QIIP - QUESTIONNAIRE OF INTERESTS FOR INTERGENERATIONAL PRACTICE

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KEY WORDS: Interests intergenerational practice Intergenerational education Ageing QIIP

ABSTRACT: This article presents the validation study of the Questionnaire of interests for intergenerational practice (QIIP), which aims to contribute to the study of interests on a population level as well as supporting the development and implementation of intergenerational activities and programs through its identification. The design of the study is correlational and cross-generational. The QIIP was applied to 385 residents of Oporto, divided into three age groups. The instrument showed to be valid and revealed good internal consistency concerning the identification of the interests of the sample studied and can be analyzed either by dimension of interest, or by activity item of interest, depending on the goals of intergenerational practices that need to be developed. Upon analysis by dimension and age group, it was found that the Dimension Caring/Protecting and the Dimension Culture refer to common interests, shared among the three age groups. On the other hand, it was observed that the younger group differs from the other age groups in the Dimension Art and in the Dimension “Handiwork”, but no significant differences were found in both dimensions between middle-aged adults and older adults. In the Dimension Use of New Technologies, significant differences were registered among all age groups, decreasing in interest as the age increases.

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1. Introduction

The word ‘interest’ is a term used rather matter-of-factly in daily life, in expressions such as “They showed great interest in pursuing the project,” “She is interested in taking her son out of that school,” and “That TV program interests me.” Colloquially speaking, to be interested in something may mean that it is important to us or that we have positive feelings in relation to it (or negative ones, in the case of disinterest) or even that we are concerned about something (Harackiewicz & Huileman, 2010).

However, despite the common uses of the word ‘interest,’ to define it scientifically has not been an easy task (Krapp, Hidi, & Renninger, 2014), as stated by Ainley (2013, p. 245), “interest is a recurrent theme, either in the field of educational psychology, to comment in the scientific literature on the persistence of its importance, as pointed out by famous educators such as Herbart (1776-1841), 1778) would later come to influence the thought of famous educators such as Herbart (1776-1841), 1778) would later come to influence the thought of famous educators such as Herbart (1776-1841),

The concept of interest in diachronic terms is a recurrent theme, either in the field of education, where they have been put into perspective as a powerful influence on learning (Hidi & Renninger, 2006; Krapp, Hidi, & Renninger, 2014), or in the field of vocational psychology where it is an object of great attention as a variable which can explain the direction of educational and professional choices made by children, young people, and adults (Betsworth & Fouad, 1997). The importance of interest in education is incontestable.

The concept, initially introduced by philosophers such as Locke (1632-1714) and Rousseau (1712-1778) would later come to influence the thought of famous educators such as Herbert (1776-1841),
creator of one of the first pedagogical theories, in which the development of interests was an assumption for successful teaching as purported by Dewey (1859-1952), who systematically analyzed the role of interest in education, highlighting its importance to elicit and support the efforts required of young people during their schooling. According to Harackiewicz and Hulleman (2010), it was also Dewey who first defined interest as the act of "being engaged, engrossed, or entirely taken up with' an activity, object, or topic" (Dewey, 1913, apud Harackiewicz & Hulleman, 2010, p. 42). At the beginning of the 20th century, it was thought that "being interested was not only an important motivational condition for effective learning but was also central to people's personality and self-concept" (Krapp, 2002, p. 405), and thus, researchers as well as teachers attributed great explanatory powers to interest; however, by mid-century, there was less research conducted on interest and its role in learning and other aspects of personal development in educational contexts, meaning that the principal studies on this concept remained within the sphere of authors writing in the vocational field (Betsworth & Fouad, 1997; Krapp, 2002; Krapp & Prenzel, 2011; Savickas & Spokane, 1999). According to Krapp (2002), studies in education on the topic of interest continued, but they preferred to use other terms such as attention, curiosity, attitude, values, and intrinsic motivation. Recently, research in education has once again taken up the discussion of learning based on interest (Krapp, 2002; Krapp & Prenzel, 2011; Krapp, Hidi, & Renninger, 2014), considering, on the one hand, that the concepts used as substitutes are not sufficient for clearly understanding the complexity of the phenomenon, and on the other hand, that its potential heuristic role has been revalued, given the movement in recent decades with respect to lifelong learning. Interests, envisioned as "a set of dynamic factors and processes of behavior" (Abreu, 1985, p. 642, italics in the original) are certainly a crucial factor in an individual's openness to the perspective of life as a lifelong learning and education process.

Currently, research in the field of education on interests is being carried out along two different lines, the first focusing on the study of the processes implied in the development of personal interest, seen as the "organization of feelings, cognitions and actions that orient the individual to approach and engage with the object of those feelings, cognitions and actions" (Ainley, 2013, p. 245). This is a modality of interest that may manifest itself in various situations and for long periods of time (Krapp, 2002; Krapp & Prenzel, 2011). The second line deals more with examining the processes that promote situational interest, this considered to be "an immediate positive orientation towards an object or event" (Ainley, 2013, p. 245), as for instance, the building of model rockets or mastering a new recipe of Italian cooking. Thus, as this type of interest is more dependent on environmental conditions, it is more transitory and able to "provide the basis of an emergent individual interest" (Krapp, 2002, p. 407).

The object of interest can thus be a topic, an idea, an issue, an activity, or other material endeavors. Fink (1991) establishes, in concrete terms, three structural components for systematically analyzing the object of interest, which are the object itself, the activities, and the topic: the real object, or in other words, the object to which one's interest is directed or the object that is necessary for the realization of the interest (e.g., a musical instrument), the activities which correspond to typical procedures for concretizing the interest (e.g., playing an instrument); and finally, the topic which can be used to describe the specific object of a situational interest (e.g., going to a concert) or of an individual interest (e.g., enjoying jazz music), being a generalization that represents a certain level of knowledge (e.g., the person enjoys music).

Valsiner (1992) affirms that the development of objects of interest by individuals is generally socially transmitted. For Krapp and colleagues, these are significantly defined by one's social group, tradition, and patterns and habits, which makes the analysis of interests feasible for certain groups of persons from a community and makes the sharing of interests practicable, either to promote the development of the previously identified personal interest or to create the opportunities for the development of situational interests, namely via cooperation amongst individuals, which may be transformed into more long-lasting personal interests (Krapp, 2002; por “Krapp et al., 2014). Within this scope, Herbert’s wise words affirm that “the pedagogical goal of multiplicity of interests [...] must be distinguished from its opposite, the multiplicity of occupations [...]” given that the intention is “harmonious training of all the potentialities” (Hilgenheger, 1978, apud Romão, 2010, p. 100).

A pedagogical process that contributes to the multiplicity of interests of individuals in the context of lifelong learning and education is intergenerational education (Sánchez, Sáez & Díaz, 2017; Villas-Boas, Oliveira, Ramos & Montero, 2016). This type of education brings together people of different generations to perform activities and tasks whose goal it is to facilitate and guarantee that they both learn and develop/share knowledge, skills, expertise, attitudes and values – that is, that they develop potentialities and transform...
3. Methodology

Participants

Participating in this research were 385 residents from the parish of Bonfim in the city of Oporto, aged 15 and over, and belonging to three age groups: Youth and Young Adults [15–44 years of age] (42.9%), Middle-aged Adults [45–64 years of age] (28.6%) and Older Adults [65 + years of age] (28.6%). Women represented 57.1% of the sample under study, whereas men represented 42.9%.

Instrument

The QIIP was developed specifically to aid in the planning, recruitment, and development of intergenerational activities and/or programs. Thus, three basic questions were devised: the goal of the first question, “Are you interested in this activity?” is to understand which activities are of interest to the respondents. However, given that having an interest in an activity does not necessarily mean wanting to engage in it, the second question, “Would you like to participate or learn more about this activity of interest?” seeks to determine whether people would participate in a determined activity of interest. The third question asks, “Do you have knowledge of or do you practice this activity of interest?” since it is important for intergenerational practices to understand in what way a person might be able to contribute to the program (Springate, Atkinson & Martin, 2008) given that in these practices, the participants play an active role and are the principle human resources for their development. Each one of the questions reflects 40 items of activities of interest, with only dichotomous Yes/No responses. The list of activities of interest came about following an online search of many toolkits, guides, manuals, articles, documents, programs, and projects, either carried out or in development, on a variety of websites on the theme, from which, following the selection of the most frequently appearing activities, the 40 items were selected.

Procedure

The QIIP was applied as an integral part of the Questionario Necessidades, Interesses e Potencialidades para Desenvolvimento de Programas Intergeneracionais – QNIPDPI (Assessing Needs, Interests and Potentials for the Development of Intergenerational Programmes Questionnaire – block V – Personal Interests). The data were collected between March and May 2015. The directors of the main institutions of the community were involved in the development of the study and the collection of data. The data were collected through the administration of the Questionnaire of Interests for Intergenerational Practice (QIIP). The main reason underlying the creation of the questionnaire is quite pragmatic in that the declared objective of the QIIP is to aid researchers, professionals, and organizations in the identification of activities of common interest for persons of all ages, thus supporting the study and development of intergenerational practices, which we understand as the broad set of “intervention options, inclusive of cultural practices, policies, and designed environments” (Kaplan, Sánchez & Hoffman, 2017, p. 14).
involved in the study were contacted (training centers, day centers, nursing homes, local associations), by email and phone. The directors of the institutions who agreed to participate in the study signed an informed consent document, which allowed the members of the research team (previously trained in applying the questionnaire), to collect data according to the specifications indicated by the institutions. Before answering the questionnaire, each individual was informed of the research objectives, of the confidentiality of data, the strictly voluntary nature of participation in the study, and the importance of honest answers. Participants were told that the average time to fill out the questionnaire was 30 minutes. The questionnaires were administered individually in three different ways: self-administered (69%), assisted by members of the research team (3%), or fully conducted by the research team (28%). The last two ways were used with participants with low levels of literacy, especially older adults, where the time needed for the completion of the questionnaire was increased to 1 hour.

To obtain a larger sample with participants from different generations, the questionnaires were also distributed at two strategic points in the Bonfim community, at the entrance of the Oporo Municipal Library and the Bonfim Borough Building.

**Analyses**

As for data analysis, bearing in mind how the present research is focused on the psychometric properties of the scores obtained from the first question “Are you interested in this activity?” the statistical analyses addressed the assessment of the quality of the items (difficulty and discriminating power), the examination of underlying dimensionality to the responses registered for the items, and internal consistency of the scores in the empirically derived subscales. In the examination of the quality of items, the respective averages, standard deviations, and inter-correlations of the items were obtained. An exploratory factor analysis (EFA) was carried out for the inter-correlation matrix of the items from the first question about personal interests. The extraction of factors was done via principal axis factoring, and the initial matrix was next transformed via oblique rotation (Promax). For the factors derived in EFA, the degree of internal consistency was estimated. The comparison of averages was carried out (via univariate ANOVAs) for the different age groups in the dimensions taken from the factor analysis. Finally, a descriptive analysis per factor was used to analyze the three QIIP questions. The commercial software IBM SPSS Statistics (version 22 for Windows) was principally used for data analysis.

**4. Results**

**Reliability and dimension analysis**

**Item analysis**

According to classical test theory (e.g., Crocker & Algina, 1986), two principal statistical properties of the responses to items from an instrument refer to the difficulty and discrimination of an item. Given that the rating of interest in each of the 40 activities included in the instrument is dichotomous (Yes = 1; No = 0), the index of difficulty (or p-value) of an item is a proportion situated on a continuum of 0 (the item in question is not endorsed by any respondent) to 1 (all the respondent endorse the item). In psychometric terms, items with p-values of .5 are ideal; however, the majority of psychometrists will accept values different from this ideal figure, although items with extreme means (for example, outside the range .1 ≥ p ≥ .9, for 0 ≥ i ≥ 1) should be avoided. As for the dispersion, or variability, in the responses to items of a dichotomous type, the values of SD ≥ .15 are considered adequate (e.g., Meir & Gati, 1981). With respect to the discriminative power of the item, usually calculated via the correlation of the item score with the total score, this correlation (for items of a dichotomous type, generally the point-biserial correlation coefficient is calculated) should be high. For example, Meir & Gati (1981) recommend rpb ≥ .30 (for s* = score on the scale not including i). As we do not know, a priori, the distribution of the items by subscales, this index was not calculated initially but only after the results of the factor analysis of the items were known.

The averages of the items varied between .33 and .75 (M = .42; SD = .17). Twenty-five percent of the p-values are between .50 and .59, and only 10% of these values are under .20 or above .60. The inter-item correlations (phi correlation coefficients) are mostly positive, varying however between -.10 and .66 (M = .22; SD = .11). The internal consistency of the scores for the 40 items, estimated by the Kuder-Richardson coefficient is excellent (KR 20 = .92). Although the homogeneity of the scores is rather high, this does not necessarily mean that the items assess a single dimension (for example, the number of items certainly contributes to the high internal consistency of the scores). The exploratory factor analysis technique will enable the determination of whether there are homogenous subsets of items amongst the 40 items of the instrument.
Dimensionality of the responses

The scores of the 40 items from the Questionnaire were inter-correlated, and the dimensionality was examined through an exploratory factor analysis. The adequacy of the data to the type of analysis selected was demonstrated; in addition, a large majority of the items were found to be positively correlated, with the coefficients being, in general, over .30. Similarly, the Kaiser-Meyer-Olkin (KMO) index of .89 clearly surpasses the minimum value recommended in the literature (Pallant, 2007) and the value from Bartlett’s test of sphericity is statistically significant \( \chi^2(780) = 5362.7, p < .001 \). Both statistics suggest that performing a factor analysis is appropriate for this data. An exploratory factor analysis was performed, using a Principal Axis Factoring extraction, revealing the presence of 10 factors with values greater than 1 (Kaiser’s criterion), which together explain 60.3% of the variance. Using Cattell’s scree plot test, a clear break in the magnitude of eigenvalues was seen after the first factor and a smaller and gradual break beginning with the fifth factor. Knowing that Kaiser’s criterion has a tendency to overestimate the real number of factors when the number of items is large, we next decided to explore the two solutions suggested by the scree plot and by Parallel Analysis (PA), having concluded that the solution with five factors was the one which corresponded with a better interpretation of the relational structure amongst the items. The five factors explain 45% of the initial variance, with the first factor contributing 25% and respectively, 7%, 5%, 4% and 4% for the remaining four factors. To help in the interpretation of the significance of the factors, a Promax rotation was done with Kaiser normalization. Table 1 presents the factor loadings for the two matrices obtained (Pattern and Structural), the communalities (these values are not identical to the sum of the squares of the loadings due to the correlation of factors), the eigenvalues, and the percentage of common variance (trace) explained.

| Items                        | I     | II    | III   | IV    | V     | \( \lambda \) |
|------------------------------|-------|-------|-------|-------|-------|---------------|
| Taking care of children      | 0.72  | 0.62  | -0.23 | 0.20  | 0.00  | 0.25          | -0.03 | 0.23 | 0.59 |
| Environment                  | 0.67  | 0.74  | 0.17  | 0.51  | -0.04 | 0.28          | 0.04  | 0.32 | 0.32 | 0.48 |
| First aid                    | 0.67  | 0.73  | 0.01  | 0.43  | -0.10 | 0.28          | 0.03  | 0.28 | 0.18 | 0.45 | 0.48 |
| Protecting animals           | 0.65  | 0.68  | -0.07 | 0.37  | 0.06  | 0.32          | 0.10  | 0.32 | 0.01 | 0.34 | 0.44 |
| Helping others               | 0.62  | 0.65  | 0.19  | 0.46  | -0.07 | 0.20          | 0.03  | 0.29 | -0.11 | 0.23 | 0.44 |
| Human rights                 | 0.58  | 0.72  | 0.21  | 0.54  | 0.10  | 0.38          | 0.01  | 0.32 | -0.08 | 0.35 | 0.40 |
| Taking care of elderly       | 0.53  | 0.50  | -0.14 | 0.21  | 0.10  | 0.23          | 0.12  | 0.26 | -0.08 | 0.18 | 0.33 |
| Healthy diet                 | 0.44  | 0.58  | 0.18  | 0.46  | 0.09  | 0.35          | -0.02 | 0.24 | 0.03  | 0.36 | 0.23 |
| Dancing                      | 0.40  | 0.46  | -0.22 | 0.20  | 0.37  | 0.47          | -0.01 | 0.16 | 0.08  | 0.36 | 0.35 |
| Taking walks                 | 0.39  | 0.56  | 0.29  | 0.51  | -0.09 | 0.27          | -0.06 | 0.22 | 0.15  | 0.41 | 0.27 |
| Cooking                      | 0.31  | 0.45  | 0.01  | 0.35  | 0.08  | 0.30          | 0.27  | 0.41 | 0.02  | 0.27 | 0.18 |
| Physical activities          | 0.31  | 0.49  | 0.10  | 0.38  | 0.15  | 0.42          | -0.20 | 0.06 | 0.29  | 0.52 | 0.25 |
| Tutoring                     | 0.29  | 0.44  | 0.20  | 0.41  | 0.16  | 0.35          | -0.03 | 0.20 | -0.01 | 0.30 | 0.15 |
| Visiting museums             | -0.01 | 0.38  | 0.71  | 0.69  | 0.11  | 0.39          | -0.10 | 0.24 | -0.02 | 0.34 | 0.52 |
| Learning about history       | 0.22  | 0.48  | 0.55  | 0.61  | -0.15 | 0.20          | -0.03 | 0.26 | 0.04  | 0.31 | 0.38 |

Table 1: Pattern and Structure matrix for Principal Axis factoring following Promax rotation with Kaiser normalization, for five interest factors.
| Activity                        | I   | II  | III | IV  | V   | VI  | VII |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|
| Political questions            | -0.16 | 0.26 | 0.52 | 0.58 | 0.23 | 0.45 | 0.03 |
| Short stories & legends        | 0.04 | 0.38 | 0.48 | 0.60 | 0.13 | 0.38 | 0.09 |
| Participating in debates       | -0.05 | 0.26 | 0.46 | 0.49 | 0.30 | 0.44 | -0.19 |
| Reading literary works         | 0.03 | 0.33 | 0.43 | 0.53 | 0.13 | 0.33 | 0.15 |
| Sharing knowledge              | 0.35 | 0.53 | 0.41 | 0.55 | 0.02 | 0.29 | -0.07 |
| Writing                        | -0.08 | 0.23 | 0.37 | 0.46 | 0.35 | 0.44 | 0.08 |
| Photography                    | 0.03 | 0.40 | 0.36 | 0.56 | 0.18 | 0.48 | -0.02 |
| Restoring furniture            | -0.25 | 0.16 | 0.34 | 0.45 | -0.03 | 0.27 | 0.26 |
| Visiting new places            | 0.23 | 0.49 | 0.31 | 0.51 | 0.07 | 0.38 | -0.10 |
| Acting                         | 0.12 | 0.34 | 0.03 | 0.34 | 0.71 | 0.69 | -0.06 |
| Singing                        | 0.02 | 0.24 | 0.15 | 0.35 | 0.64 | 0.57 | 0.04 |
| Painting and drawing           | -0.14 | 0.23 | 0.19 | 0.43 | 0.43 | 0.56 | 0.21 |
| Playing instruments            | 0.09 | 0.35 | 0.28 | 0.45 | 0.34 | 0.48 | -0.04 |
| Organizing events              | 0.15 | 0.33 | 0.10 | 0.31 | 0.21 | 0.38 | -0.11 |
| Sewing                         | 0.16 | 0.30 | -0.21 | 0.20 | 0.05 | 0.23 | 0.70 |
| Knitting/Embroidery            | 0.07 | 0.20 | -0.03 | 0.21 | 0.04 | 0.14 | 0.56 |
| Clothes design                 | -0.04 | 0.25 | -0.07 | 0.30 | 0.28 | 0.42 | 0.48 |
| Flower gardening               | 0.10 | 0.36 | 0.41 | 0.53 | -0.23 | 0.08 | 0.47 |
| Vegetable gardening            | 0.10 | 0.35 | 0.34 | 0.49 | -0.17 | 0.12 | 0.47 |
| Cooking new dishes             | 0.26 | 0.49 | 0.02 | 0.41 | -0.02 | 0.32 | 0.37 |
| Molding with clay              | -0.15 | 0.28 | 0.19 | 0.47 | 0.31 | 0.53 | 0.32 |
| Using a computer               | -0.01 | 0.26 | -0.05 | 0.21 | -0.17 | 0.23 | -0.07 |
| Inter. & S.networks            | 0.05 | 0.30 | -0.04 | 0.25 | -0.14 | 0.25 | -0.02 |
| Mechanics                      | -0.09 | 0.14 | 0.19 | 0.25 | -0.05 | 0.16 | -0.01 |
| Decorating for parties         | 0.14 | 0.36 | -0.07 | 0.29 | 0.22 | 0.43 | 0.14 |
| Eigenvalues                    | 9.5 | 2.1 | 1.6 | 1.1 | 1.0 |
| Total Variance (%)             | 23.7 | 5.2 | 4.0 | 2.8 | 2.3 |

Notas: I = Caring/Protecting; II = Culture; III = Arts; IV = Handiwork; V = Digital Technologies; \( h^2 \) = Communalities.
Usually, for the two factor matrices resulting from an oblique rotation, the Pattern matrix is the one favored in the interpretation of a factor solution; it is known that the two matrices will be quite similar if the inter-factor correlations are low, but this is not the case here (these correlations vary between .21 and .55, with five of them greater than .44). An analysis of the inter-factor correlations matrix shows a considerable overlapping of the first two factors ($r = .55$). Thus, Table 1 shows the loadings of the items for both matrices although in our interpretation, we have favored the coefficients of the Pattern matrix. In the interpretation of the factors, we considered coefficients greater than .30, that is, those which are statistically significant (nevertheless, some exceptions are described in the text below).

For Factor I, ten items clearly show high loadings (see items in bold in Table 1). These items reveal an interest in activities oriented toward caring for others, for oneself, or for the environment (e.g., taking care of children; protecting the environment, learning about a healthy diet). Two other items which show themselves to be significantly correlated with this factor (e.g., dancing and cooking) might have been included, yet these items do not fit so easily as they also correlate with respect to other factors, and for this reason it was decided to include dancing in Factor III and to exclude the item cooking, given that in Factor IV this topic is part of the item learning to cook new dishes with a loading of .37. In Factor II, 11 items clearly show high loadings, with the underlying theme seeming to indicate an interest for activities of a cultural nature (e.g., visiting museums and exhibitions; learning about the history of the country, city or parish); for this reason, we excluded the item restoring furniture, reducing the factor to 10 items. Factor III includes six items which denote an interest for the arts (e.g., singing; dancing). Factor IV also features six activities, combining activities either indoor (e.g., sewing) or outdoor (e.g., vegetable gardening) in nature, which we generally label as handiwork, as these are oriented toward crafts and skills that require manual dexterity. Finally, Factor V only includes two principal items (e.g., using computers and using the Internet and social networks) that clearly point to an interest in the use of digital technologies for information gathering and communication. Based on this analysis, 34 of the 40 items were selected.

Given the results of the factor analysis, the items were grouped into subscales and statistical calculations were performed to better characterize them psychometrically, namely with respect to internal consistency (the KR-20 was applied as it is a special case of Cronbach’s $\alpha$ when the items are binary variables) and item discrimination (corrected item-total correlations). Thus, for Factor I (Caring/Protecting), a KR-20 of .84 was obtained, and in addition, we verified that the item-total correlations vary between .37 (physical activities) and .67 (protecting the environment). Regarding the scores for Factor II (Culture), the KR-20 was .83 and the item-total correlations varied between .42 (participating in debates) and .65 (visiting museums). In Factor III (Arts), a KR-20 of .73 was obtained and the item-total correlations varied between .36 (dancing) and .56 (painting and/or drawing). In Factor IV (Handiwork), the KR-20 was registered at .73; the item-total correlations varied between .36 (learning to cook new dishes) and .55 (flower gardening). Regarding the scores for Factor V (Use of Digital Technologies), the KR-20 was .78 and the corrected item-total correlations was .64 (for this factor only two items stood out). All the measures of precision/reliability for the five scores obtained are equal to or greater than the threshold of .70 required.

Generally speaking, the analyses performed show that the 40 items can be adequately represented by only five factors of interest with a well-defined psychological significance: social interests (Dimension Caring/Protecting), cultural interests (Dimension Culture), artistic interests (Dimension Arts), crafts/working with the hands (Dimension Handiwork), and the use of digital technologies for information gathering and communication (Dimension Use of Digital Technologies). The scores generated in the factors (dimensions) present adequate levels of reliability for the sample in the present study.

**Dimensions of common interest to different generations**

To find dimensions of common interest to the different generations, we used the ANOVA statistical technique. Thus, dimensions of common interest to individuals from different generations in our sample are the Dimension Caring/Protecting ($F_{(2,382)} = 1.262$, $p = .284$), the Dimension Culture ($F_{(2,382)} = 2.432$, $p = .089$), the Dimension Handiwork ($F_{(2,382)} = 2.432$, $p = .089$). In the remaining dimensions, very significant differences were found amongst the age groups, where in the case of Dimension Arts ($F_{(2,382)} = 7.942$, $p = .001$), the post-hoc comparison (Tukey test) demonstrates that these differences are found between the group of Youth and Young Adults and the other age groups, and that there are no significant difference between the Middle-aged Adults and the Older Adults, given that youth and young adults are more likely to be interested in this type of activity. Also in the
Dimension Use of Digital Technologies ($F(2,382)=47.301, p<.001$) we've found out found differences between the generational groups, where the Youth and Young Adults are those most interested by this dimension, followed by Middle-aged Adults and finally the Older Adults (see Table 2).

### Table 2: Comparison of averages (ANOVA) of 5 dimensions of interest, by age group.

| Dimensions                  | Age Group                                | N  | M     | DP  | Post-Hoc Contrasts |
|-----------------------------|------------------------------------------|----|-------|-----|--------------------|
| Dimension Caring/Protecting | Youth and Young adults (15-44 yrs old)   | 165| 5.67  | 3.06| p > .05            |
|                            | Middle-aged adults (45-64 yrs old)       | 110| 5.68  | 3.25|                    |
|                            | Older adults (65+ yrs old)               | 110| 5.39  | 2.95|                    |
| Dimension Culture          | Youth and Young adults (15-44 yrs old)   | 165| 4.69  | 3.16| p > .05            |
|                            | Middle-aged adults (45-64 yrs old)       | 110| 4.40  | 2.83|                    |
|                            | Older adults (65+ yrs old)               | 110| 4.12  | 2.65|                    |
| Dimension Arts             | Youth and Young adults (15-44 yrs old)   | 165| 2.41  | 1.87| p < .05            |
|                            | Middle-aged adults (45-64 yrs old)       | 110| 1.76  | 1.83|                    |
|                            | Older adults (65+ yrs old)               | 110| 1.60  | 1.60|                    |
| Dimension Handiwork        | Youth and Young adults (15-44 yrs old)   | 165| 1.58  | 1.66| p > .05            |
|                            | Middle-aged adults (45-64 yrs old)       | 110| 1.78  | 1.70|                    |
|                            | Older adults (65+ yrs old)               | 110| 2.04  | 1.77|                    |
| Dimension User of Digital Technologies | Youth and Young adults (15-44 yrs old) | 165| 1.36  | 0.81| p < .05            |
|                            | Middle-aged adults (45-64 yrs old)       | 110| 1.00  | 0.87|                    |
|                            | Older adults (65+ yrs old)               | 110| 0.39  | 0.73|                    |

The analysis by dimension allows for a rapid examination of the interests and of the associations and effects with other variables. Due to issues of space, yet in order to fulfill the objective of demonstrating QIIP’s potentialities, we have only done one analysis (as an illustrative example) of the dimensions via the most fundamental aspect of the intergenerational theme – age group.

**Analysis of the QIIP by activity of interest (item)**

Analysis per item enables the collection of more specific information on any given activity of interest. Thus, in this study, it was found that the three activities which most interested this population were, in descending order: learning about other countries and places (75.1%); helping other people (73.2%) and protecting animals (68.9%). And the three activities which interested the respondents the least were: knitting, embroidering and rug-making, (21.3%); mechanics (16.4%); clothes design (13%). This information affords an overall perspective on interests, allowing for the consideration of multiple interests when developing practices (see Table 3).
Table 3. Interest, predisposition for participating/learning, and knowledge/practice (n=385), %

| Dimensions                  | Items of activities of interest         | Interest | Participate/Learn | Knowledge/Practice |
|-----------------------------|-----------------------------------------|----------|-------------------|-------------------|
| **Dimension Caring/ Protecting** | Helping other people                    | 73.2     | 65.9              | 46.7              |
|                             | Protecting animals                      | 68.9     | 57.6              | 33.3              |
|                             | Learning about a healthy diet           | 60.0     | 53.7              | 34.2              |
|                             | Defending human rights                  | 58.6     | 52.2              | 27.2              |
|                             | Protecting the environment              | 58.2     | 50.1              | 32.6              |
|                             | Taking walks                            | 57.7     | 51.2              | 43.2              |
|                             | Learning first aid                      | 56.5     | 53.8              | 21.5              |
|                             | Practicing sport/physical activities    | 53.5     | 48.9              | 40.2              |
|                             | Taking care of children                 | 44.3     | 39.7              | 31.5              |
|                             | Taking care of the elderly              | 30.1     | 28.3              | 20.9              |
| **Dimension Culture**       | Learning about other countries and other places | 75.1     | 69.0              | 36.9              |
|                             | Sharing knowledge with others           | 67.5     | 62.4              | 42.1              |
|                             | Learning about the history of the country, city, or parish | 59.9     | 54.0              | 27.1              |
|                             | Visiting museums and exhibitions        | 50.6     | 47.0              | 34.6              |
|                             | Learning about stories, legends/myths   | 45.4     | 40.9              | 19.4              |
|                             | Photography                             | 38.4     | 34.9              | 21.1              |
|                             | Reading literary works                  | 35.2     | 30.5              | 22.5              |
|                             | Participating actively in social and political issues | 27.6     | 25.8              | 15.2              |
|                             | Participating in debates                | 24.2     | 20.7              | 13.1              |
|                             | Writing (poetry, short stories, articles, etc.) | 22.3     | 12.1              | 15.5              |
However, being interested in an activity does not mean wanting to participate in it or learn it through an activity that involves this interest; thus, the second question of the QIIP is formulated to identify those individuals who would like to participate and learn more about a specific interest as well as the likelihood of such participation. It was found, on the one hand, that none of the 40 items studied registered the same percentage response to interest in an activity and the predisposition to participating in activities that involve this interest, which indicates that not all people wish to participate in or learn more about a given interest. On the other hand, and more positively, the differences between demonstrated interest and the predisposition to participate in and learn about this interest is less than 11.5% for all the items studied, which points to approximately 90% of the persons expressing a certain interest in participating in activities and learning more about this interest (see Table 3).
The analysis of the third question of the QIIP, dealing with the knowledge and practice that individuals have with respect to a certain interest, found that in all the 40 items there were persons who had and others without knowledge and practice of these interests. It was also discovered that in only 10 items, the number of persons who do not have knowledge and practice of the activity of interest is greater than the number of people who have knowledge and practice of the interest, with those items being: protecting animals; defending human rights; learning first aid; learning about the history of the country, city and parish; learning about short stories, legends, and myths; playing a musical instrument; learning about other countries and places; molding clay and/or other materials; restoring furniture; and mechanics (see Table 3).

5. Discussion

The present study has shown that the instrument QIIP identifies the interests of individuals, demonstrates good internal consistency, and constitutes an instrument that gathers important information, either for research or for the planning and implementation of intergenerational practices, such as:

1) the identification of common interests shared by people of different ages (Springate, Atkinson, & Martin, 2008; Martin, Springate & Atkinson, 2010; Sanchez, Kaplan, & Saéz, 2010) and with different socio-demographic characteristics; 2) the identification of people who would like to participate and learn about an activity that involves demonstrated interest; and 3) the identification of people who reveal knowledge/practice of a demonstrated interest (Springate, Atkinson, & Martin, 2008).

The QIIP, given that it offers variability of objectives, organization, and planning of intergenerational practices, enables an analysis by dimension of interest or by activity of interest. From the analysis of the 40 activities of interest, the following five dimensions were established, with adequate internal consistency for the population-based sample of the present study: the Dimension Caring/Protecting, the Dimension Culture, the Dimension Arts, the Dimension Handiwork, and the Dimension Use of Digital Technologies. However, a different number of activities comprise the individual dimensions, and in the case of the Dimension Use of New Digital Technologies where only two activities are included, we find this to be a limitation of the instrument which can easily be overcome by dividing the activity ‘Using the Internet and social networks’ into more specific activities, such as Using social networks (Facebook, Twitter, Instagram), Playing games on the computer, tablet, mobile phone or on-line; Using communication apps (Skype, WhatsApp, Messenger); and looking up information on-line. This would represent a way to increase the number of items in the dimension, thus affording it greater fidelity and at the same time enabling the identification of specific interests in the use of digital technologies. The use of the structure determined by the factor analysis in this study to identify the participants’ responses will be especially useful with respect to two objectives: (1) when the intention is to conduct a screening of the interests on a more macro level (per factor) and (2) when research on the associations and effects in terms of other variables requires recourse to briefer measures, but which still offer adequate levels of precision and validity. In practical terms, within the scope of the planning and development of intergenerational activities and programs, the analysis of the QIIP by dimension offers the group of participants a range of possibilities for activities of common interest, encouraging active participation on their part with respect to the selection of tasks and activities that they wish to undertake in the intergenerational program (Montero & Gallego, 2002).

For its part, the analysis per activity of interest is appropriate when a specific activity is to be realized, for example, writing a book or creating a blog of short stories, legends, and myths, or when a specific objective is in mind, as in the example of increasing one’s physical health, which requires not one but a variety of activities of interest related to improving health, such as practicing sport/physical activities, learning about a healthy diet, taking walks, etc.

If, on the one hand (and on the positive side), the vast majority of the individuals who revealed a certain interest indicated their wish to learn more and to participate in activities that involve this interest, on the other hand it was also noted that not all people expressed such a desire, being that the predisposition greater or lesser depending on the activity in question. This information is quite relevant when choosing which interests will be developed further. Finally, given that the participants in intergenerational activities and programs, develop, and share the knowledge, skills, and expertise with each other, the groups should include both persons with knowledge and practice in the stated interest as well as those who do not have such knowledge but who demonstrate interest in participating and learning so that they can develop this interest (Krapp, 2002). The third question in the QIIP, in gathering this information, facilitates the construction of heterogeneous groups based on knowledge and practice of the area of interest.

The results of the responses, per activities of interest, to the three questions mentioned, when
crossed with socio-demographic characteristics such as age group and others, allows for important decisions to be made, such as identifying which activities of interest should be developed with persons with certain socio-demographic characteristics, identifying the activities of interest to be developed, and implementing a program in which younger participants serve/teach the older adults, in which the older adults serve/teach the younger participants, or in which the younger participants and older adults serve the community (Sánchez & Díaz, 2005).

Given the limits of space, it is not possible to demonstrate all the analyses possible, either by dimension or by activity of interest, which we consider a limitation of this article. But by way of example, and in an analysis of the five dimensions selecting the characteristic which unquestionably describes intergenerational practices – age – (variable age group), it was found that three dimensions are of common interest to all the three age groups, being the Dimension Caring/Protecting, the Dimension Culture, and the Dimension Handiwork, which would indicate that developing intergenerational practices in these dimensions and in this population would increase the probability of voluntary participation in the practices by individuals from the three generations studied. It was also found that Youth and Young Adults differ from the other age groups in the Dimension Art and in the Dimension Use of Digital Technologies (dimensions where youth and young adults demonstrate greater interest). There is no significant difference in Dimension Arts for Middle-aged Adults and Older Adults. Concerning the Dimension Use of Digital Technologies, there are significant differences amongst all the age groups, in which it was verified that as age increases, interest decreases. It is worth noting here, however, that although significant differences were detected between the age groups in certain dimensions, this does not mean that individuals from different generations do not share a certain interest in common. Instead, this points to a lower probability of finding such overlapping interests, and in this case it would be necessary to conduct an item analysis, that is, per activity of interest.

6. Conclusion

Having researched varied and multiple intergenerational practices, we have verified that different forms are used for the identification of interests, and there is not one specific instrument which aids persons, professionals, organizations, and researchers who wish to develop intergenerational practices and study the interests of various populations. For this reason, this study has presented and carried out the initial validation of the Questionnaire of Interests for Intergenerational Practice (QIIP) with the objective of responding to what we believe is an important need. The QIIP is an instrument that identifies not only an individual’s interests but also those persons who want to learn and participate in activities which involve this interest and those who have knowledge and practice within the scope of these interests, thus facilitating both the forming of groups and the selection of activities and decision-making with respect to an activity or program to develop – information which we consider will increase the likelihood for success of intergenerational practices (Springate, Atkinson, & Martin, 2008; Martin, Springate & Atkinson, 2010; Sanchez, Kaplan, & Saez, 2010; O’Neil, 2016; Kaplan, Sánchez & Hoffman, 2017). Given the variability of intergenerational activities and programs, the QIIP can be used at different moments in time, for example applied during the recruitment of participants or when a group has already been formed. This instrument can also be useful for intergenerational research, constituting a model to be applied in several contexts, situations, and territories, not only allowing for comparison but also serving as fundamental information for designing policy measures. For this very reason, the QIIP is an instrument that can be adjusted by modifying the activity items of interest (via the inclusion or exclusion of items) as a way to reflect the cultural context of the individuals (Valsiner, 1992; Krapp, 2002; Krapp & Prenzel, 2011) and to fulfill the objectives that have been set for the intergenerational practice.
Notes

1 Instrument created by Susana Villas-Boas as part of her doctoral dissertation in Education Science, Specialization in Permanent Education and Adult Education, Faculty of Psychology, University of Coimbra, co-funded by the Foundation for Science and Technology (FCT).

2 AGE Platform Europe [http://www.age-platform.eu/], European Map of Intergenerational Learning – EMIL [http://www.emil-network.eu/], European Network for Intergenerational Learning – ENIL [http://www.enilnet.eu/], Generations Working Together [http://generationsworkingtogether.org/], Generations United [http://www.gu.org/], Instituto de Mayores y Servicios Sociales – IMSERSO [http://www.imserso.es/imserso_01/index.htm], United Nations Economic Commission for Europe – UNECE [https://www.unece.org/], Red Latinoamericana de Gerontología [http://www.gerontologia.org/], Penn State Extension [http://extension.psu.edu/youth/intergenerational],

3 Questionnaire created by Susana Villas-Boas to identify potentialities and needs of the part of the previously mentioned doctoral thesis.

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**HOW TO CITE THE ARTICLE**

Villas-Boas, S., Da Silva, J., Lima, A., Ramos, N., & Montero, I. (2019). QIIP- questionário de interesses para a prática intergeracional. [QIIP - Questionnaire of interests for intergenerational practice] *Pedagogía Social. Revista Interuniversitaria, 33* 31-43. DOI:10.7179/PSRI_2019.33.07

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