totally structured the interviewer conducts the process based on a pre-defined questionnaire with no possibilities of incorporating and asking other questions to the interviewee; on the contrary, when an interview is not structured, the interviewer has the option of freely formulating more questions that will lead him to the desired objective. And when the interview is neither structured nor free, it is said to be semi structured, in which case the researcher is supported by a interview guide that supports the researcher in managing and regulating the process. The pre-defined questions can change in terms of order, other questions can be added, and even some questions can be skipped or avoided depending on the answers provided by the interviewee.

The latter type Fretchling et al. called it "indepth interview" where there is a set of established questions but the interviewer is free to inquire more if necessary. Fretchling et al. (2010) assert that in this type of interview "the interviewers seek to encourage free and open responses, and there may be a tradeoff between comprehensive coverage of topics and indepth exploration of a more limited set of questions" (p.51)

For this ongoing research project, three are the main characters that are susceptible to be interviewed since they are involved in the context where the phenomenon is taking place and are able to intervene somehow: the English teachers from FOD, the students taking the Saturday English course and the coordinators of the CAADI from FOD. Nevertheless, since the objective is to obtain information regarding the teachers' assessment practice in the language classroom, the way they manage assessment, how they deal with it and so on, the interview is aimed to the English teachers, and the type of interview applied was semi structured.

3.2.1. Analysis and interpretation of the information

The interviews to teachers were recorded to gather the necessary data. Afterwards, such interviews were transcribed and the different answers and statements were categorized in order to analyze and interpret their statements to finally have objective and concrete information that led to the following conclusions.

3.2.1.1. Language teachers are not prepared to assess

The vast majority of the interviewed teachers mentioned that they are not trained to carry out assessment in the classroom, and few of them indicated they know in a very general manner what assessment is because they have partaken in courses during their college years or have taken a special course about it, although it is clear that they tend to misunderstand the term or use the term evaluation and assessment interchangeably. For instance, when one of the teachers was asked whether she had taken any assessment course, she responded: "Only they told us the "assessments". The told us the different ways to assess students, not only exams, but using other activities, but I don't remember the exact activities."

The answer of those who admitted taken a similar course or workshop about assessment does not differ much from the one stated in previous lines, they do recall having taken a course, however they seem not to remember exactly what it was about or how to work assessment in their classroom. The way in which most of these teachers assess learners is through assessment of learning (AOF), in other words, through some type of standardized tests so they learners obtain certain grade. It is probable that the way they assess learners derives from experience –previous experience and experience acquired along their teaching practice-, or based on a vague academic thought on assessment practice.

In spite of that, some of the teachers recognize the importance of other ways of assessment within their teaching practice. For example, teacher number 3 (T3) was asked: Have you ever taken any courses or workshops about assessment?, she replied: "Not besides the ones I took in the BA, but I'd like to take one, I think is important to have constant preparation, because at the end of the day you need to step up".

3.2.1.2. Heterogeneity in the teachers' assessment practice

All teachers belong to the same institution and the ones interviewed work with teenagers, one may think they all assess their learners the same way. Such statement is true at certain extent, they all have quizzes or exams for their learners although the frequency might differ from one to the other. Moreover, they mentioned different percentages for the different features they take into account for grading learners (tests, homework, participation, and so on) even though such percentages are specified by the head of the language office. On the other hand items such as participation are a tad ambiguous, consequently teachers tend to assess this aspect differently. Some talk about projects, others about speaking skills, presentations and even disposition to learn:

T3 mentions: "I have this evaluation but I have to go beyond that sometimes because summative evaluation is not important, it is but you have to change the things, you have to evaluate other aspects of your students and you need to get to know them better, you need to know really if they are learning what you are teaching. It could be willingness to learn…someone who you see has the drive, a lot of energy, he doesnt know anything but he wants to know, so that's one aspect that I try to take into consideration when I'm evaluating some things…some people are not good with languages, they are not good but they are trying, so that effort I take into consideration."

On the other hand T2 points out: "when they do Power Point Presentations (PPP), when they have to present a specific topic in front of the class, they have to explain it, and they give their ideas, more examples about the topic and I observe how they speak, the grammar rules they are following and of course the visual aids".

Additionally T5 explains:what she considers: "Homework, presentations, homework is readings and writings, presentation on cardboards, PPP, I want that they speak in class".

It is somewhat surprinsing the ambiguity of the term "participation" and what aspects teachers consider to assess it as it can be analyzed from the three different previous statements. Yet, this heterogeneity may be something positive since it enriches the assessment practice, going from assessment of learning to assessment for learning, trying to be flexible and adjust their strategies according to their students and their students' needs, and motivate students in different manners to improve their language skills.

3.2.1.3. The institution and the exams

There is something that stands out in the assessment practice in FOD, this is the evident and considerable importance tests and exam have to obtain students' learning information to assign a grade with the purpose of passing or making the learner repeat the level s/he is studying. When teachers are asked about how they know their students are learnig, some of them refert to tests as a way of having this information. Aftwerwards they are asked what the weigh of those exams is to obtain a grade, from the observation and answers of the teachers it can be said that such tests and exams are the main type and source of assessment practice. Some of their comments on this topic are:

T4: "they need to pass the exams with 75, they need participation, homework, in my case as I ask for portfolios…40% for exams, 30% is for final exams, 20% for written exams, homework and participation 10%".

T5: "Tests is 65%, and participation and homework 15% and the rest is for the way that they talk".

T3: Obviously we have exams, we have a lot of exams, we have the unit exam, depends on the teacher. In my case we have exams for each unit, we also have the middle term exam from unit one to four, and then six to eight in the final exam…Tests 40%, then 10% for homework and participation, the middle term and the final exam about 25%".

It is clear to see how AOL through tests and exams is vital in FOD, some teachers seem not to agree with this, such as T4 when she states: "It is something that the school asks us to do, it is not because I want to. I think the education in Mexico is the same, we have learned in that way, with exams, passing or not etc." She relates such practice with not only an institutional requirement from FOD, but also as part of the whole educational system in our country. Moreover, some teachers feel limited at some extent becuase of the regulations of such institution, T2 reflects: "Maybe my own ideas or my opinions are not included there (in assessment), because I have to follow the evaluation that they (institution) say. So I cannot create anything. I have to follow that and that's it".

3.2.1.4. Un-Awareness on assessment.

Although it seems as though teachers are familiar with terms referring to assessment they are not certain what they consist of or how to carry them out. Teachers refer more to activities to evaluate students than assessment. Only one of the teachers distinguished –during the interview- between formative and summative assessment (AFL/AOL):

T3: "Summative is when you have to have the sum of everything and you put it in a number, and formative goes beyond that at some point".

Even though she is able to recognize these two different types of assessment she could not specify how to differentiate one from the other or what they exactly consist of, showing uncertainty about the topic, specifically about formative assessment, however, she is aware of the importance on doing things differently in terms of assessment, that not only exams or numbers are crucial, this can be observe when she showed a deeper understanding of assessment when she indicates that:

T3: "I have this evaluation but I have to go beyond that sometimes because summative evaluation is not important, it is but you have to change the things, you have to evaluate other aspects of your students and you need to get to know them better, you need to know really if they are learning what you are teaching".

3.2.1.5. Assessment for Learning (AFL)

It is clear that despite the fact that teachers are unaware of the concept of AFL, they do recognize the relevance of having some sort of observation on the students' learning and then adjuts their teaching practice according to those observations or results. In other words, AFL is present in the classroom, even though it is not recognize as such and it is not done systematically as it should be done.

As for the activities which teachers mentioned they used to assess learners one way or another, there were: exams, activities from the book, speaking activities such as presentations of different topics, writing activities as short compositions, among others. Speaking activities seem to be widely used by most of these teachers, on the one hand they cannot seem to understand AFL, yet with these type of activities used in the way they claim they do it, it can be said that that they carry out AOL to a certain extent:

T1: "I always try to do activities where they can speak and talk, not only to write something or to make written exercises. I like having speaking activities where they can demonstrate me that they are learning".

T2: "when they do PPP, when they have to present a specific topic in front of the class, they have to explain it, and they give their ideas, more examples about the topic and I observe how they speak, the grammar rules they are following…if i realize they are having several problems when speaking or pronunciating I have to focus on that, talk to them and practice what is necessary. That's how I think is good to improve their abilities."

T3: "we have projects, they need to apply what they are learning. At the end of each unit of the book there are projects, so I give them a mini project to work on, and they have to explain what they did to the rest (of the class). I try to make projects to see if they are learning what I'm teaching at that very moment…Every time they present I see the results if they are good, then yes they are in a good path but if they are not good I have to change something in the way I teach, perhaps the activities, maybe apply more speaking or grammar activities. I take that into consideration because is a reflection of my work most of the time because I'm teaching them".

3.2.1.6. Assessment of Learning (AOL)

As it was expected, teachers rely on the usual misconception of assessment only as a way of evaluating students through test -most likely- but also reviewing other products. In other words, they tend to evaluate students' applying tests mostly which will indicate the students' grade and level. Some of them do it for conviction, something that can be observed in their answers, and others only becuase the system requires them to do so:

T1: "The exam, in the reality the exams…I think the exams are the most important, I mean, not for me, but for the school".

T3: "Well, one we have the exams because you need to apply them, that's necessary because I need to give a report of what I'm doing."

T4: "According with the school we must have exams. In my level we have four exams one mid term and one final exam. In these exams and in my case I evaluate grammar, vocabulary, listening, speaking because I have oral exams every exam and written skills."

T5: "They (tests) are necessary, it is also a way to see how much they learn in class about writing and it also can help them to speak".

In any case, let us remember that tests are part of most- if not all- institutions, therefore teachers should make the most of them, this is, not only use them to obtain mere results, but also to interpret them and to support learners towards a better English learning experience.

Conclusion

The analysis of the information gathered allows having an insight on how teachers conduct their assessment practice in FOD, in this particular case. Therefore and having such information into account, the hypothesis is proven to a certain extent. The hypothesis of this research projects reads that:

In most institutions where English is taught prevails the traditional ways of assessment when it comes down to ELT. It is only in few cases where teachers employ an alternative assessment which influences positively the language learning, but such practice is related to the formation and the commitment of the teacher in his/her teaching ways, unlike the academic programs or the given conditions in these institutions which force or regulate the assessment, so it becomes standardize.

- Through the observations and the data analysis it can be established that in FOD prevails a traditional type of assessment –assessment of learning- through the application of tests at the end of each unit, a midterm exam and a final exam. The results (in numbers) of these tests and exams make more than 80% of the entire grade for students to pass or fail, something that is already established by the institution and teachers must comply with what the system requires; whereas the other 20% is made up by more subjective features such as participation in which teachers tend to use more their criteria and they claim to do so by having speaking activities, others claim even making use of rubrics so results are clear to learners as they know what they should achieve contrasted to what they actually achieve. These can be considered as AFL since they provide feedback to learners and teachers state they act accordingly in order to guide learners towards successful learning. AOL through the implementation of tests and exams is an institutional requirement for teachers.
- It is clear that despite the fact that teachers are unaware of the concept of AFL, they do recognize the relevance of having some sort of observation on the students' learning and then adjust their teaching practice according to those observations or results. In other words, AFL is present in the classroom, even though it is not recognize as such and it is not done systematically as it should be done.

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THE IMPLICATIONS ASSOCIATED WITH TEACHER PERCEPTION AND UNDERSTANDING OF THE DANIELSON FRAMEWORK IN SELECTED HIGH SCHOOLS IN THE U.S.A.

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KEY WORDS

Pedagogical practice
School reform
Teacher evaluation
Framework
Teacher development

ABSTRACT

The improvement of teacher pedagogical practice is a central focus of contemporary school reform in the U.S.A. Moreover, the systematic evaluation of teacher pedagogical practice is viewed as an essential means to improve student achievement. The Danielson Framework is a theoretical construct that is widely used by school districts in the U.S.A. to conduct the evaluation of teachers. This paper is based on the summary findings of a study conducted in three selected suburban Chicago high schools in the State of Illinois. The study assessed teacher perceptions of their understanding of the Framework, teacher perceptions of their evaluators understanding of the Framework, and the extent to which teachers altered pedagogical practice as a result of teacher evaluation. Data were collected through survey, interviews, document analysis, and focus groups and were analyzed employing descriptive statistics and qualitative research methods to identify codes and themes. An analysis of the data revealed that there is an ongoing need to develop professional practices that enhance collaboration and deepen the mutual understanding among stakeholders of components within the Framework. While the survey results demonstrated a clear understanding of the Framework among the teachers, it was also revealed that teacher evaluation has a low impact on teacher's pedagogical practice. There are important implications of this study related to teacher development and the targeting of particular components within the evaluation that are high impact. The study highlights the limitations of teacher evaluation as a tool to improve pedagogical practice. Implications for practice for school administrators responsible for the planning, development, and implementation of teacher evaluation are presented.

GLOBAL KNOWLEDGE ACADEMICS

Part I: Review of Literature

Teacher Evaluation and its Connection to Student Achievement

School districts throughout the U.S.A. today are focused on measuring and ensuring student achievement. In an effort to accomplish this goal, many school districts have committed to developing more rigorous teacher evaluations that are supported by research and designed to improve overall teacher performance. Underlying this change is the contention that improved teacher competence and knowledge can positively affect student learning. School districts have recognized that planning lessons, developing strong instructional practices and maintaining professionalism are all key to student achievement. Hanushek (2011) summarizes the importance of teacher qualifications while also identifying some of the challenges with which policy makers and administrators are faced:

> Literally hundreds of research studies have focused on the importance of teachers for student achievement. Two key findings emerge. First, teachers are very important; no other measured aspect of schools is nearly as important in determining student achievement. Second, it has not been possible to identify any specific characteristics of teachers that are reliably related to student outcomes. Understanding these findings is central to the subsequent discussions of policies and their underlying economics. (p. 3)

A sound teacher evaluation model recognizes the need for schools to hire and retain the very best teachers possible. This is only possible with a teacher evaluation system that is supported by research, articulated by districts and understood by teachers.

At the close of the twentieth century, teacher accountability and the impact that it had on student learning became a central driving force for educators and policy-makers throughout the U.S.A. Influencing this change was the passage of the federal No Child Left Behind Act (2001). This law required states to provide evidence that schools were staffed with highly qualified teachers by the beginning of the 2005-2006 school year. Furthermore, each state was to determine the qualifications required to meet the standard as a highly qualified teacher (Strong, 2011). Most states chose to define "highly qualified" in terms of licensure and training (NCLB, 2001). This is what Michelle Rhee, a former chancellor of Washington D. C., public Schools, calls "front-end qualifications" (Strong, 2011). Thus, in recent years determining teacher quality through teacher evaluation has become an important focus of education reformers.

Elements of a Strong Teacher Evaluation Process

Developing a meaningful evaluation system for teachers can be difficult. A relevant assessment tool must reflect three distinct needs: accountability and a summative judgment of individual teachers; formative feedback that supports ongoing professional development; and systematic feedback to human resources that would, in theory, help to develop sound practices (Maslow & Kelley, 2012). Administrators in schools throughout the country have struggled to address all of these needs at the same time. Educational researchers have recognized that there are inherent inconsistencies and shortcomings when talking about teacher evaluation.

> By the end of the first decade of the new century, the inadequacies of teacher evaluation systems were well known and a matter of public discussion. This enhanced level of public awareness, along with federal legislation, placed educator evaluation in the spotlight. (Marzano, 2013, p. 3)

Typically, evaluation systems have suffered from inconsistencies in implementation, lack of understanding, and competing demands (Maslow & Kelley, 2012). Any meaningful evaluation system must be clear and consistent in order to be effective. Charlotte Danielson sums up the importance of tethering teacher evaluation to evidence and a consistent set of expectations:

> Any evaluation system used for high stakes personnel decisions should be highly evolved. For example, does it clarify what will serve as evidence for each item in the instructional framework, such as observation, planning documents, or conferences? Are the words in the rubric clear enough to enable both teachers and supervisors differentiate one level of proficiency from the rest? (2012, p. 34)

Developing an instrument or model to evaluate teachers has become of paramount importance to policy makers and administrators. One influential report titled *The Widget Effect* (Weisberg, Sexton, Mulhern & Keeling, 2009) portrayed an overall failure of evaluation systems to provide accurate and credible information about individual teachers' instructional performance.

Improvements in Teacher Evaluation

A significant step was taken in advancing the importance of teacher evaluation with the introduction of the comprehensive study taken on through the Bill and Melinda Gates Foundation. Researchers funded by this foundation conducted a study titled *Gathering Feedback for Teaching: Combining High Quality Observations with Student Surveys and Achievement Gains* (Kane & Staiger, 2012). These researchers concluded that high quality teacher evaluation would require clear standards, certified raters and multiple observations. Concurrent with the Kane and Staiger (2012) study was a federal initiative designed to stimulate reform in teacher evaluation. The Race to the Top Act (2011) was developed to motivate nationwide education reform and, in particular, to reform teacher evaluation (Marzano & Toth, 2013). The Race to the Top Act (RTT) included the recommendation that states adopt new teacher evaluation systems that would include a performance-based system that takes student growth into account.

Many states within the U.S.A. were then motivated to pass legislation that would position them to get funding from RTT (Alvarez & Anderson-Ketchmark, 2011). In the state of Illinois, this effort resulted in the Performance Evaluation Reform Act (2010) which required all schools to change how teacher and principal performance is measured. The Performance Evaluation Reform Act, (PERA) was passed in 2010 and mandated that all districts in the state of Illinois design and implement performance evaluations systems that assess teacher skills as well as incorporate student growth. PERA furthermore established that the Performance Evaluation Advisory Council (PEAC), which was comprised of teachers, principals, superintendents and other stakeholders, would advise Illinois School Board of Education (ISBE) on how these evaluation systems are developed and implemented (ISBE, 2011). These recommendations apply not only to principals and assistant principals but also to teachers. The new law, as interpreted and enforced by ISBE, has several important components that relate to teacher evaluation, but one important one was the requirement to evaluate teachers using an instructional framework that was based on improved instruction, planning and classroom management.

Many school districts in Illinois adopted the Danielson Framework for Teaching (hereafter referred to as FFT) as their framework for teacher evaluation. The FFT is a theoretical construct that identifies 22 components as essential areas of teacher focus that positively impact student learning (Danielson, 1996).

An underlying assumption in teacher evaluation is the existence of evidence-based teaching practices that are identifiable and influence student achievement. More explicitly, teacher evaluation is based on the idea that there is a "codified or codifiable aggregation of knowledge, skill, understanding and technology, of ethics and disposition, of collective responsibility – as well as a means for representing and communicating it" (Shulman, 1987, p. 4). Some educational reformers hold that there are pedagogical skills and practices that result in higher academic achievement. They see "teacher quality solely in terms of classroom practice rather than of the front end qualifications or personal attributes that a teacher may possess" (Strong, 2011, p. 16). It is important to understand how certain teaching practices are connected to student achievement. As a profession, there has been a growing understanding that there are a preferred set of teaching practices that represent a more effective impact on student learning (Darling-Hammond, 2000). Strong (2011) claims there is evidence that certain teaching practices are more closely correlated with student achievement than other practices. His research demonstrates that there may be a set of effective teaching practices that relates to all contexts (Strong, 2011). The evidence associated with the impact of teaching practice on student achievement has subsequently been identified in educational research literature as process-product research (Wilen & Clegg, 1986). Wilen and Clegg (1986) further explain that outcomes from research employing the process-product research theoretical framework suggest procedures that teachers can employ to increase student achievement (p. 153). Understanding the research and literature that relates to the components within the four domains of the Danielson FFT was essential to this study. Furthermore, there are a number of research studies, based on the process-product theoretical construct, that have documented a relationship between teachers' performance on the Danielson domains and student achievement (Brophy & Good, 1984; Ames & Archer, 1988; Zimmerman, 1990). Much of this research contends that there are teachers who excel in these high level practices can expect higher student achievement and learning.

For a system of performance evaluation to be successful, there must be some knowledge and understanding on the part of those being evaluated and on those conducting the evaluation. Ultimately, there must be some impact on future teaching methods and strategies. The purpose of this study was to uncover teacher perception of their own understanding of the instrument while also determining their perceptions of how the evaluation process impacted their own teaching.

Part II: Methodology

The study was designed to gain an understanding of 1) teacher perceptions of the teacher evaluation instrument in a suburban Midwest high school district and 2) how teacher evaluation impacts their pedagogical practice (Redacted, 2016). The three research questions were:

1. What is the extent of teachers' perceived understanding of the teacher evaluation tool, specifically, the various components used in the District model?
2. What are teachers' perceptions regarding the expertise of their evaluators in regard to the Danielson Framework for Teaching?
3. Does the evaluation instrument impact teacher pedagogical practices and if so, how?

The particular suburban Midwest high school district examined, is a high school district in a western suburb of Chicago comprised of four large high schools. The district serves over 8000 students and employs over 500 teachers and 32 administrators. It is the third largest high school district in the state of Illinois and viewed by many in the area as a premier high school district within the state. The suburban Midwest high school district adopted the Danielson model, and developed an evaluation handbook and establishing a rubric where each component within the FFT was able to be rated. In doing these things, the district had committed itself to the belief that this evaluation tool is clear, cohesive and effective in changing teacher behavior and improving student learning. The district was interested in supporting this study as a means of enhancing their ongoing efforts to modify and improve the teacher evaluation instrument and process. The study was approved by the Roosevelt University IRB and the suburban Midwest high school district being studied.

This study employed a sequential explanatory mixed methods design, which consisting first of a quantitative and then a qualitative phase. In the first phase, quantitative data was collected using a survey titled "Teachers' Perceptions of the Framework for Teaching Survey." The survey was developed by the researcher and was comprised of four sections (Redacted, 2015). The first three sections of the survey included a number of questions designed to measure teacher understanding of the evaluation system, teacher perception regarding the expertise of their evaluators, and the degree to which their pedagogical practice changed as a result of the evaluation. The fourth section of the survey included a number of demographic questions useful in profiling the respondents. The survey was administered to 245 certified teachers who had undergone a full evaluation during the fall semester of the 2013-2014 academic year. One of the four high schools within the district was excluded due to the researcher's role as an administrator at that school. The survey was administered electronically using the approved Redacted University survey tool, Qualtrics.

The data from the survey was analyzed using descriptive statistics, examining standard deviation, variance and means. After analyzing the survey data, the researcher began the second phase of the study by interviewing six teachers out of the group that had been surveyed. These teachers were selected randomly after indicating interest in participation. The qualitative semi-structured interviews helped codify and confirm findings drawn from the quantitative portion. The researcher also conducted document analysis of key district and school teacher evaluation documents including the teacher evaluation handbook. The researcher also compiled field notes and a reflective journal during the study. Codes and themes were derived through the triangulation of survey data, interview transcripts, document analysis, and reflective journal.

Part III: Findings and Conclusions

The findings of this study led to a three important conclusions. First, teachers who participated in this study saw themselves as having a clear understanding of the Danielson components. The survey results indicate that mean scores associated with teacher perception of their own understanding of the Danielson components were consistently higher than mean scores associated with teacher perception of their evaluator's understanding of these same components. Although, the high mean scores associated with teacher perception of their clear understanding of the Danielson components were not necessarily reflected in the semi-structured interviews. Second, the quantitative and qualitative results suggested that teacher respondents perceived their evaluator's understanding of the Danielson components at a consistently high level. The quantitative data suggested that for each component, teachers' perception of their understanding of the Danielson FFT was higher than their perception of their evaluator's understanding of the Danielson components. Additionally, both the quantitative and qualitative portion of the research indicated that the evaluation process had little to no impact on instructional practices. Finally, survey results clearly indicated that mean scores associated with teacher perception of the extent to which they altered their teaching practices within the Danielson components as a result of the formal evaluation were consistently low as reflected in the mean scores of the survey.

Part IV: Recommendations

The results from this study revealed challenges and opportunities for improvement associated with adopting the Danielson Framework as an evaluation model. While District 87 developed an evaluation process where teachers have confidence regarding their understanding and their evaluator's understanding of the areas in which they are measured, many admitted that they had not significantly changed their teaching practices as a result of the evaluation (Redacted, 2015). This study suggests that in order to have an impact on teaching and learning, administrators and evaluators should intentionally embrace specific actions associated with the evaluation. These activities would include prioritizing or emphasizing important Danielson components, supporting the components with specific professional development, emphasizing collaboration between evaluators and teachers and allowing teachers an opportunity to implement practices associated with the evaluation. Four key recommendations for District 87 emerged from the study. These recommendations, while idiosyncratic to this particular district, have broader implications for schools and districts using the Danielson framework for the purposes of teacher evaluation. These four recommendations are as follows:

1. Prioritize individual Danielson components that are associated with learning standards.

Having a total of 22 components within an evaluation can prove to be confusing for teachers and evaluators alike. These components do not all have similar impact on student learning. Districts implementing the FFT should consider prioritizing components to help clarify the central goals of an evaluation. Additionally, there are certain components that are recognized as having a more significant impact on student learning than some of the others. For example, those components found within the *instruction* domain should be viewed as key levers that promote effective teaching along with student growth. Within this domain, the components of communicating clearly, engaging students in learning and providing feedback to students are all areas that, if done well, impact teaching and learning more significantly than some of the other areas or components. For example, teachers who implement strategies around clear communication typically establish specific learning targets that are made explicit to students at the beginning of each lesson.

Teachers post these learning targets and explain and discuss them with the students. Throughout the lesson, these targets are revisited. These learning targets are associated with units and standards that have been identified by the team of teachers who teach the course. Another component within the instruction domain, providing feedback to students, involves checking for understanding and then effectively sharing with students their individual progress. This provides additional clarity related to these learning targets. Finally, teachers who are able to implement strategies that maintain student engagement establish classroom activities that are aligned with practices that allow student to interact with the content as well as each other. A high degree of engagement indicates that students are challenged and universally connected to the activities of the classroom.

In designing effective evaluation procedures, districts might also emphasize certain components based on individual teacher needs, experience in terms of years served and the particular discipline taught. Currently, the framework and The Handbook do not make these distinctions. For example, less experienced teachers might need some of the components associated with maintaining records, parent communication, managing procedures and managing student behavior – all important areas that need to be mastered in the first few years of teaching. More veteran teachers might need a bigger focus to be place on innovative instructional practices. For example, the implementation of assessment literacy practices and the use of formative assessments is closely associated to providing feedback. Assessment is no longer considered the end to the teaching process, but instead an integral part of learning and an opportunity for both students and teachers to make adjustments. Feedback used in this way transforms the learning environment and activates engagement among students. Providing effective feedback is considered by some to be the most impactful change a teacher can make to influence student learning.

The respondents within the study appeared to have a better understanding of particular components when they were emphasized, either at the department level or throughout the building. Allowing and encouraging teachers to focus on a smaller number of components might be more impactful in regard to how teachers improve their practice.

2. Link the Evaluation to targeted professional development

As indicated by the survey results, the evaluation appears to have a low impact on teaching practices, or teachers perceive that the impact is low. In considering the evaluation process, districts would be wise to place a focus on key professional development strategies. This study suggests that the evaluation alone is not enough to alter teaching practices. By their nature, evaluations tend to be limited by time and relegated to particular classes or courses. Furthermore, with the evaluation comprised of 22 components, systematic teacher improvement becomes more difficult and diffuse. As districts work to prioritize their focus when it comes to the Danielson components, they might also consider the important role of targeted professional development opportunities. Districts should target three or four components throughout the year that are viewed to be especially significant and build professional development opportunities around those choices.

Determining which components to focus on could be done in multiple ways. For example, a district or school could evaluate overall teacher performance from one year to the next and determine the components where there is the greatest need for improvement. Establishing a data that builds in continual year-to-year progress and process is logical and can help to establish a system for monitoring improvement. If three components were identified, the school could identify experts within the staff who could provide these growth opportunities throughout the year for teachers. When school systems connect professional development to the evaluation process, it allows for a more systematic, ongoing and progressive approach to teacher improvement that truly impacts student learning.

3. Personalize the evaluation

Teachers who work in districts where the FFT is used need to have personalized direction on to how to implement instructional improvements that are aligned with the components. Districts should consider providing teachers with specific examples of ways in which various components are implemented within a classroom setting. It is important to make suggestions and recommendations that are aligned with the needs of individual teachers. For example, when teachers are evaluated, specific recommendations could emerge that are identified as areas where improvement is needed. The process for teacher improvement would not end with the evaluation. Instead, teachers would be given specific components on which to improve based on the evaluation. Districts could in turn develop a post-evaluation process that requires teachers to coordinate with their department chairs, instructional coaches and peers on strategies to get better.

When teachers undergo evaluation, each of the 22 components is given a rating. At the end of the process, there is a summative meeting where the co-evaluators sit down with the teacher and review these ratings along with the collected evidence that determined the ratings. Teachers are provided a full report that lists out the ratings for each of the components; these ratings are calculated and averaged for each of the four domains. The compilation of those four domains make up the “summative rating” of the teachers professional practice evaluation. Teachers are provided this full report prior to the meeting. This research suggests that evaluators should, rather than focus on all of the components instead hone in on two or three components that were identified for future improvement.

From there, it is recommended that districts and evaluation teams examine ways to track teacher progress from one year to the next. This would allow evaluators, administrators and districts as a whole to hold individual teachers accountable for their own progress. Furthermore, the evaluation model would be specific and useful for those being evaluated.

4. Emphasize collaboration and trust between teachers and evaluators

Throughout the qualitative interviews of this study, it was clear that teacher emotions and personal opinions regarding the evaluation process may have interfered with their ability to understand the Danielson components. Teachers expressed a concern with the summative rating and at times dissatisfaction with the evaluation process as a whole. Furthermore, some shared a sense that teaching practices previously acceptable were no longer deemed as effective. They were upset with the notion that their work was not viewed as being valuable or effective.

Increased opportunities to collaborate between administrators and teachers might alleviate some of these concerns and provide opportunities for evaluators to address issues directly before they interfere with the evaluation. When communication from administration is clear, non-judgmental and consistent, there are less likely to be perceptions of unfairness. Administrators need to demonstrate clearly that the primary goal of teacher evaluation is to improve student learning. In general, interactions between evaluators and teachers need to collaborative rather than adversarial. Administrators should listen and respond to teacher concerns so that there is a shared sense of trust. These important conversations could happen within the setting of a teacher advisory group. This group could meet monthly and be organized so that either administrators or teachers could contribute to the agenda. These semi-formal opportunities to work together for shared goal are productive and contribute to a shared understanding of terminology, instructional practices and the conclusions of this study points to the need for administrators and evaluators to include intentional practices when evaluating teachers. Essential in this practice is aligning feedback so that it promotes specific, high impact components within the teacher evaluation. Evaluators should also personalize teacher growth and improve collaboration between administrators and teachers. Accountability measures are important and should be catered to individual teacher strengths and challenges. At the same time teachers need clarity and trust when it comes to meeting the changing demands of the ever-changing educational field. This study has shown that evaluation alone is not enough to provoke positive teacher growth. Evaluators and administrators should concentrate their efforts around key practices designed to support the evaluation and positively develop the professional growth of teachers.

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INTEREST AND MOTIVATION TOWARDS MATHEMATICS

Most talented students' self-perception

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KEY WORDS

Educational diagnosis
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Mathematical competence
Attitudes towards mathematics
Self-perception

ABSTRACT

Since the beginning of schooling, students have been using elementary procedures to find solutions to problems that indicate how they structure their mathematical thought. One of Mathematics learning objectives is to get students to develop a flexible, agile and applicable knowledge that can be continually reinvented and adapted to new situations. Regrettably, this objective is not easy to reach and students frequently complain about the failures of mathematical education, mainly for the rejection sometimes inspired by this discipline, causing a negative attitude towards their own learning. In this article, we will focus on the attitudes that students show towards Mathematics. For this analysis, we will use the results obtained through the process of construction of the "Batería de Evaluación de la Competencia Matemática" (BECOMA), an evaluation instrument that measures the mathematical competence of students in 5th grade of Primary Education, focusing on the variable Interest and motivation towards the subject of Mathematics from the student's point of view analyzed throughout the process of validation of the set of evaluation tools previously mentioned. In the last section of this article, we will only focus on the results of the most talented students in Mathematics.

1. Introduction

Education has as its one of its fundamental purposes the attainment of the greatest equality of opportunity possible among students, in order to bring about their full and integral development by means of some teaching and learning quality processes. In order to support the attainment of this purpose, the competency-based education is born as a fundamental model of working of diverse national and international organizations, marking the priority lines of action in educational subject.

In the case of mathematical competence, central theme to this article, it appears integrated in the educational processes, mainly in the development of the area of Mathematics, taking three forms (González, 2007): as a group of general processes, as a study domain and as main and priority purpose of the teaching and learning of Mathematics and, finally, as a group of agglutinated competences in the form of groups or levels of cognitive complexity expressible by a scale.

A basic premise of the educational application of this competence is that the elements of mathematical reasoning are used to face diverse daily situations. To this end, it is necessary to detect and analyze such situations, selecting the appropriate techniques to calculate, represent and interpret through the available information and applying problem solving strategies. This competence also emphasizes the elements and processes of mathematical reasoning that lead students to the solutions of problems or requires them to obtain information in a wide variety of situations.

In terms of the attitudes of students toward the resolution of mathematical problems, De La Rosa (2007) believes that the preferences and feelings that students show are: going directly to get the solution without first settling down a work plan, not making a comprehensive reading of the problem, quickly solving in a trial/error way without making any previous reading, letting their attention scatter, not reasoning about the provided data, feeling fearful in novel situations or that they don't dominate (mental blocks), requesting the teacher's help for the resolution before having finished reading the problem; lack of motivation to problem solving and the existing separation between the reality where the student lives and problem's translation to the mathematical language.

In the assignment to avoid these attitudes in the students, the docent plays an important role. Pifarré and Sanuy (2001) establish that there are variables that influence students' when solving mathematical problems, noting the following ones in relation to teaching: "el tipo y las características de los problemas, los métodos de enseñanza utilizados y los conocimientos, las creencias y las actitudes del profesor sobre las Matemáticas y su enseñanza-aprendizaje"[1] (207). The teaching of the Mathematics will begin with the reflection on two important purposes of its didactics: (1) to try that the students come to appreciate the paper of the Mathematics in society, its fields of application and its contribution to social and cultural development, and (2) to make them understand the operation of the mathematical method, so that they can adjust it to each situation.

The European Union (2004) establishes as attitudes towards Mathematics to work with students on the following: disposition to get over "the fear of numbers", choice to use numerical calculation to solve daily life problems, respect for the truth as the base of the mathematical thought, willingness to look for the reasons in which their own arguments are based and willingness to accept and reject opinions of others based on valid or invalid evidences.

In Spain, the *Marco General de la Evaluación de 3º de Educación Primaria* (2014) sets as the development principles of attitudes and values in Mathematics, accuracy, teamwork, respect for datas, effort, perseverance and truthfulness, requiring the students the following aspects:

- A favorable attitude towards contexts of mathematical content.
- To value the need to explore different sources of information, and their use when the situation suggests, in order to progressively acquire more complex knowledge from experience and previous knowledge.
- To recognize the role of Mathematics in the world and to use the concepts, procedures and tools to apply them in the resolution of problems that may arise in certain situations throughout life.
- To demonstrate an orderly and systematic work style, creatively tackling the search for solutions to problems.
- To be persistent in the task, to develop a critical eye and reflect on the results.

Muñoz and Mato (2008) indicate that educational systems should generate teaching methods that take into account the attitudes of students during the learning of mathematics, granting to the teacher a fundamental role as a knower of these internal processes of their students. They affirm that "los puntos débiles de las actitudes frente al estudio de las Matemáticas no solo afectan a los grupos de alumnos o a los centros de enseñanza de rendimiento más bajo; muchos alumnos con un rendimiento relativamente bueno, se ven frenados por su actitud negativa hacia las Matemáticas" (224).[2]

[1] "The type and characteristics of the problems, the teaching methods used and the knowledge, the beliefs and the attitudes of the professor of Mathematics and his/her teaching–learning"

[2] "The weak points of the attitudes towards the study of Mathematics not only affect at the groups of students or the centers of teaching of

Lastly, it's necessary to point out that the most talented students in Mathematics show some specific characteristics that make them unique compared to the rest of students. A process of detection of these particularities should be first developed, so that educators can adjust their interventions accordingly. Within these characteristics, the affective-emotional ones appear as as essential aspect to be known and developed with the purpose to increase both personal, social and educational well-being of these students. Therefore, a good attitude is considered fundamental for school success in the area of Mathematics.

2. Method

This article consists of a descriptive study whose objective is to analyze and to understand the existing relationships among a group of quantitative data analyzed from two variables defined in the study about mathematical competence, in this case *interest and motivation towards the area of Mathematics from the student's point of view* and *results in the BECOMA battery*. After that, these two variables are compared with the *interest and motivation toward the area of Mathematics from the teacher's point of view*. Ultimately, the study approaches the results of the most talented students in Mathematics according to these variables. The consideration of "most talented students in Mathematics" starts with the achievement of a high score after the administration of the BECOMA battery.

In the process of construction of this battery, several samples of students of 5th grade of Primary Education of the province of Albacete have been used in the following way:

Table 1. Participant sample in every period of investigation

	First Administration	Second Administration	Final Administration	Total
Students	170	230	722	1.122
%population	4.28	5.80	18.20	28.28

The validation process of the instrument has been developed from the last administration performed, at which time the data center the content of this article. An initial sample of 722 students of the 3,968 students enrolled in this province and at this level, the participant final sample being of 712 or a 17.94% of the school population.

These student participants in this last period of the research have been distributed among twenty-four educational centers with different educational units. According to their ownership, there are twenty public schools and four charter-private ones, and according to their environment there are fourteen urban and ten rural. In this selection of schools, the proportion of schools in the province of Albacete has been respected, where public education is around 83% of the total number of schools and the private school is 17%; whereas a 61% of the schools are located in urban areas and a 39% in rural ones.

The BECOMA battery consists of 34 items divided into 8 evaluation tests. These items are divided into six factors: *Successions* (six items), *Graphic structuring* (nine items), *Parts of the whole* (seven items), *Problem solving* (four items), *Ten-hundred-thousand* (five items) and *Decomposition and properties* (three items). Each item can have a score of 0, 1 and 2, oscillating the total value between 0 and 68. From these scores, seven levels of mathematical domain are established according to the degree of difficulty of the items and the answers given by the subjects. The instrument can be administered in an individual or collective way and its application time is forty-nine minutes.

The main variable used has been *interest and motivation towards the area of Mathematics from the student's* point *of view*, a variable that in the construction and validation process of the BECOMA has served for the analysis of the concurrent validity. This variable has been picked up by means of a question that was indicated to the students in the cover of the instrument and has been defined by a Likert scale with a score between 1 and 5: *Nothing* (1), *Little* (2), *Regular* (3), *Enough* (4) and *A lot* (5).

In the BECOMA battery, the students' results are based on seven levels of perfomance. For the analysis of the perfomance of the most capable students for the Mathematics according to this variable, levels 6 and 7 have been used, the two upper levels of BECOMA. These levels, and their respective intervals and frequencies, appear defined in the following table 2:

Table 2. Levels of perfomance of the BECOMA

Levels	Intervals	n	%	% valid	% accumulated
1	<= 8	14	2.0	2.0	2.0
2	9 – 18	88	12.4	12.4	14.3
3	19 – 28	165	23.2	23.2	37.5
4	29 – 38	184	25.8	25.8	63.3
5	39 – 48	159	22.3	22.3	85.7
6	49 – 58	80	11.2	11.2	96.9
7	59 – 68	22	3.1	3.1	100.0
	Total	712	100.0	100.0	

lower yield; many students with a relatively good performance are held back by their negative attitude towards Mathematics."

3. Results

The interest and enjoyment towards mathematical competence, or *intrinsic motivation*, affects the degree of effort and involvement of the students in their own learning, demonstrating that it influences significantly regardless of the general motivation towards the set of contents to learn at school (INEE 2008, 2013). Table 3 shows the distribution of the students in the investigation according to this variable.

Table 3. Distribution of the participant sample according to the attitudinal self-perception of the students

	Scale	n	%
Student interest	Nothing	43	6.0
	Little	104	14.6
	Regular	231	32.5
	Enough	184	25.8
	A lot	150	21.1
	Total	712	100

By relating the scores obtained by the students in the battery with this variable, a Pearson correlation coefficient = .72 was obtained, the correlation being significant at the .01 bilateral level. The index obtained shows a close association among both variables.

To analyze the differences in the scores in the battery set, this attitudinal variable has been transformed into another categorical one, distributed in three levels: *low* ("nothing" and "little," n = 147, 20.7%), *medium* ("regular," n = 231, 32.4%) and *high* ("enough" and "a lot," n = 334, 46.9%). The average score in each one of the categories has been 20.03 (DT = 9.02) for the low level, 29.45 (DT = 9.19) for the medium one and 42.69 (DT = 10.13) for the high one.

The results of the ANOVA (see table 4) have shown statistically significant differences among the three groups considered, suggesting that the students' scores in the battery set have varied according to the categories within this variable.

Table 4. ANOVA of the variable interest and motivation in the area of Mathematics according to the student's point of view

	Under		Medium		High						
	M	*DT*	*M*	*DT*	*M*	*DT*	*F*	*gl*	*p*	*Eta²*	*Direction*
F1: Successions											
IT 14	1.45	.69	1.56	.57	1.86	.38	39.03	711	.000**	.099	A > M, B
IT 15	.82	.76	1.03	.72	1.45	.65	49.18	711	.000**	.122	A > M > B
IT 16	.47	.65	.82	.75	1.33	.75	79.66	711	.000**	.183	A > M > B
IT 17	.54	.65	.97	.72	1.41	.69	84.20	711	.000**	.192	A > M > B
IT 18	.53	.61	.83	.69	1.26	.66	70.65	711	.000**	.166	A > M > B
IT 19	.41	.53	.62	.58	1.12	.68	83.93	711	.000**	.191	A > M > B
Total Factor	4.22	2.33	5.83	2.37	8.42	2.44	180.60	711	.000**	.338	A > M > B
F2: Graphic structuring											
IT 1	.55	.89	.68	.94	1.14	.98	26.68	711	.000**	.070	A > M, B
IT 2	.22	.61	.26	.66	.67	.94	25.73	711	.000**	.068	A > M, B
IT 3	.55	.87	.99	.95	1.40	.87	47.70	711	.000**	.119	A > M > B
IT 4	.73	.80	1.20	.84	1.46	.80	42.18	711	.000**	.106	A > M > B
IT 12	1.59	.77	1.79	.60	1.91	.40	16.32	711	.000**	.044	A, M > B
IT 13	.34	.74	.68	.93	1.20	.97	51.21	711	.000**	.126	A > M > B
IT 28	.12	.36	.22	.46	.43	.67	20.18	711	.000**	.054	A > M, B
IT 29	.58	.72	.94	.76	1.42	.70	75.92	711	.000**	.176	A > M > B
IT 30	.84	.81	1.26	.78	1.54	.65	47.79	711	.000**	.119	A > M > B
Total Factor	5.52	3.40	8.03	3.58	11.18	3.41	149.20	711	.000**	.296	A > M > B
F3: Parts of the whole											
IT 20	.32	.72	.60	.89	1.19	.97	58.55	711	.000**	.142	A > M > B
IT 21	.07	.37	.26	.64	.63	.91	34.35	711	.000**	.088	A > M, B
IT 22	.42	.80	.83	.98	1.39	.92	62.96	711	.000**	.151	A > M > B
IT 23	.48	.76	.79	.89	1.24	.91	44.11	711	.000**	.111	A > M > B
IT 24	.43	.69	.59	.82	.90	.91	18.61	711	.000**	.050	A > M, B
IT 25	.37	.64	.62	.80	1.05	.91	40.08	711	.000**	.102	A > M > B
IT 26	.20	.49	.39	.66	.86	.86	51.78	711	.000**	.127	A > M > B
Total Factor	2.29	2.47	4.07	3.33	7.26	3.77	128.11	711	.000**	.265	A > M > B
F4: Resolution of problems											
IT 31	.99	.92	1.44	.83	1.74	.61	51.52	711	.000**	.127	A > M > B
IT 32	.47	.78	1.01	.94	1.37	.89	52.75	711	.000**	.130	A > M > B
IT 33	.37	.71	.65	.88	1.19	.91	55.14	711	.000**	.135	A > M > B
IT 34	.10	.38	.26	.61	.75	.91	52.99	711	.000**	.130	A > M, B
Total Factor	1.93	1.93	3.36	2.17	5.05	2.25	115.65	711	.000**	.246	A > M > B
F5:Ten-hundred thousand											
IT 5	1.03	.90	1.30	.86	1.47	.78	14.30	711	.000**	.039	A, M > B
IT 9	.59	.65	.74	.68	1.15	.73	42.91	711	.000**	.108	A > M, B
IT 10	.49	.67	.84	.76	1.32	.63	84.58	711	.000**	.193	A > M > B
IT 11	.35	.59	.54	.68	.84	.71	30.81	711	.000**	.080	A > M > B
IT 27	.31	.72	.54	.88	1.16	.97	59.90	711	.000**	.145	A > M, B
Total Factor	2.77	1.99	3.97	2.11	5.96	2.04	141.93	711	.000**	.286	A > M > B
F6:Decomposition and properties											
IT 6	1.29	.73	1.45	.71	1.66	.54	19.08	711	.000**	.051	A > M, B
IT 7	1.27	.72	1.58	.62	1.69	.54	24.08	711	.000**	.064	A, M > B
IT 8	.75	.78	1.17	.76	1.46	.68	50.28	711	.000**	.124	A > M > B
Total Factor	3.31	1.72	4.19	1.61	4.81	1.39	50.01	711	.000**	.124	A > M > B
Total Battery	20.03	9.02	29.45	9.19	42.69	10.13	317.41	711	.000**	.472	A > M > B

* Significant to the 5% ($p < .05$)
** Significant to the 1% ($p < .01$)

Next, the results of the most talented students in Mathematics according to this variable are pointed out. After the administration of the battery, this group of students has been located in levels 6 and 7, the two highest perfomance levels of the instrument. In the validation of the BECOMA, its intervals and frequencies have been the following:

Table 5. Superior levels perfomance of the battery

Level	Interval	f	%
6	49 – 58	80	11.2
7	59 – 68	22	3.1

As it can be observed in the superior perfomance levels, 102 students have appeared. Their results according to this variable have been the following:

Table 6. Interest and motivation towards Mathematics of the students located in the highest perfomance levels in the BECOMA

	Scale	Level 6	Level 7
Student interest	Nothing	0	0
	Little	1	0
	Regular	6	0
	Enough	28	6
	A lot	45	16
	Total	80	22

According to table 6, the students of level 6 rate their interest and motivation in Mathematics "enough" or "a lot." In the case of level 7, the superior of this instrument, most rated themselves at "a lot." It is verified that the more interest and motivation the students show, the bigger their acting area in the BECOMA battery is.

Lastly, the results of this variable have been related to a different one also used in the process of construction and validation of the battery "*interest and motivation towards the area of Mathematics from the teacher's point of view*". This variable has also been used for the analysis of the concurrent validity of BECOMA. When relating this variable to "*the interest and motivation in Mathematics from the student's point of view*", previously analyzed, the Pearson correlation coeficient has been .73, the correlation being significant at .01 bilateral level. The obtained index shows a high association among both variables.

In table 7, the distribution of the students in the investigation according to the teacher's perception can be seen:

Table 7. Distribution of the participant sample according to the teacher's perception of attitudes

Teacher interest	Nothing	29	4.1
	Little	142	19.9
	Regular	227	31.9
	Enough	186	26.1
	A lot	128	18.0
	Total	712	100

After relating the scores obtained by the students in the battery with this variable, the Pearson correlation coefficient has been =.80, a high and significant index, that shows a very high association between the variables. To detail the differences in the scores in the whole of the battery taking as a factor this attitudinal teacher perception, this last one has been transformed into a category with three levels: *low* ("nothing" and "little," n = 171, 24%), *medium* ("regular," n = 227, 31.9%) and *high* ("enough" and "a lot," n = 314, 44.1%). The average score in each category has been 18.62 (DT = 7.73) for low, 30.92 (DT = 8.26) for medium, and 43.95 (DT = 8.91) for high. The results of the ANOVA have shown statistically significant differences among the established groups, suggesting that the scores of the students have varied according to the category where eache student has been included within this variable.

As stated above, 102 students have appeared in the superior levels of performance. The students' results according to this variable have been the following:

Table 8. Interest and motivation in Mathematics according to the teacher of the students located in the highest perfomance levels in BECOMA perfomance levels in BECOMA

	Scale	*Level 6*	*Level 7*
Teacher interest	Nothing	0	0
	Little	0	0
	Regular	5	1
	Enough	33	2
	A lot	42	19
	Total	80	22

According to table 8, the students of level 6 have an interest and motivation in Mathematics of "enough" or "a lot," and those of level 7 of "a lot.". It is shown that the higher the teacher's expectations of the interest and motivation of his students towards Mathematics, the greater his performance in the BECOMA battery.

4. Conclusions

The period of compulsory education constitutes an important moment for the work of competences as it is possible to make all the students participants of their own learning, what constitutes a unique opportunity for its balanced and integral development. In the case of mathematical competence, it is considered as a complex construct that acquires educational sense when the mathematical knowledge learned is used in the natural environment surrounding the student, giving to the student's attitudinal component an unusual importance and being essential as a central theme in the teaching and learning of Mathematics.

Throughout this article the explicit attitudes by means of the variable "*interest and motivation in the* *area of Mathematics from the student's point of view*" have been related to the results in the BECOMA battery. In this linking, an index of correlation of .72 has been obtained, i.e. a high and significant one. In order to analyze the differences in the scores, this variable has been transformed into another category with three levels: low ("nothing" and "little"), medium ("regular") and high ("enough" and "a lot"). The comparison of the averages has derived in scores of 20.03 (DT = 9.02) for the low level, 29.45 (DT = 9.19) for the medium one and 42.69 (DT = 10.13) for the high one.

The ANOVA results show statistically significant differences among the three groups in relation to students' scores on the battery. These results are connected to those obtained in other investigations regarding this variable (Bazán and Aparicio 2006; Gil, Blanco and Guerrero 2006; INEE 2008, 2013; Mato, Espiñeira and Chao 2014; Molera, 2012).

In the case of the most talented students in Mathematics, it has been observed that the greater the students' interest and motivation toward Mathematics, the higher their perfomance in the BECOMA battery. Studies have shown that students with greater interest and motivation in Mathematics tend to get better results and better perfomance than the rest. Thus, a positive disposition toward Mathematics is in itself an important educational objective (Cueli, García and González-Castro 2013; INEE 2008, 2013; Mato, Espiñeira and Chao 2014).

This pleasure in the subject is translated in the enjoyment towards learning, in the consideration of carrying out a good perfomance or in the valuation of the contents that are learnt as interesting (Tourón et al. 2012). Other investigations manifest that students with higher perfomance are shown to be more intrinsically motivated by the subject, showing a greater interest in doing their homework. (Pan et al., 2013).

Among the conclusions of PISA 2012 in relation to this variable, it is pointed out that the students' interest in learning mathematical content is low; enjoying little with their learning and, mainly in the case of girls, their advancement is hindered by anxiety and lack of trust (INEE 2013). Mato, Espiñeira and Chao (2014) affirm that the courses of Primary Education to Obligatory Secondary Education will prompt a descent in the attitudes towards the study of Mathematics. Moreover, if these attitudes decrease, the student may have feelings of lack of confidence in their own abilities, favoring the appearance of a low interest in the subject and the consequent diminution of their motivation to learn it (Mato, 2010).

Within the scope of Mathematics, the results of another variable have also been pointed out in this article, relating them to the performance of students in BECOMA, the *"student's interest for Mathematics from the teacher's point of view".* The interrelationship between both variables is .80, a quite high and significative one. When comparing the averages, this last variable has been transformed into a categoric variable with three levels: *low* (nothing and little); *medium* (regular); and *high* (enough and a lot). The average score in each category has been: 18.62 (DT=7.73) for the low level; 30.92 (DT=8.26) for the medium level; and 43.95 (DT=8.91) for the high level. ANOVA results show statistically significant differences among the three groups according to the students' scores in the battery. According to Tourón et al. (2012), statistical significant differences in *class perception* from the teacher's expectations about what the students should do and their interest in the tasks, with important differences between the students with high and lower performance.

When relating this variable with "interest and motivation toward Mathematics from the student's point of view" a Pearson index =.73 has been obtained, where the significant correlation is at the .01 bilateral level and there's a close association between both variables.

In short, the study and knowledge of students' attitudes toward Mathematics can be considered as an educational field of great value within what is known as *mathematical affective domain* (Palacios, Arias and Arias 2014). For this reason, teachers should pay special attention to these interests and motivations because of its importance in their mathematical perfomance, in order to favour the reduction and/or prevention of school failure habitually generated by this discipline.

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GIRL POWER

Personal Moral Compass in Middle Schools in the Periphery

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KEY WORDS

Moral Compass
Values
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Children
Gender
Palestinians
Jews

ABSTRACT

The aim of this study was twofold. First, we sought to map the personal moral compass (PMC) of children in the periphery – girls and boys, Palestinians and Jews – to better understand how nationality and gender affect their values – as activated in their lives. Second, we examined the relationship between personal moral compass and measures of well-being. 1001 *children aged 12-13 years living in the geographic northern periphery of Israel were asked to write short compositions on enactment of their values and completed questionnaires on sense of hope, general belongingness, and life engagement. In choice of values, clear differences between Palestinians and Jews were revealed, but gender differences were less salient. We also found that Palestinian and Jewish girls mentioned values more often and demonstrated deeper commitment to their PMC than boys did. Examining personal moral compass emerged as a valuable tool to learn about children's inner world.*

Introduction

Researchers and educators search for effective avenues to guide children in the direction of a healthy balance between responsibility to the community and personal success, but children construct their own understanding of the world; they are not empty and passive vessels to be filled with content by responsible adults (Dreitzel, 1973). It seems that a collaborative approach is necessary to draw children into a useful dialogue and foster a moral as well as a pragmatic approach to the future. Damon (2008) found that young persons inspired and committed to a noble purpose of their choice tended towards healthy and wise behaviors that served to reduce the risk of drifting into maladaptive lifestyles. However, as children develop a sense of identity and try to determine their place in the world, the values to which they become committed will likely serve as guides in times of stress and decision making and as signposts toward future goals.

In a controversial move, the city of Chicago recently decided to require high-school seniors to present a plan for the future as a condition for receiving a high-school diploma (CNN report, Ray Sanchez, 8 July 2017). Radical as it was, this measure reflects a growing concern that schoolchildren need to be better prepared for adult life. William Damon's seminal book, *The path to purpose: How young people find their calling in life* (2008), and research inspired by his work have shown that a sense of purpose contributes to a healthy and productive future. However, choice of purpose as well as many other life decisions are deeply affected by our values. According to Malin, Liauw, and Damon (2017), individuals find purpose on the basis of a set of clear values, and are "driven by those values to act on them" (p. 1202). We maintain that it is one's personal moral compass (PMC), composed of a set of core values, that serves as an inner guide in major life choices. Educators need to understand what matters to children, how they see the world, and, crucially, how their evolving PMC guides and motivates them.

1.1. Personal Moral Compass, and Well-Being

In the present study, we examined the values of middle-school children as they are actively expressed in their behavior. We focused not on abstract core personal values, but more importantly, on how children express them in their daily lives, where values serve as a guide to their actions.

We also focused on how the expression of values is related to well-being. Accordingly, in addition to the compositions, we administered three measures of well-being. The first, children's perceived sense of hope (Snyder et al., 1997), measures confidence in goal setting, as well as overcoming obstacles along the way. The second, general belongingness (Malone, Pillow, & Osman, 2012), is understood to be a key measure of well-being (Anderman & Freeman, 2004; Osterman, 2000; Van Ryzin, Gravely, & Roseth, 2009). The third, life engagement, is a measure of purpose (Scheier et al., 2006).

1.2. Demographic Variables: Gender and Nationality

In light of the possibility that demographic variables would affect children's responses to the research questionnaire, we examined the impact of two salient variables, gender and nationality, on the content of PMC as expressed in children's compositions. We chose these two parameters because findings of recent studies have demonstrated how children construct their moral outlooks from their social experience (see, e.g., Narvaez & Lapsley, 2014). This inevitably includes the sociopolitical environment, tensions between different national groups, and other aspects of the world in which they live. For example, Jewish and Palestinian children growing up in the Galilee are exposed to atrocities occurring in nearby Syria on the television screen. This situation has engendered increasing research interest in the resilience of children who live in such areas (Ajdukovic, Kimhi, & Lahad, 2015; Miller-Graff & Cummings, 2017; Shachar-Dadon, Gueron-Sela, Weintraub, Maayan-Metzger, & Leshem, 2017). The results of previous research suggest that most children continue to thrive and demonstrate resilience despite uncertain, sometimes dangerous, and frightening experiences (Hamill, 2003). However, there may be concerns regarding the effect of these negative life experiences on some children's abilities to articulate PMC, as well as their well-being in general. Also, differences between Jews and Palestinians, and especially, unequal power relations between these national groups living in the constant shadow of a chronic violent conflict, may affect children's value choices as well as general well-being (Ayer, Venkatesh, Stewart, Mandel, Stein, & Schoenbaum, 2017).

Van der Graaff et al. (2014) found gender differences in perspective taking and empathetic concern among adolescents, with girls displaying higher abilities and more prosocial abilities than boys. However, differences in physiological development might explain some gender differences in adolescence; adolescent girls are around two years ahead of boys in some aspects of cognitive development (Silberman & Snarey, 1993). In an Israeli sample of adolescents, Kulik (2005) found that girls tended to identify less with gender stereotypes than boys did, and this tendency decreased with age, regardless of sex. This suggests that, beyond the impact of gender on cognitive development in adolescence, children may be less constrained by gender stereotypes today than they were in the past.

In addition, nationality and gender may intersect. Some researchers and commentators have described Palestinian society as relatively patriarchal and collectivist (Efrati, 2004). In contrast, in a more recent study, Greenberg and Sagiv-Reiss (2013) found that the traditional ties to family and accepted gender-based norms are currently being challenged in this society. Therefore, any assumptions regarding gender roles in this national group should be viewed with caution, but there is also a need for research on how gender impacts PMC in the context of national groups.

1.3. Composition Writing and Analysis

Banyard, Hamby, Aubin, and Grych (2015) found that children's writing exercises on morality, in particular when expressing their personal outlook, potentially stimulate their interest and may foster emotional as well as physical health. Moreover, research on the impact of self-affirmation has shown that writing about treasured values often leads to prosocial behaviors (Cohen & Sherman, 2014), and there is also some evidence that it can serve as a buffer to stress (Brady et al., 2016).

Analyzing children's compositions with a focus on values can provide rich data on what children find most important to them. For example, Veljkovic & Schwartz (2001) found that a composition competition provided an outlet for the expression of children's "laws of life." Elias (2008) discussed the effectiveness of such activities in enhancing resilience; Stepney, Elias, and Epstein (2015) found that content analysis of children's compositions could help identify children at risk. Therefore, asking children to write about their values and how they apply them in their daily lives could provide them with an opportunity to consider which values are important to them and how these values affect their day-to-day lives. Such information could provide researchers and educators with a window into the world of adolescents.

1.4. The Present Study

We defined PMC as a set of values that serve as rules of thumb for each child when encountering obstacles and challenges that require responsible and considered decisions and choices. Therefore, to identify PMCs, we asked the children who participated in the study to write short compositions articulating how they put their personal values into practice, based on two questions: Do you have any value or values that are important to you personally, and how do you put them into practice in your daily life?

We also administered questionnaires on the three measures of well-being listed above, in order to gather information regarding well-being. In addition, the participants completed a demographics questionnaire, to help determine the impact of gender and national identity.

We studied the PMC of middle-school children in a geographic periphery. The premise was that their expressions of commitment to values would provide information about what they cared about and how they saw themselves as active agents in their daily lives, but more importantly, how these values were directly related to behavior. However, the present study was not intended as an intervention, and it did not include the initiation or evaluation of any related programming.

1.5. Hypotheses

Based on the research literature, we posited the following hypotheses:

1. Children will be able to identify values that are important to them and to describe how they put them into practice in their day-to-day lives.

2. Values expressed will be associated with gender as well as with national differences.

3. Children who do not write compositions will score lower than children who do on measures of well-being.

4. General belongingness, children's perceived sense of hope, and life engagement (LET) will predict evaluated commitment to values (EC) as expressed in compositions.

2. Method

In order to examine these hypotheses, we chose a mixed-methods approach, in which quantitative as well as qualitative data were collected and analyzed. For the qualitative data, we asked children to write short compositions about their values. Based on data from the compositions, we calculated a measure of their commitment to values (EC) in order to investigate the relationship between PMC and measures of well-being. We also administered three standardized questionnaires to evaluate children's well-being: children's perceived sense of hope, general belongingness, and life engagement. We then performed regression analysis in order to determine the degree to which these measures predicted evaluated commitment (EC). In addition to analyzing the results for the children who wrote about their values and answered the questionnaires, we also examined the results of the questionnaires completed by children who refrained from writing compositions.

2.1. Participants

The research sample was comprised of 1001 eighth-grade girls and boys aged 12-15 who were attending seven middle schools in the Galilee, Israel. There were 422 males, 486 females, and 98 students who did not mention their gender; 337 were Jewish and 664 were Palestinian. In Israel, Palestinian and Jewish children study in separate schools. The two systems, both supervised by the Israeli ministry of education, differ in language of instruction (Palestinians study in Arabic, and Jews, in Hebrew). The two different cultures are reflected in their respective curricula, but they share a common core of subject matter. We made every effort to reach a sample typical of children in the Galilee including both Palestinians and Jews. To obtain a representative sample, we included all the children studying in all regular classrooms in each school, all in public institutions providing education to children studying in regular frameworks.

2.2. Ethical Considerations

All research conducted in the public education system requires written permission of the chief scientist of the education ministry. We obtained this before approaching the school principals, whose permission was also required. Following the instructions of the chief scientist, we made sure that parents of the participants were aware of the research and its content and were given the option of refusing to allow their children to take part. After completing our initial analysis, we returned to the participating schools, reported the results to the management and teachers (untraceable to any child or class) and participated in a proactive discussion on its consequences. In addition, we hosted the Palestinian children at Tel Hai College, had them meet with Palestinian role models in the campus –students and faculty – and thanked them in a moving ceremony with members of the campus management.

2.3. Design and Procedure

Research assistants met the participants in their classrooms during the school day and guided them in filling out questionnaires and writing compositions. We also provided written instructions. The children wrote the compositions in the classroom without the presence of teachers and were given unlimited time to complete the questionnaires; most of them took around 20 minutes to do so. Some children wrote short compositions of 3-4 lines; others completed up to half a page of writing. In a few exceptional cases, the compositions were longer.

2.4. Instruments

Written composition. The children were asked to write a short composition addressing two questions: (a) do you have a value or values that you personally identify with; and (b) how do you put it or them into practice in your daily life?

The Children's Perceived Hope Scale. Snyder et al.'s (1997) Children's Perceived Hope Scale contains six items, three representing agency (e.g., "I am doing just as well as other kids my age") and three representing pathways (e.g., "When I have a problem I can think of lots of ways to solve it"). In the initial validation studies (Snyder et al., 1997), the reliability scores for CHS ranged from α = .70 to α = .86, with a median alpha of α = .77. In the present study, an acceptable level of reliability was attained (α = 0.75).

General Belongingness Scale (GBS). Malone, Pillow, and Osman's (2012) questionnaire contains twelve items that are rated on a 7-point Likert-type scale from "strongly disagree" to "strongly agree." For this research, we used two of the subscales of GBS: acceptance/inclusion (e.g., "When I am with other people I feel included") and rejection/exclusion (e.g., "I feel like an outsider"; these items were reverse-scored). The authors of the scale reported high and stable reliability (α = .92; Malone et al., 2012). In the present study, an acceptable level of reliability was attained (α = 0.79).

Life Engagement Scale (LET). Scheier et al.'s (2006) questionnaire, designed as a measure of life purpose, contains six items (e.g., "To me, the things I do are all worthwhile"). Scheier et al. (2006) obtained acceptable reliability scores in all cases, ranging between α = .72 and α = .87, average α = .80. In this study, a less than satisfactory level of reliability (α = 0.62) was attained.

Demographic questionnaire. The children were also asked to complete a demographic questionnaire about age, gender, religion, and place of residence.

2.5. Content Analysis of the Compositions

Before analyzing the children's compositions, we prepared a protocol for content analysis and held a training workshop in which initial coding of compositions was conducted. Four trained graduate students – two native Arabic-speakers and two native Hebrew-speakers – served as research assistants (RAs); they conducted content analysis of the compositions written in Arabic and Hebrew, respectively, employing the constant comparison method (Strauss & Corbin, 1994). The Arabic-speaking RAs analyzed the compositions written in Arabic, and the Hebrew-speaking RAs analyzed those written in Hebrew (each composition was read by two RAs). At an early stage of this analysis, one of the researchers conducted an independent content analysis of a sample of 60 compositions (30 in Hebrew and 30 in Arabic), to ensure that the protocols were being followed, the four evaluators and the entire research team met to compare results.

2.5.1. Protocol for the content analysis

1. To identify the main themes, each RA completed a standard form constructed to obtain the following information regarding themes: (a) name; (b) definition; (c) number of times the theme was mentioned in the composition; and (d) the estimated power of the theme (a scale of 1–9, low to high). The RAs arrived at these estimates based on the number of repetitions, word choice, and degree of detail. The estimated power was considered a relative factor, because it was based on comparison of all the themes elicited from the compositions.
2. The RAs assessed each child's overall commitment to values mentioned in the composition, based on repetitions, power of themes, word choice, and level of detail (using a scale of 1–9, low to high). We called this evaluated commitment (EC). This estimate was also relative, because it was based on comparison by the RAs of the compositions of all the students.
3. The research team met to compare their results, with the goal of reaching a consensus. A protocol was developed to resolve the differences between evaluators; most of these were semantic and therefore easily dealt with. In the few cases of significant disparity between RAs (each composition was evaluated by 2 RAs), one of the researchers served as adjudicator.

The data from the questionnaires were then loaded into the SPSS statistics tool for further analysis.

2.6. Statistical Analysis

Missing data. We assumed that any missing data was random, and did not employ ad hoc methods to address this issue. Thus, the missing data caused by children refraining from responding to all items in the questionnaire was not included in the analysis. It accounted for 5.3% of responses for the children's sense of hope measure, 5.8% for belongingness, and 9.9% for life engagement. A significant number of children did not write compositions but did complete the self-report questionnaires. We used this as an opportunity to test the differences between those who did and those who did not write compositions, as described in the section, Composition Writing.

Mixed methods analysis. We employed Fisher r-to-z transformation to assess the significance of the difference between two correlations – Jews and Palestinians (see Table 2). We also performed multiple regression analysis to explain variance in evaluated commitment by nationality, gender, belongingness, hope, and life engagement (see Table 3).

Composition writing. In light of the significant number of participants who did not write compositions, we performed an independent t-test to examine the differences in hope, belongingness, and life engagement between those who wrote compositions and answered the questionnaires and those who only answered the questionnaires. A separate test was performed for each group (Palestinians and Jews). We also performed independent t-tests to examine gender differences in hope, belongingness, and life engagement among those who did not write compositions.

3. Results

3.1. Theme Mapping

The content analysis of the compositions indicated 17 themes, which we then organized into three main categories: values; types of behavior (activities and actions related to values); and justifications, explanations, and motives for belief in a value (see Table 1).

Table 1. Categorized Themes Extracted from Participants' Compositions

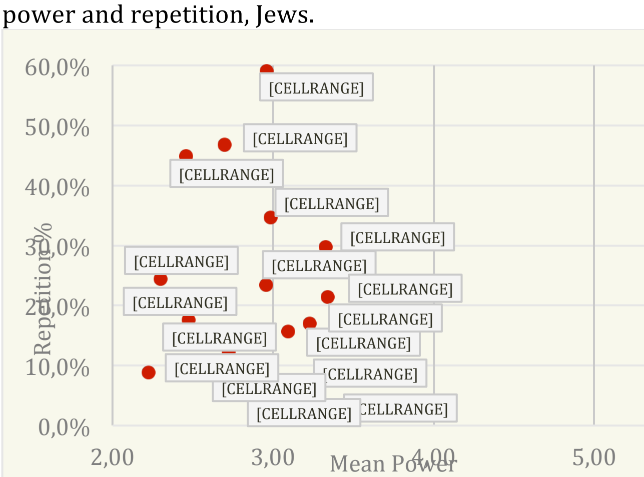
Category	Theme*	Definition	Example
1. Values - What respondents believed in and actively promoted	Honesty and morality	Being truthful and straightforward	I play a fair game and if I lose, I lose.
	Respect	Considering others' feelings and rights	I must respect all people, it doesn't matter if they're young or old.
	Tolerance	Accepting that others have different opinions and behaviors	I have friends with different political views then mine. It upsets me, but I respect them and keep my anger to myself.
	Being true to oneself, love of life and freedom	Upholding one's own beliefs and not accepting societal norms and pressures automatically. Defining freedom as a Value as well as a pathway to self-expression and creativity	It's very important to be myself, it means to keep my own style and point of view.
	Loyalty to others	Commitment to the social environment	Family is very important, I need to invest in relationships.
	Justice and equality, accepting others	Encouraging justice and opposing injustice; accepting others, expressing a desire to help the excluded, weak, and alienated.	I accept all, I don't care if he's gay, trans, straight or Arab.
	Helping others	contributing to society	I help reconcile between to friends when there is a fight
2. Behaviors and frames of reference - Types of behavior, activities, and actions related to values	Activism for change in environment	Promoting a value; commitment to act for the sake of others	I go to demonstrations against animal abuse and the meat industry and pro vegan diet.
	Value justification within the family framework	Justifying a value only within the family or close personal framework	I want my parents to be proud of me
	Value justification within a general social framework	Consideration of others who are not necessarily known personally, based on a universal social outlook	I love my country and hope to live in my homeland in peace and security.
	Determination to realize a goal	Belief that determination to achieve long-term goals is a value and a personality trait	I don't give up when I face a challenge, there is a future waiting for me.
	Critical reflection regarding expression of value	Critical reflection on the appropriateness or feasibility of acting according to values; awareness of the limitations of oneself and other in maintaining values	Sometimes, out of recklessness I do not implement all the (religious) commandments.
3. Justifications - Explanations and motives for belief in a value or behavior intended to promote it	Social justice	Seeing a value from the perspective of society and justifying it as serving the greater good	If we all keep the environment clean, we'll all live a healthy lifestyle.
	Emotional justification	Justifying a value based on past experience and a desire to protect oneself or others; an emotional motive for upholding a value	Volunteering and helping others gives me a sense of fulfilment, it makes me happy.
	Justification motivated by self-interest	Justifying a Value based on self-image, ego, or attainment of a material or abstract advantage	I help my parents in a lot of stuff, that's why they love me.
	Rational justification	Justifying a value based on a logical explanation	If you respect others, then others will respect you.
	Tradition and religious belief	Justifying a value or behavior based on tradition or religion	Because my religion taught me this value.

3.2. Theme Repetition and Mean Power

The degree of commitment to (mean power) and repetition of the selected themes were examined by group (Palestinian and Jewish) and by gender.

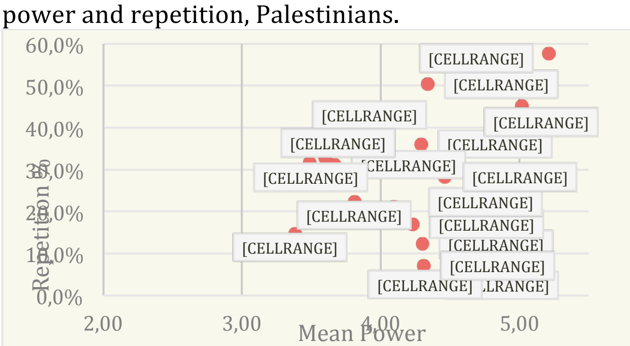
Comparison between the Palestinian and Jewish groups. The results of the comparison between the national groups are presented in Figures 1 and 2. The most frequent themes among Palestinians were determination to realize a goal (57.7%), critical reflection (50.3%), loyalty to others (45.2%), and close framework (43.0%). Determination to realize a goal (M = 5.2) and loyalty to others (M = 5.0) were also the most powerful themes, and activism (M = 5.2). The themes most frequently mentioned by the Jewish participants were being true to oneself (59.0%), general framework (46.8%), and close framework (44.9%).

Figure 1. Theme distribution according to mean power and repetition, Jews.



Comparison by gender. More than 40% of the female participants mentioned the themes of critical reflection, close framework, determination to realize a goal, being true to oneself, and loyalty to others (the themes repeated most frequently by the female participants). In comparison, only 25 to 35% of the male participants mentioned these themes.

Figure 2. Theme distribution according to mean power and repetition, Palestinians.



3.3. General Belongingness, Children's Perceived Hope, Life Engagement, and Evaluated Commitment

Table 2. Pearson Correlations, by National Group

	Evaluated commitment	Belongingness	Hope
Jews			
Evaluated commitment	-		
Belongingness	-0.038	-	
Hope	0.072	0.448***	-
Life engagement	0.063	0.380***	0.482***
Palestinians			
Evaluated commitment	-		
Belongingness	0.069	-	
Hope	-0.149*	0.152**	-
Life engagement	0.210**	0.492***	0.587***

*p < 0.05, **p < 0.01, ***p < 0.001

National differences. The results of the Fisher r-to-z transformation are presented in Table 2. The dark areas in the table show significantly higher correlations in the Palestinian group, compared with the Jewish group, except regarding children's sense of hope.

Prediction of evaluated commitment. The results of multiple regression analysis for the prediction of evaluated commitment are shown in Table 3. The Jewish respondents expressed higher commitment compared with the Palestinians (β = 0.10, p < 0.01). Belongingness (β = 0.26, p < 0.001) and hope (β = 0.31, p < 0.001) were significant predictors of commitment whereas gender and life engagement were not; together they explained 25% of the variance.

Table 3. Multiple Regression to Predict Evaluated Commitment by Nationality, Gender, Belongingness, Hope, and Life Engagement

	B	S.E.	β
Sample	0.89	0.33	0.10**
Gender	0.40	0.28	0.05
Belongingness	0.07	0.01	0.26***
Hope	0.36	0.05	0.31***
Life engagement	0.09	0.07	0.05
$F_{(5,599)}$		40.49***	
R^2		0.25	

**p < 0.01, ***p < 0.001

Comparison of children who did and did not write compositions. Among the Jewish participants, the only significant difference between those who did and those who did not write compositions was in life engagement. Those who wrote compositions scored higher on life engagement than those who did not (25.1% and 23.8%, respectively). We observed the same trend in the Palestinian group (24.0% and 22.3%, respectively). In contrast to the Jewish group, in the Palestinian group, significant differences, all in the same direction, were found between those who did and did not write compositions in the subscales of the hope questionnaire (see Table 4).

Table 4. Means, Standard Deviations, and Differences in Dependent Variables Between Children Who Wrote and Did Not Write Compositions, by National Group

	Questionnaire	Composition (*n* = 206)		No composition (*n* = 131)				
Sample	and subscales	*M*	*SD*	*M*	*SD*	*F*	*p*	Eta^2
Jews	Hope							
	Agency	9.1	1.8	8.9	1.9	0.418	0.518	0.002
	Pathways	9.2	1.9	8.9	1.8	1.547	0.215	0.006
	Belongingness							
	Acceptance	23.1	2.5	23.0	2.9	0.031	0.860	0.000
	Rejection	28.4	5.4	27.4	4.6	2.730	0.100	0.009
	Life engagement	25.1	3.5	23.8	4.2	2.682*	0.008	0.034**
Palestinians		(*n* = 471)		(*n* = 193)		*F*	*p*	Eta^2
	Hope							
	Agency	8.8	2.2	7.9	2.7	19.035	<0.001	0.029
	Pathways	9.1	2.2	8.1	2.4	24.706	<0.001	0.038
	Belongingness							
	Acceptance	22.9	3.7	22.4	4.6	1.347	0.246	0.0012
	Rejection	28.9	6.0	27.0	6.4	12.242	0.001	0.019
	Life engagement	24.0	4.5	22.3	5.8	3.378*	<0.000	0.27**

* t-test, **Cohen's d

4. Discussion

In this study, we first investigated children's PMC and how core themes that arose in the research were affected by gender and by national group, and we then examined the relationship between evaluated commitment to values (EC) and three measures of well-being. The research produced several interesting findings.

We found that in general, the children in this study were able to express their values well and to describe how they implemented them in their lives, confirming Hypothesis 1. The findings regarding demographic variables confirmed Hypothesis 2, in general. In both national groups, the girls identified more strongly with values and scored higher on evaluated commitment than the boys did. This was not surprising; the children who participated in the research were 12 and 13 years old, an age when most girls are cognitively more advanced than boys are (Silberman & Snarey, 1993). Interestingly, the gender differences among the participants were notably less pronounced than those by nationality. This supports the findings of Kulik's (2005) research, in which gender stereotypes were largely absent from an adolescent sample. Nevertheless, in the present study, 40% of girls mentioned critical reflection, close framework, determination to realize a goal, being true to oneself, and loyalty to others, and these values were markedly less prominent in the boys' compositions. In addition, we found no significant gender differences in the general measures of well-being.

Furthermore, although more pronounced among the female participants, there were significant differences between the Palestinian and Jewish subsamples irrespective of gender. According to the compositions, determination to reach a goal was the leading value among Palestinians; being true to oneself was most salient among the Jews. This is consistent with Gross's (2013) finding that Palestinian schoolchildren tended to display extrinsic motivations, and Jewish children tended to be intrinsically motivated, in correspondence with the priorities of their respective school systems.

Another way to explain this finding is sociopolitical, based on the difference between a hegemonic and a minority population. The minority group of Palestinians in Israel — and the same could apply to the Hebrew- or Mandarin-speaking communities in the US — competes and strives to win by "the other's" standards, so that it makes sense to invest in external and universal standards, such as grades; in contrast, members of the hegemonic Jewish group might be able to succeed simply by being "true to oneself" since they comprise the dominant group. It is also possible to interpret the findings of this study by recognizing that the participants displayed differences by nationality rather than by gender. The dominant narratives in Israel emphasize ethnic or national conflict (Oren, Nets-Zehngut & Bar-Tal, 2015), and living in a geographically peripheral area of the country would not be expected to provide an environment free of such emphasis.

Changes in Palestinian society may explain the lack of gender differences among Palestinian children; research has suggested accelerated change towards gender equality among Palestinian girls (Weinstock, Ganayiem, Igbaryia, Manago, & Green field, 2015). If young people are actively engaged in writing their own stories, they may be inclined to express a more egalitarian social outlook, but maintain cultural differences. However, the Jewish research participants ascribed equal importance to their close family and friends and general frameworks (wider society) as areas for value enactment. In contrast, the Palestinian children largely saw their close framework of family and friends as the place for value enactment. This might reflect a more open society among Jews, compared with their Palestinian peers, who, in spite of rapid social changes may still have a more inward outlook on life, which is dominated by the extended family. However, further research is required to substantiate this explanation of results.

4.1. Writing Compositions

A substantial portion of the children, and particularly of the boys, completed the questionnaires but did not write compositions. Comparison of all the children who wrote compositions with those who did not showed that the latter scored significantly lower on life engagement. In the Palestinian group, the children who did not write compositions also scored lower on children's sense of hope than those who did.

In general, not writing compositions might reflect difficulties in self-expression, even in simple language, but it seems that at least some of these children felt that they had little to say on the subject of values. This might suggest that this group should be considered children at risk for a range of difficulties, because a lack of expression of moral compass along with depressed scores in the measure of life engagement indicate lower identification with positive purpose. Damon (2008) found that children with a sense of purpose grounded in prosocial values are likely to live healthy balanced lives, and those who lack a sense of purpose may not. Marcia (1980) termed children without purpose as "adrift" and likely to experience a range of psychological difficulties.

Furthermore, the Palestinian children who did not write compositions scored significantly lower on sense of hope than those who did. The children's sense of hope scale speaks to the ability to think ahead, set personal goals, and have confidence in the ability to attain them. Therefore, we suggest that identifying children who do not relate to personal values will provide educators with an opportunity to concentrate efforts on encouraging them to develop a personal moral compass, along with other life skills that will help them develop a positive sense of purpose in life.

Hypothesis 4 was not fully confirmed. This is discussed further in the Conclusion.

5. Conclusion

As a large-scale replication of an earlier study of children's values choice in middle school (Kasler, Shavit, Harel, 2014), the present research enabled us to focus on the significance of gender and nationality across a broad sample that included children from Jewish and Palestinian backgrounds. The regression analysis showed that children's perceived hope and general belongingness significantly predicted evaluated commitment as an overall measure of personal moral compass, but life engagement did not. Therefore, Hypothesis 4 was partially supported, suggesting a relationship between two of the three measures of well-being and evaluated commitment as expressed in compositions. It may also be instructive to examine the children's dominant values to further understand the relationship of personal moral compass with well-being. For example, the fact that most of the Palestinian children in the present study mentioned determination to reach a goal would suggest a commitment to working towards a better individual future. In contrast, the emergence of being true to oneself as a dominant value among the Jewish participants indirectly suggests a search for meaning and authenticity, perhaps revealing that other, less material needs are more pressing. This contrast might be best explained within the context of a poorer, marginalized minority (the Palestinian citizens of Israel) as opposed to the dominant Jewish majority. Perhaps Palestinian children look ahead with determination to carve out a better future for themselves, but the Jewish children are more concerned with what might be considered more spiritual needs.

In general, there was an absence of significant gender differences, perhaps indicating a balance between what were once considered traditionally "male-oriented" values (e.g., determination to reach a goal) and those that were more often identified as "feminine" (e.g., concern for others). Another interesting difference between the Palestinian and Jewish participants was the preference of the former for a close framework (usually family and friends) as the arena for enacting values, while the latter were more evenly distributed in both close and general frameworks (wider society).

Finally, the size of the research sample allowed us to examine a group that didn't write compositions as requested, although they did complete the self-report questionnaires. These children scored significantly lower on life engagement than their counterparts who completed both parts of the research. Within this group, the Palestinian children also scored lower on children's sense of hope. Educators should be cognizant of those children for whom expression of their values or moral compass is difficult, and work with them to strengthen essential life skills strongly promoted by professionals and researchers in the field (Elias, 2014; Snyder, 2014).

5.1. Limitations and Recommendations for Future Research

The present research was conducted in a specific geographical area, and therefore the results may be difficult to generalize. Further research comparing children living in the center of the country and the periphery, or between the children in the Israeli periphery relative to other peripheral localities in other countries, is therefore needed. Nevertheless, the results provide essential data that should inform further research. In addition, the well-being measures we chose did not provide a full picture of the psychological characteristics of the children in the study, but did highlight children who may be at risk. Moreover, the study was limited to a specific age group (ages 12 to 13), and therefore one should be cautious about inferences regarding children of other ages. Furthermore, disparities in the cognitive maturity of girls and boys in this age group are likely to have affected the results. One methodological weakness in this study was the probability of priming; the writing of compositions preceded questionnaire completion and may have therefore influenced their answers. Finally, the reliability measured in the study for the life engagement scale was low and this may lessen confidence in research results. Despite these limitations, the present research contributes to the discussion of the significance of values children regard as important to them in their daily lives.

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