Can Wisdom be Taught by Philosophical Practice?: An Experimental Research in Spain, Norway, Croatia and Mexico*

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Abstract: This paper aims to explain the outcomes of the first international empirical project on Philosophical Practice. It was performed in México, Croatia, Norway and Spain and it was funded by John Templeton Foundation by means of the Center for Practical Wisdom (The University of Chicago). Each country worked on a control group and an experimental group. The results are based on the implementation of the Three Dimensional Wisdom Scale (3D-WS) by Monika Ardelt and on a qualitative research based on personal questionary. Results prove positive improvement in affective and cognitive dimensions on participants. In addition, sessions provoked important modifications in the behavior of some participants after being exposes to the Philosophical Practice workshops.

Key words: Philosophical Practice, wisdom, experience, life-experience, Monika Ardelt, 3D-WS, experiment

1. Theoretical framework

1.1. Towards a classification of wisdom

Wisdom has been defined in several ways. Each definition highlights

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specific concepts:

> (a) Sapientia or divine knowledge (Millar, 2016; Steward 2015; Antón-Pacheco, 2010; Panikkar, 2001; Paredes, 1995), an idea found in the Hebrew concept HoKMaH (Dell, 2000) or in the Egyptian concept Maat (Curnow, 1999). Scientia, knowledge based on human reason that includes divine features (its substance is not confined by the limits of time or space) and is grounded on sapientia.
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> (b) Phronesis or human wisdom based on the practice of a number of virtues and exercises or technologies of the self (Cooper 2012; Tiberius, 2010; Nussbaum, 1996; Séneca, 2001a and 2001b; Aurelio, 2010; Epicteto, 2007; Rice, 1958; Nozick, 1989).
>
> (c) Expertise or knowledge and skills, generally of a technical nature, acquired by the consistent repetition of activities and which is acquired by professionals such as physicists, video game developers, or specialists in ethics (Apodaka, Merino, and Villareal, 2012; Balthes and Staudinger, 2000:124).
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> (d) Philosophia perennis: the compendium of wisdom from a particular cultural tradition, exhibited in maxims and popular sayings and that coincides with other types of wisdom (Kopenawa and Albert, 2010; Huxley 2004; Curnow, 2015; Oruka, 1994).

According to this taxonomy, Teresa de Jesus (Negre Molinos, 2015) and Juan de la Cruz (2007) defend wisdom as knowledge that comes from God (sapientia). On the other hand, Nozick states that wisdom (phronesis) "is what you need to understand in order to live well, cope with the central problems, and avoid the dangers in the predicaments human beings find themselves in" (1989: 269) and Balthes (2004) affirms that wisdom is expert knowledge.

Psychology and Pedagogy have addressed dimensions of wisdom instead of attempting to define it. For example, they have connected wisdom to intelligence, creativity, common sense, knowledge, the ability to acquire values to achieve a common good (Sternberg, 1998), to come up with a reflective way to address important values for society and individuals (Maxwell, 2007), to a form of advanced cognition (Dittmann, Kohli, and Balthes, 1990), or to improve reflectiveness, good judgment and gain a broad perspective (Gilbertson,

1991: 24). All these actions are achieved through critical thinking. Monika Ardelt has proposed a three-dimensional idea of wisdom based on cognition, affection and reflection (Ardelt, 2003). According to this scheme, she built the instrument that we are going to use in our experiment.

1.2. Fields where wisdom has been developed

Despite the fact that wisdom has historically been a preeminent topic of research in the philosophical and religious fields, in the past years, the study of wisdom in other areas of knowledge such as psychology, education or sociology, have proven to be cumbersome. In the 1980s, Paul Balthes, a psychologist, gathered a team at the Max Plank Institute für Bildungforschung to begin a pilot (psychological) study on wisdom. The project was carried forward by some of his students such as Professor Staudinger (based at Columbia University), and Professor Glück (now at the University of Klagenfurt). Today, the United States' largest interdisciplinary project on wisdom is being conducted at the University of Chicago, where Professor Howard Nusbaum has achieved a seedbed of empirical projects on wisdom that apply the concept in fields such as sociology (Ardelt, 2003, 2004), psychology (Law and Staudinger, 2016; Targowski, 2016), neuroscience (William and Nusbaum, 2016), languages (Hayakawa et al., 2016), art (Hopper, 2016) and philosophy (Tiberius, 2010). Studies have been created to investigate how individual (emotional and cognitive), group, institutional and social capacities can be increased through wisdom, subjecting experimental groups to certain triggers that would facilitate it. These triggers are dance (Hopper, 2016), the learning of foreign languages (Hayakawa et al., 2016), or stimuli of another type. Our project was launched thanks to a grant from the Center for Practical Wisdom at the University of Chicago to analyze whether stoic techniques could continue to be effective in increasing sapiential abilities.

Apart from the center in Chicago, the European interdisciplinary network of wisdom studies Sophia and Phronesis, coordinated by Professor Eeva K. Kallio (University of Jyväskylä), is also distinguished

for its work in this field.

Finally, it should be noted that the application of sapential content has occurred in various fields: social work through Cheung (2016), nursing through Cleary and Horsfall (2016) and Vishnesky (2015), ecology, where Xiang has created the concept ecophronesis (2016), and business sciences, to which Hicks and Waddock (2016), Nayak (2015), and Malloch (2015), among others, have contributed.

1.3. Instruments for measuring wisdom

There is a number of tests for measuring wisdom. The first one is the Berlin Wisdom Paradigm (Banicky, 2009). It contains a set of problems that assess the cognitive features of wisdom-related knowledge. Examples of such problems are: 'A 15-year-old girl is in a rush to get married. What should one/she consider and do?' and 'A 14-year-old girl wants to move out of her house right away. What should be considered in this situation?' The evaluation of answers depends on five criteria: factual knowledge (about human condition and nature), procedural knowledge (related to problem-solving), lifespan contextualism (knowledge about context and how it changes), relativism of values (being aware of cultural differences and being sympathetic to all of them), management of uncertainty (dealing with the uncertainty of the future and effectively managing personal limitations).

The Adolescent Wisdom Scale (AWS) has twenty-three attributes and three sub-scales (spirituality, intelligence and harmony/warmth) (Perry et al., 2002). It has been used to evaluate adolescents and young people.

The ASTI (Levenson et al., 2005) stresses self-transcendence of wisdom. Transcendence is based on Trevor Curnow's works on wisdom (1999, 2005). Ten of thirty-five items refer to alienation and twenty-five to self-transcendence (such as 'I am more likely to engage in quiet contemplation' and 'I feel that my individual life is part of a greater whole').

The Self-Assessed Wisdom Scale (SAWS) (Webster, 2007) encompasses forty items. It focuses on emotional issues and emphasizes humor as a way of dealing with difficult events in life. In addition, it

measures openness, emotional regulation, critical life experience, and reminiscence and reflectiveness.

The Three-Dimensional Wisdom Scale or 3D-WS was devised by Monika Ardelt (2003). It measures cognitive, reflective and affective elements of wisdom[1]. Cognitive aspects cover 'an understanding of life and a desire to know the truth'. It assesses 'the ability and willingness to understand a situation or phenomenon thoroughly', 'acknowledgment of ambiguity and uncertainty of life', and the ability to make decisions despite these drawbacks. The reflective aspect embraces the ability to see events 'from multiple perspectives'. The affective aspect implies the ability to feel sympathy for and empathize with others (Ardelt, 2011). The Three-Dimensional Wisdom Scale has 39 items, but there is an abbreviated model (3D-WS-12) with 12 items (Thomas et al., 2017).

We decided not to choose the Berlin Wisdom Paradigm because it required that the person who is going to work with the data have profound knowledge of critical thinking and ethical reasoning, and our expert was a psychologist. In the AWS, an age limitation was implemented in the sample of participants. Since our project works with the elderly, it did not align with our goals. The ASTI was too linked to spiritual issues. We just had six sessions to develop wisdom skills, therefore we were not going to have a lot of time to work on that issue. Only one session was devoted to the 'vision from above'. Therefore, we did not use the ASTI either. The SAWS and the 3D-WS were considered to be the most useful. In fact, both of them were translated into Spanish for Spanish and Mexican participants. Initially we had thought of using SAWS because the 3D-WS has been tested with elderly people. However, we discovered that it has also been tested on young participants. Both tests were administered to twenty people, and their consensus was that Ardelt's Three-Dimensional Wisdom Scale was clearer. It also contained main areas of the exercises of stoics, which led us to choose it.

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[1] This is a test assessed by people from different countries that are several ages. This is considered one of the more respected test for measuring wisdom in the world. Therefore, it is one of the best measure instrument to get our results.

1.4. Is wisdom teachable?

This project aims to teach wisdom in lab conditions. This idea raises a question: is wisdom teachable? Some authors claim that it is not possible to teach wisdom because they endorse the Socrates' position in Meno. Socrates states that it is not possible to teach wisdom because it is a 'gift of the gods' (Gilbertson, 1991: 24). Sharon Ryan agrees with Gilberson by defending Socrates' connection between wisdom and epistemic humility in Republic: 'wise people don't believe they are wise' (Ryan, 1999).

Nicholas de Cusa supports this position because he understands wisdom as 'sapientia'. Therefore, it cannot be achieved by human means. It can only be received by God. He calls wisdom 'docta ignorantia' or learned ignorance. These positions could lead one to infer that wisdom cannot be taught, but they do not rule out that wisdom can be learned. This is the view offered by Gallager (1992) and Weiss (2017): wisdom is not teachable, but it is learnable. Wisdom could be exercised personally by the maxim 'know thyself'. Human beings can learn wisdom if specific conditions are in place. Weiss has developed guided imagery activities to help people to cultivate wisdom on their own. Guro Hansen Helskog concurs with this idea. She developed a program called 'Dialogos' to teach wisdom in schools and colleges (Helskog, 2017).

On the other hand, some philosophers have argued that wisdom can be learned by means of memorizing maxims (Aranguren, 1966: 42; Marias, 1966: 124) or through storytelling by parents to their children or by masters to their disciples (Curnow, 2015). This idea comes from soul therapy, a widespread topic in Hellenistic times. Stoics, epicureans and cynics understood that philosophy was a way of life (Hadot, 1995, 2002) and they work on technologies of the self (Foucault, 1994, 2000) in order to increase wisdom. For them, wisdom meant achieving practical abilities such as tranquility of the soul, emotional regulation, critical thinking, reflective thinking, deep insight, self-knowledge and following natural and rational principles, among others[2]. This is close

[2] These goals are shared by several philosophical schools. Our experiment is more

to the three dimensions Monika Ardelt proposes in her instrument to measure wisdom.

The question is if stoics achieved their target and, more important for our project, if we can *today* by using their proposed exercises. This is the basis of our experiment: we designed and implemented six workshops in four experimental groups in order to discover if those exercises can develop wisdom in the 21st century.

2. Experimental project

2.1. Similar experiments

Each culture devises personal ways of understanding its concepts, such that wisdom is understood differently by Westerners and Easterners. Takahashi and Bordia (2000) proved this point in a very influential article. They discovered that 'the conceptualization of wisdom in the West differs from that in the East, with the former emphasizing the cognitive dimension and the latter stressing the cognitive and the affective dimensions'. Americans and Australians defend that wise persons have a high level of life-experience and knowledge. In contrast, wisdom is related to discretion and life experience in India and Japan. Sánchez Escobedo et al. (2014) refers to the study by Ivanova and Rascevska to conclude that 'In Latvia, wise persons were perceived to have high social skills and intrapersonal abilities, comprehensive knowledge, and adaptation and forecasting abilities'. On the other hand, gender is another factor to be considered in the implicit theories of wisdom. Glück, Strasser and Bluck (2009) completed three studies with remarkable conclusions: 'In Study 1, participants rated characteristics and possible sources of wisdom

focused on stoics by means of performing specific stoic exercises (prameditatio malorum, the writing of a diary, Diakrisis, etc…). After making this experiment, we decided to perform a second one (working in progress) with more than twenty sessions develop in each experimental group. Therefore, we have enlarged the number of sessions and exercises there. It contains a work with more than five hundred inmates from several prisons in Iberoamerica.

concerning their importance for wisdom. Gender differences are small, but suggest a slightly more cognition-oriented view of wisdom in men. Study 2 showed gender differences in participants' reports of an event in which they were wise: men most often reported events from their professional life, whereas women reported events from a range of domains including family-related events and events concerning death or illness. Study 3 showed very small differences in the characteristics participants ascribed to a male wise person and a female wise person: aspects related to concern for others were rated as slightly more typical for a female wise person. In sum, the findings suggest minimal or no gender differences in abstract conceptions of wisdom, but larger gender differences when individuals perceive wisdom in real-life contexts'.

Definitions of wisdom are important, but it is more relevant, for our purposes, to know where some specific cultural features determine differences in the level genders exercise wisdom. Igor Grossmann carried out relevant studies about how cultural context influences wisdom. He concludes that 'experiential, situational, and cultural factors are even more powerful in shaping wisdom than previously imagined' (Grossmann, 2017). This is confirmed by Benedikovicovák and Ardelt (2008), who underline that 'US students make more emphasis on cognitive dimensions and less on emotional and vice versa. Slovak students make more emphasis on emotional and less on cognitive'. Lee et al. focus on the topic of self-transcendence to explain differences in the level of wisdom achieved by Americans and Koreans (Lee et al., 2015).

Takahashi and Overton published a prominent article in 2002 in which they agree with that found in previous studies: 'specific effects of culture (…) were found' in the development of culture. In addition, they demonstrate that there were differences between ages, too: 'Older adults generally performed better on these wisdom measures regardless of gender or their cultural background (…). Both the analytic and synthetic dimensions are equally important in understanding the functioning of wisdom in late adulthood'. In fact, they attested that 'several older participants stated that, as they experienced losses (e.g., loss of loved ones, physical impairment, a decrease in income, etc), through the years, they gradually gained an insight into the value of

what they still had. This, in turn, intensified a sense of appreciation and satisfaction about self and life in general'. Monika Ardelt (2010) analyzed that found by Takahashi and Overton. She used her Three-Dimensional Wisdom Scale to verify their conclusions. Her sample was composed of 477 undergraduate students and 178 older adults. She concludes that wisdom does not depend mainly on age, but on 'opportunity and motivation to pursue its development'. Old adults who hold a college degree scored better, and those who studied a literary degree scored even better. This idea paves the way to studies on how particular activities can enhance wisdom.

William et al. (2016) demonstrate that 'Wisdom was higher on average among meditation practitioners, and lowest among ballet dancers, and this difference held when controlling for differences in age between practices, supporting the view that meditation is linked to wisdom and that ballet is not. However, we found that increased experience with meditation and ballet were both positively associated with wisdom, and that lowered trait anxiety mediated this positive association among meditation practitioners, and, non-significantly, among ballet dancers'. Costa and his team (2014) have been researching how studying or speaking a foreign language influences moral decisions and wisdom in general.

Our experiment aims to know if *philosophy* (particularly Stoicism) can enrich practical wisdom. While we were working on this paper, we found a second experiment on that topic based on the work carried out by Donald Robertson and his team. They designed a stoic e-week where participants train themselves on stoic exercises for seven days. They give participants a small test the first and the last day in order to verify whether there were any changes. Despite it being a very good initiative, there are some important problems to be considered for designing an accurate experiment. First, there are no control groups. Second, pre and post-tests have not been validated. Third, there is not any official publication of the results that would oblige them to follow protocols, particularly all those that produce rigorous results. Fourth, the project has not been assessed by any IRB. Fifth, there is no protocol for recruitment. Sixth, there is no empirical data analysis. In any case, however, if, their research fulfills these scientific requirements in the

future, it could become promising scientific research, especially given that they manage a lot of participants. The present project has fulfilled all these requirements.

There are hundreds of philosophical practitioners who set up consulting offices and philosophical workshops and have started similar projects, but again, they cannot be considered scientific since they lack essential elements as aforementioned (control groups, validated test, evaluation by IRB, and so forth). This project has met all of the requirements. Moreover, our project's team members have several years of experience working in numerous workshops and consulting offices. This is the first experiment in philosophical practice that tackles the challenge of providing empirical results in this field. It is a first step because it is a pilot project, since limited funding did not permit us to expand our research. In any case, the results are statistically good enough to propose a second project (on which we are currently working) that includes more sessions and for which more than five hundreds participants are being recruited.

2.2. Team

The team consisted of four philosophers: Author, principal investigator and professor at the University of Seville in Spain, Michael Weiss, vice president of the Norwegian Association for Philosophical Practice, David Sumiacher, president of CECAPFi in México, and Zoran Kojcic, Ph.D. candidate at the University of Sophia in Bulgaria. All of them are philosophical practitioners and have worked with groups and individuals for five to twenty years in Spain, Norway, Switzerland, Croatia and Mexico. The project initially included researchers from other countries (Japan, Brazil and Portugal), but they could not organize philosophical groups and therefore they had to be eliminated.

The project was proposed to the Center for Practical Wisdom (at the University of Chicago) and they accepted it, with the proposal that we include a statistical component to deal with data analysis. Therefore, Author2, professor in the Department of Psychology at the University

of Huelva (Spain) joined the project.

Michael Weiss proposed adding Guro Hansen Helskog, professor at the Buskerud and Vestfold University College, to assist him in his workshops. She has been working for more than a decade on philosophical practice, mainly in schools. On the other hand, Author2 proposed one of his top students (J. A. Toscano) to help him with the data analysis. He will use some of the data for writing his undergraduate thesis.

2.3. Design

The project was approved by the Andalusian Ethical Committee (IRB) with the code 0561-N-17.

Participants were intended to consist of sixty-four volunteers, including sixteen from each of the following countries: Norway, Spain, Mexico and Croatia. There were differences because some countries, such as Spain, received more than sixty applications to be part of the experiment. This situation made it possible to select participants according to required profiles. Selection to be included in the control group or the experimental group was random, provided participants met the requirements.

In each country, participants were randomly divided into two groups (experimental and control) of eight participants. Groups were matched based on sex, age (over or under the age of fifty-five) and education, with one person per category in each of the groups (see [Table 1]). Homogeneity, both within and between groups, was pursued.

[Table 1]

	Higher education: Yes		Higher education: No	
	Young adults	Older adults	Young adults	Older adults
Women	1	1	1	1
Men	1	1	1	1

Participants signed an informed consent and committed themselves in writing to participate in all the activities. However, a small number of

them quit due to personal problems.

The exclusion criteria were "Participants above the cut-off point in the social desirability measures at the post-test will be excluded from the final analysis in order to avoid potential group bias".

Social desirability will be also controlled with the Balanced Inventory of Desirable Responding, BIDR (Paulhus, 1991). Both questionnaires were translated and adapted to the native language of the participants in each country using reverse translation.

Socio-demographic data was collected with an ad-hoc questionnaire. Another questionnaire was developed to monitor the evolution of the participants during the study in order to study their motivation to participate, their level of commitment to the proposed activities, reasons for dropping out if they decided not to continue, etc. This monitoring questionnaire included open-ended questions in order to enrich the quantitative data with qualitative measures.

Wisdom was measured by two instruments: the Three-Dimensional Wisdom Scale, 3D-WS (Ardelt, 2003, 2004), which includes a social desirability screening, and the aforementioned open questionnaire that revealed personal events that had occurred during the whole process.

2.4. Workshops

Workshops were implemented for a period of 3 months (one session every 14 days). Spanish groups started in January 2016, Croatian groups in February, Mexican groups in March and Norwegian groups in August. Sessions lasted 60 minutes. The control and experimental groups attended sessions in the same room but did not have contact with each other.

Control group procedure was based on philosophical dialogues conducted using a relaxed *café-philo* format. A one-page handout was distributed. The text came from philosophical books or from papers intended for the general public. Since participants were not philosophers, it was essential for the text to be compelling and easy to read. The first session was about happiness and we used 'What is happiness, anyway?' by Acacia Parks; the second was about freedom

and we read 'How to experience true freedom to live a life with fewer limits' by Sonia Derian; and the third was about friendship and we read 'How friendship changes in adulthood' by Julie Beck. Finally, the last session was about reason and we used an article from *The gay science* by Nietzsche. After 15-20 minutes spent reading the text, an open dialogue was initiated where people talk about the concept, its characteristics, and some of their experience related to the concept. At the end of the session, participants were encouraged to *think* about the topic of text for fifteen minutes each day at home. They took the text home in order to read it again if they wanted. Some of the participants asked for writing activities in the second session, but researchers said they should not do any writing because it was an activity reserved for the experimental group. The first few minutes of some sessions were spent on comments about the reflections, since that was the case in the experimental group.

The experimental group was trained in six stoic techniques: to write a diary where participants think about virtues that they developed in their lives and vices that they have overcome, activities to distinguish between what is possible to change and what is not possible to change in our lives, activities to distinguish between our representation and authentic reality, *praemeditation malorum*, visions from above, *prosoche*, activities to work on dealing with difficult situations such as sleeping on the ground, public speaking for shy people, or even depriving oneself of cakes and other delicious foods. Explanations were based on stoic texts that participants were able to take with them after each session. All sessions ended with a text related to the topic of the session, for example, the first chapter of *Enquiridion* by Epictetus, or a text from *Letters to Lucilius, On anger, On clemency* by Seneca, or a text from *Dissertations by Arrian*. Before the next session, participants reflected on that explained in the previous session and spent fifteen minutes a day performing the exercises in the notebook given out. Nobody was allowed to read the notebook except the author.

2.5. Participants and measure instruments

Recruitment was conducted by advertisement posters, interviews of researchers in newspapers for the general public, and news about the project published in university newspapers. Most of the participants were not philosophers.

As is justified below, we decided to use the 3D-WS. The 3D-WS was handed out in the first session. All questions were then answered one at a time. The same test (post-test) was sent by email fifteen days after the last workshop. In addition, an open questionnaire based on three questions was sent to gather events that cannot be included in the quantitative Ardelt's test. The following three questions were raised about the three dimensions of the 3D-WS:

(1) Skill 1: "A perception of phenomena and events from multiple perspectives requires self-examination, self-awareness and self-insight. Examples:

- the ability and willingness to look at phenomena and events from different perspectives;
- the absence of subjectivity and projections (i.e., the tendency to blame other people or circumstances for one's own situation or feelings)"[3].

Do you think you have improved these skills in the 6 sessions?

i. Please respond using a numeric scale [0 (smallest improvement) - 10 (largest improvement)]?

ii. If you think that you have improved these skills, please give some concrete examples (indicating the specific day of the experience) that illustrate this improvement.

(2) Skill 2: "An understanding of life and a desire to know the truth, i.e., to comprehend the significance and deeper meaning of phenomena and events, particularly with regard to intrapersonal and interpersonal matters. Includes knowledge and acceptance of the positive and negative aspects of human nature, of the inherent limits of knowledge, and of life's unpredictability and uncertainties. Examples:

- the ability and willingness to understand a situation or phenomenon thoroughly;
- knowledge of the positive and negative aspects of human nature;

[3] Definitions come from Ardelt (2004).

- acknowledgment of ambiguity and uncertainty in life;
- the ability to make important decisions despite life's unpredictability and uncertainties".

Do you think you have improved these skills in the 6 sessions?

i. Please indicate using a numeric scale [0 (no improvement) - 10 (most improvement)]?

ii. If you think that you have improved these skills, please give some concrete examples (indicating the specific day of the experience) that illustrate this improvement.

(3) Skill 3: "Sympathetic and compassionate love for others. Examples:

- the presence of positive emotions and behavior toward others;
- the absence of indifferent or negative emotions and behavior toward others".

Do you think you have improved these skills in the 6 sessions?

i. Please indicate using a numeric scale [0 (no improvement) - 10 (most improvement)]?

ii. If you think that you have improved these skills, please give some concrete examples (indicating the specific day of the experience) that illustrate this improvement.

3. Method

3.1. Data analysis

The data was analyzed using the statistical package SPSS for Windows (v. 19). The scores on the wisdom W3D questionnaire were calculated on the basis of the average of each of the dimensions, and then averaging the score in the three dimensions (Ardelt, 2003). In this way, the scores on the test were based on the original measurement scale of 1 to 5.

To analyze the effectiveness of the intervention, a mixed ANOVA was used with the variable group (control, experimental) between subjects and the time variable (pre, post) intra-subjects. The normality tests were performed and normality was achieved in the variable between subjects for both the pre-test ($Z(24) = 0.115$, $p = 0.200$ and $Z(19) = 0.125$, $p = 0.200$) and for the post-test ($Z(24) = 0.107$, $p =$

0.200 and Z(19) = 0.173, p = 0.136). However, the same could not be said of Levene's homoscedasticity test, which, in the pre-test, showed significant differences between the groups (F(1, 41) = 10.978, p = 0.002), although it was achieved in the post-test (F(1, 41) = 0.225, p = 0.638). In spite of this specific non-fulfillment, we decided to keep the parametric test because the increase in the error type 1 due to non-fulfillment of the assumption of homoscedasticity cannot be assessed when groups are of a similar size (Glass, Peckham, and Sanders, 1972).

A blind analysis of the data was conducted. A contributor, not related to this research in any other way, arbitrarily assigned the labels P and Q to the experimental groups, such that the data analyst performed his work without knowing to which group each of the scores belonged. Once the analyses were complete, the identity of the groups was finally revealed in order to proceed with writing up the final results.

3.2. Results.

3.2.1. Description of the participating sample

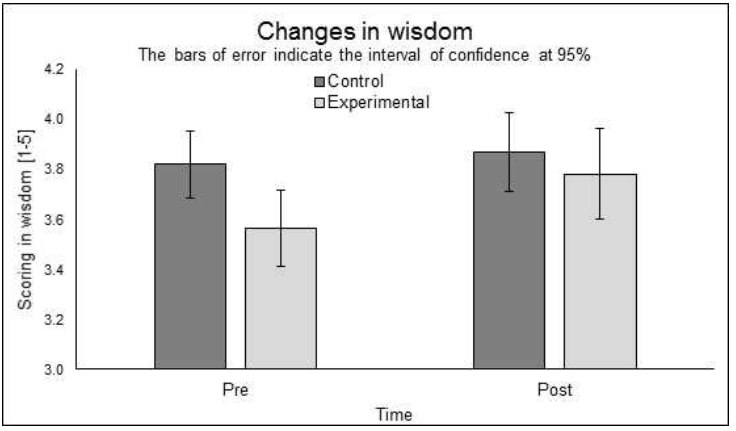
The participating sample (the group of people who completed at least part of the questionnaires) consisted of 61 persons from Croatia (26.2%), Spain (29.5%), Mexico (27.9%), and Norway (16.4%). 34.4% of the participants indicated that they were male, and 47.5% indicated that they were female, while 18% of participants did not indicate their gender. The age range of the participants varied widely, from 18 to 71 years old, with an average of 36.44 years old, and a standard deviation of 15.52. 18% of the participants did not indicate their age. As for the level of studies completed, almost half (44.3%) did not indicate their education level. The vast majority of the respondents (97.1%) indicated that they had completed or were enrolled in university studies. 78.6% of the participants attended all sessions and 17.9% of the participants attended five of the six sessions. Only one person attended three of the sessions.

Of these 61 participants, one person from Norway (GC1_N) and

another from Mexico (GC3_M) were excluded from the analysis because the pre-test, the post-test, or both, were incomplete in their entirety. Missing values were not recorded. Only the scores of the participants who responded to all items were calculated. The final number of participants counted in each group was 24 in the control group and 19 in the experimental group, in both the pre-test and the post-test. While the comparison by sex and age could be ensured without any problem, this was not the case with the level of education, as the vast majority of the participants were college graduates.

3.2.2. Quantitative results

[Figure 1] shows the differences between the groups before and after receiving treatment.



[Figure 1] Changes in the scores on the W3D questionnaire according to the group.

At the descriptive level, the groups start with high scores on the questionnaire at the time of the pre-test, although with slight differences, with the experimental group having lower scores (M = 3.564, S.D. = 0.203) than the control group (M = 3.820, S.D. = 0.397). In the post-test, the scores in wisdom increase and the mean differences

become smaller, while the control group maintains a small advantage (M = 3.869, S.D. = 0.396) over the experimental group (M = 3.783, S.D. = 0.375).

The joint analysis of variance indicated that there was no interaction statistically between the variables group and time (F (1, 41) = 3.023, p = 0.090). However, the time variable was found to have a main effect, indicating that the groups significantly increase their scores on the questionnaire post-test (F (1, 41) = 7.476, p = 0.009, h2 = 0.154). There was no main effect on the variable group (F (1, 41) = 3.015, p = 0.090).

3.2.3. Qualitative results.

Comments from the open questionnaire are consistent with the work carried out in the sessions conducted with the control and experimental groups. Critical thinking sessions were carried out in the control group and participants showed no improvement on affective or reflective dimensions. For example, GC2_S writes that 'It is surprising that I don't distinguish any improvement in any of the three dimensions. I think they are part of my personality (…). In addition, I don't know if I have acquired any other ability, given that I didn't improve on any previous ones'. GC5_S underlines that '[Workshops] didn't have any tangible impact on my empathy or emotions towards others'. In fact, GC5_S defended similar opinions and he didn't want to change any of them during the sessions. GC10_S describes himself as having an open mind, but adds that 'I had an open-minded attitude before the project started and I don't think that my attitude changed at all during the workshop'. It is the same argument used as that of GC4_M, a participant from another country: 'I don't find any change in this area [cognitive dimension]. I studied philosophy some years ago and I used to try to see things from several points of view (…). Therefore, I give a zero to this dimension'. GC2_M adds that the amount of time spent in this project wasn't enough to develop any abilities: 'I did not attend for the time necessary in order to develop this ability'. However, the experimental group increased its abilities with the same number of

sessions.

Other participants pointed out that they felt they improved in the cognitive dimension. GC8_M claims that ‘they [workshops] were useful for seeing issues from several perspectives’. GC5_M agrees and says ‘I could reflect on the several perspectives [of an issue] because of the different opinions raised during the sessions’. However, their comments are generally related to the discussions during the workshops, not outside.

Some participants were happy to see how several perspectives on the same topic flourish in a calm atmosphere, but they didn't witness any change in their lives. GC3_S points out that ‘the fact that we were so diverse was productive because we could listen to different opinions on such important daily topics. I probably couldn’t arrive at those ideas on my own because they were not my personal position’.

Just three participants were an exception; that is, they reported significant events related to relevant changes. GC9_S writes that ‘attending the sessions stirred up some questions (…). They led me to make an important decision not to file for divorce’. She adds ‘I had problems with my husband before the sessions. In March, I decided to change my world view’. GC3_M mentions that since ‘we were looking for truth’ in the sessions, she was able to ‘decide what to do on a family problem with [her] mother. I feel we talked more profoundly about the topic and we did it in a way similar to what we did during the sessions’. GC_1S decided to break off her relationship with her boyfriend based on a rational decision: she ‘discovered that he does not follow [her] in [her] way of seeing life’. All three testimonies are based on the use of cognitive abilities.

Another problem that creates doubts about actual progress made in the control groups is that members do not draw distinctions between the past and the present situation, as we can read in the experimental groups. Some participants ask for improvements to be made on this dimension and they explain an event, but they do not indicate what their behavior or beliefs were before the experiment. Therefore, they were able to exercise wisdom in a situation, but it is not clear whether it was motivated by the workshops because we don’t know if they reacted in a different way in the past. This is the case of GC8_S who

describes how calmly he dealt with a big problem he had with his son. Nevertheless, he didn't say that he was less calm in previous difficult situations, and he even demonstrated a calm attitude since his first session. At the beginning of the experiment, he explained that his life had changed some years ago, causing him to adopt a calm approach, so it is unclear whether the sessions influenced his reaction in this situation. Similarly, GC8_M explains how well he dealt with the death of his ex-girlfriend's mother. He compares it with his ex-girlfriend's reaction. It is needless to comment on the difference between the death of a mother and that of the mother of an ex-girlfriend. Moreover, we did not receive any reports of how GC8_M responded in the past, as in previous cases.

Finally, specific examples of changes are more frequent in the experimental group than in the control group, as we are going to explain. This is very important because the control group could be answering the open questionnaire in a positive way in order to say that the workshops had a real impact. Nevertheless, it is very strange to discover that almost none of the participants state a clear difference between the past and the present.

To sum up, the control group affirmed that there were cognitive changes, but they didn't use to be part of any personal experiences or real situations outside the workshops. Some participants reported an improvement in the reflective dimension, but it is not very clear because it seems to be part of the cognitive enhancement. The affective dimension seems to be the least developed. There are very few cases and all of them are based on improvement of the cognitive dimension. Finally, there are just three experiences that illustrate the difference between how participants were before and after the experiment, although they are not completely clear. That lack of clarity creates doubts about the participants' real progress, even in the cognitive dimensions, because the responses to the open questionnaire could be given with a bias. The participants in the control group affirm that the workshops were useful for them, albeit they are unable to identify the change in particular situations.

We are now going to take a look at the questionnaires given to the experimental groups. Firstly, there is a couple of testimonies similar to

the ones in the control group. GE1_S described a difficult situation that required having a strong character in order to face it. He claims that he was able to overcome it due to the sessions. He read an article about fathers that suffer having to deal with a son who has cancer. That article provoked him to think: 'Could I be so positive and have energy to fight, smile, and to live? Or, on the contrary, would I begin to complain and ask why this is happening to me?' Despite being able to discuss the existence of a reflective dimension in this case, it raises the question: is it new? Is it different to his usual reaction before the workshops? If so, there is no evidence of any change in the person. However, most questionnaires in the experimental group are different: they emphasize a 'before' and 'after'.

The main changes come from reflection and, perhaps, the affective dimensions. Feelings towards other people are improved and skills to overcome weaknesses are developed because reflective abilities are strengthened. GE3_S explains that before the workshops she used to blame her boyfriend when she had a personal problem. I came up with 'thousands of reasons to blame him for my feelings'. The workshops were beneficial because she reflected on the real source of her feelings and she stopped nurturing ideas that support he is the one to blame for her feelings. In addition, GE3_S talks about her complicated relationship with her mother because of her emotional blackmail. GE3_S decided to practice *praemeditatio malorum*, an exercise learned during a session. That led her to discern between her role and her mother's role in their arguments. Her reflection on it reduced her bad feelings towards her mother. On the other hand, GE3_S explained how she managed opinions others have about her. Before the workshops, she used to depend on other people's opinions about her. Her personal improvements were made to impress other people. After the project ended, she understood that it was better to make progress 'for herself, not for others'. She started to enjoy some activities, such as dancing 'sevillanas' (a Spanish dance). Before the project, she tried to dance better for people; after the project, she no longer worries about what people think. She worked for her own benefit and she began to enjoy life. These were some of her reflections (the reflective dimension in Ardelt encompasses 'self-examination') on others' points of view.

Finally, she explains how bad she felt when her boyfriend did not excel in his life. Now, it does not bother her so much. For example, after the first session, her boyfriend booked a hotel. It could have been cheaper if he had checked more prices, and that made her angry. However, in April, after the last session, her boyfriend broke the screen on his mobile phone. It doesn't affect her, even a week after that he broke it again. She says: 'I understood him and I accepted the situation. It wasn't a problem to spend the money'.

GE4_S explains similar control after losing a chess game. His reaction was very different to ones in the past: 'After putting into practice one of the exercises from the sessions, I got over an utterly huge defeat (…). I put a big smile on my face and I congratulated my opponent. I had overcome this situation in the past, but I have never felt so good'. The affective dimension was based on the reflections he made.

GE5_S talks about her relationship with a rude customer. Nobody, including GE5_S, wanted to talk him. She reflects on her position, the customer's position and the unfairness of the situation. She then decides to put aside her reservations and start talking to him. She also explained the case in one session. She was excited because she felt that she could not do it without the workshops. Indeed, just like her co-workers, she had been avoiding him before participating in the project.

The workshops contributed to improving relationships between GE5_S and her mother. They argued a lot because of their opposed point of views. She decided to 'implement some techniques that [she] learned at the sessions: I begin to contemplate reality as an external observer (…). I discovered that the fights with my mother were the most frequent situations that disturb my calmness'. After that, she decided to put herself in her mother's shoes. Therefore, she discovers which of her mother's advice is valuable to her. She also discovered that it was better to face some of her personal problems herself, rather than tell her mother about them. This decision 'has allowed me to better deal with my problems, rather than depending on my mother's intervention'. This is another paradigmatic case of using reflection to overcome a difficult 'impasse'.

Through the sessions, GE7_S got the strength to 'get away from a person who was hurting [her]'. The sessions also helped her to think about why it was important that she not remain with her partner. She had put up with the relationship for a long time because, like GE3_S, she was worried about what people would think if they separated. Now, after reflecting, she discovered that her own well-being in life is better than what people think of her.

GE2_M used the workshops to understand her boss and to accept the criticism she had been receiving from her boss for a long time, criticism that was hurting her before the sessions. 'I rethink her words from a different point of view (…) and I think our relationship has improved'. In addition, she has had major conflicts with of the kids' parents in her job. 'Now, I try to see my feelings from a 'panoramic' perspective and allow myself time to get over my temper'. Her words are consistent with the definition of the reflective dimension. At home, her situation was similar: In April, her daughter threw a can of paint on the carpet. 'I keep calm even when, in past situations, I would have gotten very angry'. Before acting, she had reflected on both what the can means and on her love for her daughter.

GE2_S thought about how to manage an unpredictable expense. It would have been a big problem in the past, but it wasn't after the experiment because of the reflecting he had done. In addition, GE2_S feels how his labels on people have decreased. He used to decide whether or not he wanted to pursue getting to know anyone based on his initial impression of them. Now, his reflections about each person was more meticulous. He began to listen to 'new people' carefully, to refine his choosing, and try to see the best side of people.

GE5_S states that she was very critical of her friends when she would go out with them. She would usually go back home before them. In the end, she commented that they 'drink and go out until late' and that they should look for another way of enjoying life. After the sessions, she now reflects on their position and on why they feel good doing activities that she dislikes. It enriched her perspective. Consequently, she started to enjoy going out with them and she felt that they now understand better why she prefers to return home earlier.

GE6_S reports that she hated that her daughter would get sick

because of not taking care of herself. She reflected on the real reason and on her daughter's motivations, and 'understands that the real cause [of her illness] may be due to her weak defense system and that illness was a natural process she had to face'. She also reported having overcome some prejudices: 'for example, having sex outside of marriage was reprehensible and a sin. I begin to think that (…) people have reasons for living the way they want and I should not be affected by their behavior'.

3.2.4. Exploratory analysis

To check if the quantitative data supported the impressions found in the qualitative analysis of the previous point, an exploratory analysis of the responses to the different dimensions of the questionnaires was conducted.

In [Table 2], the averages and standard deviations of the groups in the pre-test and the post-test can be observed in the three sub-scales of the questionnaire:

[Table 2] Scores in the sub-scales

Measurement	Time	Group	Average	S.D.	N*
Affective	Pre	Control	3.67	0.46	28
		Experimental	3.48	0.42	23
	Post	Control	3.69	0.54	28
		Experimental	3.55	0.47	23
Cognitive	Pre	Control	3.99	0.53	26
		Experimental	3.77	0.28	24
	Post	Control	4.00	0.49	26
		Experimental	3.92	0.45	24
Reflective	Pre	Control	3.81	0.44	28
		Experimental	3.65	0.46	26
	Post	Control	3.91	0.53	28
		Experimental	3.86	0.48	26

Note: S.D. = Standard Deviation

* The N varies in the different measures due to eliminating the missing values.

A mixed ANOVA was performed as described for the whole scale for each of the measurements.

Although there are changes in the measurements of the affective and

cognitive aspects, the change in the reflective aspect is noteworthy. Although, in the reflective sub-scale, there was no effect of the group x time interaction ($F(1, 52) = 0.804$, $p = 0.347$), the main effect of the time variable was statistically significant ($F(1, 52) = 8.161$, $p = 0.006$). The increase in the scores on reflexivity is, however, minimal ($\eta^2 = 0.136$).

4. Discussion

The average of the scores on the Ardelt wisdom questionnaire increased in a statistically significant way between the pre-test and the post-test. This effect is consistent with the initial hypothesis of the project that virtues can be trained effectively in people from different cultures.

The high scores in wisdom observed in the groups (3.564 - 3.869 range on a scale of 1 to 5) may have made it difficult to evaluate a possible change. Future studies may be directed to groups with lower initial scores where the possible effect of an intervention can be seen more clearly.

The fact that slightly different scores were found in the control group and the experimental group before the start of the intervention makes it difficult to interpret the results, given that, since the groups are formed randomly, the initial scores for both groups were expected to be similar.

As the differences between the groups were not found to be statistically significant, it is difficult to ascertain which, if any, of the components of the intervention program was responsible for the change. However, the results are not incompatible with the initial hypothesis that the treatment provided to the experimental group may be responsible for the changes. As can be seen in [Figure 1], the experimental group is the one that starts with lower scores, but they increase and ultimately become comparable to those of the control group at the time of the post-test. The experimental group increases in 0.2019 points and the control group increases just less than a quarter of that result: 0.049 points.

The low number of people per group due to missing values and the marginal trend toward the significance of the effect of the group x time interaction suggest that the absence of differences may be due to low statistical power. For this reason, we believe that the data suggest that it would be useful to conduct a new study with a larger number of participants.

On the other hand, the activity of the control group appealed to the development of the cognitive abilities, which is why, as was seen in the qualitative analysis, it would be advisable to conduct another experiment that does not train these abilities.

The improvement in the experimental group, even though they were only exposed to six one-hour sessions, is notable. The processes of wisdom are slow to learn and, as pointed out by one of the participants, more sessions should have been given. Therefore, it is recommended that, in future developments to extend this pilot project, there is the possibility of, at least, doubling the duration of the experimental application.

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