

# Testing International

Vol 35, July 2016 Editor: Jan Bogg



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**President's Letter**  
**Dave Bartram, President (2014-2016)**

Dear ITC Members and Friends,



By the time this report is published, the Vancouver ITC conference will be upon us and I will be handing over the reins of the ITC to the capable hands of our new President, Dragos Iliescu. It is hard to believe that it is two years since I took

over from Fanny Cheung in San Sebastian. I see these two years as being a period of consolidation with a particular emphasis on the role of the ITC Committees. When I first joined the ITC Council as an elected member, in 1994, there were no committees and the ITC had done little in terms of productivity apart from the work on the Test Adaptation Guidelines. Since their formation, the committees have been increasingly taking on the ITC's expanding workload that would otherwise have fallen on individual council members. The committees are important not only because they provide a focus on a particular area of our work, but also because they bring in people as contributors, who are not themselves members of Council. This gives us more focus, greater flexibility, the potential for more productivity and more inclusivity.

Our publications are going from strength to strength with a book series in progress and the launch of the *ITC International Handbook of Testing and Assessment* at the conference. In addition we welcome a new editor for *IJT*, Stephen Stark, who will be taking over from Avi Allalouf in January 2017. Our thanks to Avi for the great job he has done as Editor. Jan Bogg is also stepping down as editor of *Testing International*. We thank her for dedication to this role and the improvements she has wrought over the years. We are delighted to announce that April Zenisky will be taking over Jan's mantle and we appreciate that she will have a hard act to follow.

We have also seen a lot of progress in the development and publication of guidelines over the past two years. Notably we have seen the publication of the ITC Guidelines on the Security of Tests, Examinations, and Other Assessments in July 2014 and Guidelines for Practitioner Use of Test Revisions, Obsolete Tests, and Test Disposal in March 2015. The much-awaited second edition of the Test Adaptation Guidelines is due to be out for general consultation by the time this report is published.

The past two years have also seen some sad events. The recollection of the tragic murder of Tom Oakland still shocks. We remember Tom formally now through the ITC's Thomas Oakland Award for Distinguished Contributions to Testing and Assessment. This Award recognizes an individual that has made one or more significant and noteworthy contributions to research or practice in educational or psychological assessment. The first recipient of this will be awarded at the conference in Vancouver. More recently we also heard of the passing of Robert Roe. Robert was a strong supporter of the ITC and a frequent presenter at our conferences. He was a leading figure in European work and organizational psychology and played a leading role in the development of the discipline in Europe. Shortly before his death he had been President of EFPA and led that body through a period of important structural and organizational change.

On a personal note, as well as stepping down as ITC President, I will be retiring from my post of Chief Psychologist with CEB at the end of July 2016. However, I hope to continue in a freelance capacity to contribute to professional developments in our field and to support the ongoing work of the ITC. While there is no longer the official post of past-president, the outgoing president is invited to take up a co-option for a further two years. I will be happy to continue to serve and contribute in that role. The future holds many challenges for the ITC and the current Council provides a terrific mix of expertise and experience in a diverse range

of areas of assessments. The role of the ITC is becoming increasingly important as assessment becomes an increasingly global phenomenon. The focus of assessment delivery continues to shift to the internet and we see more and more use of mobile technology in testing. We also have the growing interest in assessment through 'big data' analytics and internet 'data scraping', including attempts to profile people's personalities through the analysis of their online data. This raises many issues for standards and guidelines, not least of which is a question of freedom from bias and fairness (e.g. not everyone has a Facebook or Twitter account!). Furthermore we need to consider the potential for people to use sophisticated systems to 'impression manage' their online profiles or 'fake good'.

I look forward to a wonderful conference in Vancouver and wish to end by thanking Ananda van Tonder for her support. She has transformed the management of the day-to-day business of the ITC since she was appointed. I also want to thank my fellow executive members, Dragos Iliescu, Aletta Odendaal and Kurt Geisinger, and the committee chairs, for working together as such a great team and for making my term of office so pain free.

Dave Bartram, President, ITC.  
[President@InTestCom.org](mailto:President@InTestCom.org)

### ITC Publications Committee Chair Report

We are delighted to report that the ITC *Handbook on Testing* published by Oxford will be on display at our conference in Vancouver. The *Handbook* is edited by Fred Leong with chapters authored by many members of ITC. Orders for the Handbook at a 30% discount will be accepted by Oxford during the conference. Work on four volumes in our book series is progressing. The four authors and titles include the following:

- Security for Tests and Other Assessments by David Foster
- Adapting tests in linguistic and cultural situations by Dragos Iliescu
- Measuring Opportunity: Insights from International Large Scale Assessments by William Schmidt
- International Applications of Web-based Testing: Challenges and Opportunities by John Scott, Dave Bartram, Doug Reynolds, and Dave Foster

Anyone interested in contributing a volume to this series is encouraged to write Neal Schmitt ([schmitt@msu.edu](mailto:schmitt@msu.edu)) with a proposal idea.

We are also delighted to report that we have selected (and he has agreed to serve) Dr. Steve Stark as the new editor of the *International Journal of Testing*. Dr. Stark is a 2002 Ph.D. from University of Illinois and currently a Professor at University of South Florida. He is also a member of the ITC Council and has served as Associate Editor of IJT for the last three years. His psychometric research contributions include the use of item response theory to develop ideal point models of responses to personality tests. We want to thank Dr. Avi Allalouf who has served as editor the past four years. As a former editor, I can attest to the very large effort entailed in managing the editorial process and doing it well. Avi has done so.

Finally, several weeks ago, Dr. Jan Bogg who has assembled our newsletter for many years indicated that it is time that this responsibility is assumed by another ITC member. The newsletter is a major means of communicating with our members. Jan has sought out contributions and written many pieces of the newsletters herself. Dr. April Zenitsky has agreed to serve as the next editor of the newsletter. We are confident that she will expand on Jan's very fine stewardship in this area.

Neal Schmitt, Chair

Ype H. Poortinga, April 2015

**1. During what year did you become involved with the ITC, how did this affiliation occur (e.g. were you asked to join the ITC, were you a representative of another organization, or did you elect to become involved), and what was the nature of your initial work on the ITC?**

Already in 1974, before the ITC was established I became involved. In that year Jean Cardinet invited national committees on tests and testing from several countries to be represented at a meeting in the context of the congress of the International Association of Psychology (IAAP) in Montreal. As I was going to attend this congress I was asked to be the delegate for the test commission of the Netherlands (COTAN) of which I was a member at the time. Cardinet had a strategic vision on the need for an international association of national committees on tests and testing, but wanted to hand over the task of further development of his initiative because of other pressing responsibilities. Before the meeting in Montreal he asked me whether the COTAN could take over and I agreed to propose this to the COTAN. During the meeting, of less than 10 people, there was consensus when Cardinet tabled this plan.

At the time, the idea was that an international test commission would function under the auspices of IAAP, but its Secretary-General unexpectedly ruled this out as IAAP's constitution only recognized individual membership. Back home The COTAN was not forthcoming either; its chair insisted that I had taken this on and that it was my baby. Admittedly, I felt quite desperate but there was no way to pass on or return what had landed in my lap. Guided by a set of recommendations drawn up by Cardinet, which I considered to be the backbone for future activities, and with the firm belief that tests and testing are an important part of psychological science and

practice, I started to think of a structure for an independent International Test Commission. The following steps have helped to get things started: I established a Newsletter as a means of communication and posted it to persons and committees who had expressed an interest, asked four key persons to form an advisory committee (see Oakland et al., 2001), and drafted a constitution.

In 1976 a meeting was convened annex to the congress of the International Union of Psychological Science (IUPsyS). On that occasion the draft constitution was accepted provisionally, with some suggestions for future change, and a board was elected. At this meeting, one might say, ITC was born. As elected president I spent time in the two years from 1976 to 1978 on a small survey in European countries on attitudes towards tests among psychologists (at the time there was a fairly strong anti-test sentiment), on a revision of the constitution and on the preparations for a symposium at the 1978 IAAP congress in Munich organized under the auspices of ITC. (Perhaps I should mention that at this congress the IAAP president mentioned ITC as an important development.)

**2. Who were some of the key leaders in the ITC at that time and what were their roles?**

It is difficult to imagine how ITC would ever have come about without the initial steps by Jean Cardinet. I see him as the patriarch of ITC (see Oakland et al., 2001). There were two other significant persons in the early period. The first is Justin Schlegel who accepted responsibility for the Newsletter in 1976 and arranged to have it published as a supplement to the *Revue de Psychologie Appliquée*, a great improvement over the earlier mimeographed form. He remained the editor for several years. I remember Justin as a very constructive and modest person, always prepared to help out where he could. The second is Iraj Ayman who was elected president of ITC in 1978. He was a superb organizer and expectations were high about what he would achieve. Unfortunately, shortly after his election the revolution in Iran,

his home country, forced him to move to the USA where he had to start a new career, leaving no time for ITC. Ken Miller, the vice-president, had to take things from there.

**3. Every organization and association goes through growing pains. During your first few years on the Council, what were some of the impediments that you felt limited the ITC's work and needed to be changed?**

As already indicated, when I started here was no structure or organization, it was almost a one-man show; also there were no financial means (fortunately, nobody ever asked questions about the reproduction of the ITC Newsletter at the printing office of the university in Tilburg). Even today it seems to me that first and foremost there needed to be an organizational structure, the reason why the drafting of a constitution was important. In retrospect I might have been bolder in taking action, but lacking both money and experience at a time when administering tests to people was often seen as a highly questionable practice, I have even today no clear idea how that could have been realized. As I see it ITC made a slow start, but institutionalization was the first task, and there was progress between 1974 and 1978. After Iraj Ayman left, ITC moved into hard years until Ron Hambleton came to the rescue. More than anyone else he has made ITC into the organization it is today.

**4. What prominent changes have you seen in the ITC between when you first were a member and now?**

ITC is now an established and respected organization. It probably helps that attitudes towards testing are generally more positive today, both among the public at large and within the profession of psychology.

**5. Where has the ITC done well? What do you think the ITC's biggest accomplishment has been over the years?**

The most outstanding achievement of ITC are the sets of Guidelines together with the fact that they are published on the Internet. These

are products that can help to improve the quality of instruments and testing practices. To me the guidelines are more important than the congress, another strong feature of ITC.

**6. What do you perceive to be current challenges facing the ITC and what role should the ITC play in this regard?**

I see two (latent) challenges. ITC is largely made up of experts on tests and testing and there are also test publishers. A third category of stakeholders is not really represented, at least not directly, namely the clients or test takers. They have a great interest in the quality of tests and in safeguards concerning the proper use of tests. I am not sure how their representation could be arranged, but perhaps some international association of national consumer organizations and/or a body like UNESCO could be invited to take a position, or at least observer status, on the ITC Council.

Another challenge is the limited citation impact of the *International Journal of Testing*. Establishing the IJT was a wonderful idea. However, for some reason it did not really take off to become a preferred outlet for authors with excellent manuscripts. Somehow this will have to change. I know that this suggestion has been made before, but one way to boost the number of citations is through the publication of a set of excellent review articles. Approaching senior persons in the field one by one will not work, because they are being asked for a serious time investment that does not lead to anything much for anyone. Perhaps things would work out better if a larger plan were developed for a set of review articles that would span about three years with every second issue of IJT being devoted to a major review, perhaps with commentaries. Current ITC seniors and the IJT editors might form an editorial committee to draw up the plan and invitations could be issued to teams of authors as well as to single authors. An important element would be that invitees should also receive a letter asking for commitment from the ITC Council. The authors of the first article in the series should start writing only when a

sufficient number of commitments have been made. Not only should it be a bit of an honor to be asked, but the set of IJT issues would form a solid overview of contemporary issues in testing theory, methods and applications. Of course, the assumption is that the review articles will boost the number of citations.

**7. Among your various contributions, what do you believe may be your lasting legacy?**

For a better part the early constitution was based on my ideas and I am still rather satisfied with most of it. Especially, full membership of national test committees and associate membership for publishers was a good starting point for ITC. Of course, there have been substantial changes in later years, and the constitution is certainly not my legacy. Most other activities were sort of run-of-the-mill; for example, newsletters were already much in fashion at the time. I am very pleased with having been the first president of such a viable organization, but I am afraid that “legacy” is too big a word for anything I achieved for ITC.

discipline in Lebanon and the region, having started mostly in Egypt in the 1940’s (Ahmed, 1992). The past few years have witnessed a rise in psychology-related services in Lebanon. In 2010, there were 45 practitioner psychologists in Lebanon (Khoury & Tabbarah, 2010), while today there are more than 300 mental health professionals registered as psychotherapists or practicing psychologists. However, a number of local challenges present themselves in Lebanon, particularly with psychological testing. This articles touches upon these challenges and opportunities across four key dimensions – research, academic education, professional training, and practical application.

*Research*

Much of the local research has focused on the adoption or adaptation of tests from English and French, into Arabic (Ibrahim, 2013). Recent developments includes the WISC-IV Arabic in 2015, a number of clinical interviews (e.g., DAWBA; Zeinoun et al, 2013), and clinical rating scales (e.g., Mood and Feelings Questionnaire; Hariz et al, 2013). However, there were no indigenous instruments until recently, when a group of researchers began developing the first Arabic test - a personality inventory based on implicit personality concepts in Lebanon, Syria, Jordan and the Palestinian territories. Otherwise, there is still much room for constructing or adapting tests for the Lebanese (or Arab-speaking) population. This is mostly due to insufficient research funds and expertise in statistical and conceptual methods of test development and adaptation. Also, the Arabic language itself poses a number of challenges. A test developed for use in one Arabic-country does not lend itself usable in all Arabic countries. This is because the Arabic language exists in multiple varieties, which are not mutually understood from one country to the next. Therefore the Arabic used in a test developed in Egypt, is not necessarily transferable to Lebanon. Finally, the diverse linguistic and cultural fabric of Arab countries does not mean that psychometric properties

**ITC SCHOLARSHIP RECIPIENTS 2016**

**Testing and Assessment in Lebanon  
Pia Zeinoun**

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**Beirut, Lebanon**

Lebanon is a small country, stretching on the coast of the Mediterranean sea, with a population of approximately 4 million. The official language is Arabic (the 5th most spoken language in the world), although most people have a bilingual or trilingual education in French and/or English. Psychology is a relatively new



established in one Arab country will apply in another

#### *Education*

Graduate programs that prepare students for a career in test-related fields are still sparse. The American University of Beirut offers a Master's degree in Educational Psychology, with an Emphasis on Tests and Measurements, and the Lebanese University launched a Master's degree in non-clinical Neuropsychology in 2015. Otherwise, universities offer individual courses in 'testing' with syllabi emphasis ranging from projective testing, to cognitive evaluations, to psychoeducational evaluations, to function-specific testing (e.g., language). There are no graduate courses in occupational aptitude and personality tests, or psychometrics.

#### *Professional Training*

Professional training in psychology is mostly in psychotherapy or psychoanalysis. This tendency has been attributed to the need for treatment of mental illness, after the Lebanese civil war, and the lack of academic, financial, and mentoring opportunities for developing other skills. At the moment there are no formal post-graduate or doctoral training programs in test-related fields such as neuropsychology, school psychology, or industrial (occupational) psychology. One exception is the American University of Beirut's, Psychological Assessment Center, that formed a training affiliation with the US-based Kennedy Krieger Institute to facilitate post-graduate training in neuropsychological assessment, with the objective of providing an evidence-based model of practice to the region.

Given the limited professional training possibilities locally, those wanting to specialize in psychological testing need to travel to Europe or Northern America, and the majority do not come back to practice in their home country. Another challenge to practice is the lack of laws that regulate practices related to psychology in general and assessment in particular. For instance, there are no current laws or professional regulations for the use of the title of "psychologist" or for test-users.

Professionals with varying levels of expertise can therefore purchase and use tests at their own discretion.

#### *Applications of Testing*

Despite the limitations in education and training, testing is used in applied settings. The majority of practitioners have a Master's degree, and few have a doctorate (LPA database).

The most frequent application is likely that of projective tools by psychotherapists and psychoanalyst and function-based testing, by non-psychologists (e.g., speech therapists). This is likely due to the fact that these professionals form the majority of practitioners. Next, are 'test-bound' evaluations that use one or two tests to help diagnose specific issues like learning disabilities. The assessment center at the American University of Beirut Medical Center uses a comprehensive assessment approach that tests across cognitive, neuropsychological functions and personality. Occupational assessment is probably the least frequent application, owing to the fact that there are no test publishers or training institutes which offer training in occupational testing.

Combine the above that with no professionals regulations at the national level, the result is a large number of professionals (clinical, educational, human resources, etc) using various tests without the necessary training for informed selection of appropriate testing methods, and meaningful interpretation of results. As such, decisions based on testing (e.g., diagnosis, or candidate selection) remain highly tentative at best.

#### *Conclusion*

Many national efforts are underway to improve the status of testing in Lebanon. There are committees tasked with drafting laws aimed at regulating the practice of psychology (including test users). Also, in 2014, the Lebanese Psychological Association tasked a committee on Tests, Measurements, and Assessment to liaise with the ITC and disseminate the international standards on test-usage in Lebanon, particularly those

pertaining to professional credentialing and cultural/linguistic adaptation. Given the role that Lebanon has historically played in bringing modern education to the Middle East region, it is not unrealistic to predict that Lebanon would be a major contributor to the improvement of psychological testing, as a practice and a science, to the region. The proper development of tests, and the establishment of world-class testing procedures in all fields of psychology has to be accompanied by the establishment of a system - A cadre of graduate education, specialized training, and participation in the international community of scientists and practitioners, which will produce capable and ethical professionals specialized in testing. A critical mass is already being formed among educated and trained practitioners and researchers who are reshaping the study and practice of psychological testing in Lebanon.

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### Test Development Process in Ethiopia

**Abiy Kefyalew Aboret**  
**Addis Ababa, Ethiopia**



Ethiopia is the second largest populated country in Africa and located in east of Africa. It has an education structure of 8-2-2. This comprises first cycle of primary education (1 to 4), second cycle of primary education (5 to 8), secondary education (9 to 10) and preparatory education (11 to 12). National Examination has been conducted at Grade 8, 10 and 12 in yearly basis and National Assessment at grade 4, 8, 10 and 12 in four years of interval. Early grade assessments such as early grade reading assessment and early grade mathematics assessment has also been carried out on grade 2 and 3 students.

National Examination has the purpose to certify and place students to the next cycle while National Assessment has the purpose to monitor the quality of the education at the system level. These tasks are carried out by the National Educational Assessment and Examination Agency established under the ministry of education. The agency has two main directorates, responsible for these major tasks.

To this regard, the exam preparation and administration directorate manages the examination task, while the Assessment directorate leads the national assessment.

Both directorates are involved in the test development process independently.

*Test development process in Exam Preparation and Development Directorate*

The directorate has a major duty to prepare and administer National Examinations for grade 10 students in nine subjects specifically English, Mathematics, Physics, Chemistry, Biology, History, Civics, Geography and Amharic (federal language) and only administer university entrance examination for grade 12 students prepared by Addis Ababa University.

Each subjects has an exam development expert and two other item writers hired on a contractual basis. The test development process has the following steps:

- Test blue print
- Item writing
- Item reviewing
- Test assembly

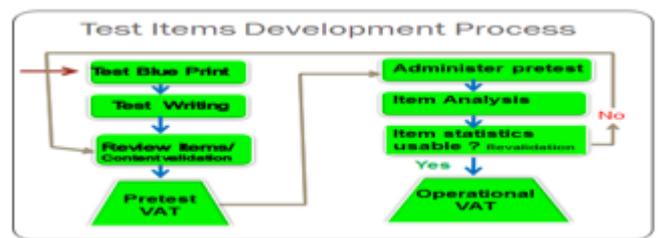
Due to security issues, the test development processes hasn't been through piloting. Recently, there is an attempt to pilot items, although there is no item bank. In future, there is a plan to establish an item bank system using custom made item bank software. All national examination tests are multiple-choice items and they are criticized for measuring lower level of cognitive domains.

*Test Development Process in National Assessment Directorate*

The Directorate has 7 experts working on different sub tasks such as Early Grade Reading Assessment, Early Grade Mathematics Assessment, National Learning Assessment and Classroom Assessment .A group of two or three experts organized as a team are responsible for the tasks. Unlike National Examinations, the assessments are sample based and use questionnaires, as additional data collection instruments.

The test development process it follows, is better than the national examination. It involves piloting and revision of items based up on item statistical results. Software such as Test Analysis Program (TAP), Item and Test Analysis (IATA), Parscale and Macro programs are used for analysis. In General, the following diagram shows the test development process of the National Assessments (Fig 1).

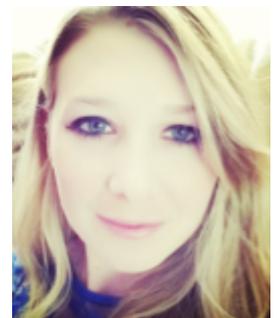
**Figure 1: Test Development process of National Assessment**



**Evidence for a Bi(Multi)lingual Advantage on Working Memory Performance in South African University Students**

**Mandy Wigdorowitz  
South Africa**

Due to linguistic diversity within South Africa, multilingualism is becoming increasingly prominent. Since there are 11 official languages, it is the norm rather than the exception that South Africans are exposed to – and consequently speak – more than one language. With the increasing prevalence of multilingualism, both in South Africa and globally, there is a need to enrich existing knowledge and gain new insight that address how differing linguistic profiles function at a cognitive level. By doing so, an understanding



of cognitive processes associated with multiple language exposure and use will emerge.

Over the past few years, there has been an increased focus on multilingualism in psychological and linguistic research. Specifically, the acquisition of additional languages to an individual's mother tongue has been shown to have an effect on executive (cognitive processes that underlie higher-order, goal-directed behaviour) and linguistic tasks that extend beyond the language domain. However, there is contention as to whether multilingualism is a hindrance or an advantage on a variety of these tasks (Costa & Sebastián-Gallés, 2014). The reasons for these differing findings remain unclear, but various proposals and trends have been noted in relation to task specification (verbal or non-verbal) and type of executive function being assessed (e.g., inhibition, working memory, lexical selection etc.). This study looked specifically at the executive tasks of verbal and non-verbal working memory – the short-term storage and manipulation of information during the performance of cognitive tasks (Baddeley, 2003).

At this point, research in this area has produced mixed results. Extensive findings suggest that monolinguals outperform bi(multi)linguals in executive tasks that utilise verbal mechanisms (e.g., lexical retrieval, naming, phonetic and semantic fluency), while the opposite has been found, where bi(multi)linguals outperform monolinguals, in tasks that employ non-verbal mechanisms (e.g., response conflict, executive control, switching, inhibitory control and flexibility, Bialystok, 2009).

A criticism of similar studies is that demographic factors that may shape executive control have not been rigorously measured, and so these confounding variables, such as level of proficiency in each language, intellectual ability, vocabulary and SES, may be, at least in part, responsible for the bi/multilingual processing advantages (Hilchey, & Klein, 2011). As such, the aim of this study was to determine whether verbal

and non-verbal working memory ability differs significantly between monolinguals and bi(multi)linguals, while statistically controlling for intellectual ability and SES between these groups.

Participants were 78 undergraduate students, comprising English first- (monolingual,  $M_{age} = 20.06$  years,  $SD = .88$ ) and second- or additional-language (multilingual,  $M_{age} = 20.03$  years,  $SD = 1.03$ ) speakers, matched for age, gender and SES. Language groups were compared on the Automated Working Memory Assessment, subtests of the Wechsler Adult Intelligence Scale – Third Edition, and the Living Standards Measure. Participants' reported language proficiency was measured using the Language Experience and Proficiency Questionnaire. These assessments have been validated and are found to be reliable tools.

Four components from Baddeley's (2003) multicomponent model of working memory were investigated: verbal short-term memory (phonological loop), verbal working memory (central executive and phonological loop), visuospatial short-term memory (visuospatial sketchpad), and visuospatial working memory (central executive and visuospatial sketchpad) in a comprehensive battery of three tests of each component.

One-way between-group ANCOVAs showed that (a) the bi(multi)lingual group outperformed the monolingual group across five of six non-verbal subtests, namely Mazes Memory and Block Recall (visuospatial sketchpad), and Odd One Out, Mister X and Spatial Recall (central executive and visuospatial sketchpad), (b) the bi(multi)lingual group outperformed the monolingual group on two verbal subtests, namely Digit Recall (phonological loop) and Listening Recall (central executive and phonological loop), (c) the language groups performed equivalently on verbal simple and complex tasks of Word Recall, Non-word Recall, Counting Recall and Backwards Digit Recall (see Table 1).

Table 1. Means, Standard Deviations and ANCOVAs between language groups (controlling for SES and verbal intelligence)

Measures	Monolingual (n = 39)		Multilingual (n = 39)		ANCOVA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>Partial η<sup>2</sup></i>
<i>VSTM</i>	92.69	11.95	88.87	13.23	2.20	.029
Digit Recall	85.90	9.85	93.77	13.95	12.63**	.148
Word Recall	89.84	13.33	85.56	12.71	1.54	.021
Nonword Recall	106.63	16.18	93.84	13.43	.46	.006
<i>VWM</i>	87.00	10.46	95.72	13.41	11.14**	.132
Listening Recall	92.36	12.53	97.05	14.70	8.19**	.101
Counting Recall	88.46	12.39	101.87	16.70	3.97*	.052
Backwards Digit Recall	84.97	19.09	88.92	18.91	1.67	.022
<i>VSSTM</i>	86.77	11.42	95.67	15.49	7.27**	.091
Dot Matrix	92.62	13.80	99.97	15.94	2.72	.036
Mazes Memory	92.90	16.82	99.46	14.72	4.78*	.061
Block Recall	82.49	12.21	90.21	16.03	6.34*	.080
<i>VSWM</i>	90.38	10.84	101.87	14.90	15.56***	.176
Odd One Out	91.36	9.02	100.79	15.34	10.61**	.127
Mister X	95.41	13.22	103.10	16.56	7.52**	.093
Spatial Recall	90.38	10.16	99.92	14.81	8.66**	.106

Note: *VSTM* = verbal short-term memory; *VWM* = verbal working memory; *VSSTM* = visuospatial short-term memory; *VSWM* = visuospatial working memory; \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .0001$ .

The findings contribute to the extant literature confirming a 'bi(multi)lingual advantage' in executive functioning. There was clear evidence of a bi(multi)lingual advantage on the visuospatial working memory tasks. However, evidence for a bi(multi)lingual advantage on the other three components of working memory were less robust, and may suggest task-specific mechanisms, rather than general working memory effects.

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## Testing and Assessment in Paraguay

### Pamela R. Woitschach Paraguay



Paraguay, a country located in the heart of South America with an area of 406,752 km<sup>2</sup> and an estimated population of 6,818,180 people (DGEEC, 2015) of which 58.8% of the population is enrolled in a higher level of studies which is superior to the national level (+18 years old). The country is divided into administrative and political effects in departments and districts, which are groups of cities with a corresponding capital city to each department. In total, throughout the national territory, there is a total of 17 departments, among which the Central Department and the Country's Capital have a total of 2,553,994 people.

By mid-1921 in Paraguay, the first introduction to the official teaching of Experimental Psychology is given and in 1950 with the support of the Ecuadorian pedagogue Emilio Uzcategui, the first laboratory of experimental psychology is established, but despite being equipped with a great variety of psychometric tests, the laboratory closes its doors by 1959, ending in abandonment. In Paraguay, there are few published studies on psychometric scopes or areas and adaptation studies or validation tests of psychological measurement. Since psychology at the university level has its beginnings towards the year 1963, with the opening of the first degree in Psychology, the process of evolution in Paraguay; dates since the year 1610 with the first forays into the psychological philosophical thinking of the time (Garcia, 2009).

On July 29, 1966 the Paraguayan Society of Psychology was founded, which was formed by the first class of graduates of the career of Psychology of the 'Facultad de Filosofía y Ciencias Humanas de la Universidad

Católica de Asunción.' Subsequently, the first doctorate in psychology began around 1975. The main contribution to the initiation in the interest on the use or application of projective assessment is given with Aguirre (1990). Recalling the words of Garcia (2009) "The scientific production of Paraguayan psychologists so far only led to sporadic initiatives and almost no institutional support, making it difficult to a considerable extent the realization of coherent research programs and ongoing research." (page 12) The same author makes a classification of publications from 1960 to 2005, not finding in them a raid on aspects of measurement and psychometrics in the country.

In mid-2007 studies such as Martín-Albo, Núñez, Leite, Almirón and Glavinich and the validation of the scale of educational motivation in Paraguay, done by Núñez Alfonso (2006) with the support of the "Universidad de Las Palmas de Gran Canaria", Spain; are some of the sporadic publications regarding the use of measuring instruments adapted within the Paraguayan population obtained through the web and published in international journals.

Within the area of health the work adaptation and validation of scales is observed in the health staff of the Health Center level across the country for the Cognitive Emotion Regulation Questionnaire CERQ scales and the "Cuestionario de Burnout de Granada CBG" (Woitschach, 2013). Among other psychometric research conducted at the National Universities as EOG work rather focused from the Classical Test Theory.

From the educational area, the inclusion of Paraguay is highlighted in standardized assessments such as those developed by UNESCO (PERCE, 1997; SERCE, 2006; TERCE, 2013) for the evaluation of third and sixth graders in public and private schools at a national level, besides having a "Sistema Nacional de Evaluación del Proceso Educativo" (SNEPE). Currently, the country prepares for its first participation in the 2017 PISA tests for the Development conducted to 15 year olds

(MEC, 2016).

The application of psychological evaluation tests on a large scale as in the case of the National Police Academy and José Eduviguis Díaz (ISEPOL, 2016) College, where making profiles for both admission to the police profession, training courses for the promotion to many degrees of the career, profiles for the selection of musical areas, profiles for the selection of scholarship personnel abroad for training, selection of personnel for training in various areas of undergraduate and postgraduate at the national level, incorporation of civil servants and allocation to high-performance work are made since 2013 with materials provided by the publishers of the test. In 2015, 4300 policemen in promotion careers have been evaluated, 800 policemen assessed for the admissions to courses of promotion careers, 3000 applicants for the admission to the Police Academy and a hundred more for different areas, in order to promote cultural evaluation at a national level and optimize the selection process within the police system. This cluster of applications has largely served to the existence of scales of Paraguay in measuring instruments for personality assessment, clinical characteristics, skills, interests and career preferences, among others (TEA Editions, 2016).

The process of globalization and the frequent, fast, and effective access to research journals and the work environment or research groups via web, allows that the advances are no longer a kept secret of slow diffusion. The social impact of the use of measuring instruments in areas of risk evaluation, including the areas of human resources, clinical or educational area; has promoted that the process of adaptation of the instruments in their language and/or psychometric facets; it becomes an imperative need which has been strengthening since the academy.

It is also imperative that it generalizes to all levels of education, in strengthening of research strategies, the creation of networks of

international work and shaping of working groups within the country interested in the development of assessment tools. And, above all, the support at government level of the 'Plan Nacional de Desarrollo, 2014-2030', which promotes scientific research and the immersion of Paraguay to the world.

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## **Advancements in Psychometric Research in Brazil**

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Emerging approaches such as network analysis and latent modeling of response styles offer new ways of addressing old psychometric questions. These analytical approaches have implications for adapting, understanding and analyzing psychometric instruments, and they can provide incremental information when compared with traditional latent variable modeling techniques, such as standard unidimensional Item Response Theory models. In the present report, we briefly describe how our individual research initiatives are intended to provide contributions to the field of assessment in Brazil.

### **Applying network analysis to investigate item clustering and comorbidity patterns in mental health measures**

**Wagner Machado**



As a means for constructing and adapting mental health measures, we started to use networks analysis, which combine graphic representation of complex systems with powerful statistical learning algorithms. For example, we recently implemented the network approach along with classical psychometric models in the adaptation of the Mental Health Continuum scale into Brazilian Portuguese.

Results revealed a convergence between item parameter estimates across a wide range of statistical techniques, including graph analysis of covariance structure

(Machado & Bandeira, 2015). Our work is inspired by Borsboom's research group initiatives (<http://psychosystems.org>), making use of Epskamp's analyzing tools for R programming.

Based on previous studies (Cramer, Waldorp, van der Maas, & Borsboom, 2010), we applied the network analysis to validate scales of negative affects such as the Depression, Anxiety and Stress Scale – DASS21 (Lovibond & Lovibond, 1995), investigating the dynamics and structure of symptoms in a non-clinical adult sample (N = 686, 72.7% females).

Network analysis has much to improve our comprehension about mental health issues. Beyond the structural information in regards to the latent trait covariance, using the network approach we can observe how specific symptoms interact activating or enhancing another symptoms. In our investigation, lack of positive expectancies and increased emotional reactivity were core symptoms that influenced and preserved system cohesion.

We also used this approach to compare groups as to their symptom architecture, as an alternative to traditional latent trait multi-group models. With network comparison algorithms, we can observe if the symptom interaction holds between groups of gender or development differences.

Furthermore, instead of using factor analytic models to investigate item clustering, we used advanced community-find algorithms based on statistical simulation. In this case, clusters are not interpreted as factors underlying a latent trait, but rather as a group of processes that can even have different underlying causes, all connected by reciprocal and recursive influences.

Interestingly, network analysis identified the expected three cluster structure (depression, anxiety and stress) of the original scale, an information that potentially helps, for example, to uncover inter-cluster influences or comorbidity process.

## Self-report and socially desirable responding

Nelson Hauck



One can hardly reach a full compilation of all the advancements in the field of psychological assessment afforded by the self-report method. Still, challenges abound, especially when the question is the assessment of undesirable traits, as is the case for the ‘dark side’ of personality. Psychopathy, a tendency toward callous interpersonal exploitation and disinhibition (Fowles & Dindo, 2009), is one example that merits attention. Self-report items tapping on psychopathic traits typically suffer from multidimensionality, as they possess two types of content: The *descriptive* contrast—the trait continuum itself—, and the *evaluative* contrast—how ‘good’ or ‘bad’ is the trait described seen in a given culture.

The study reported here is a preliminary application, to the assessment of psychopathy, of the ingenious technique devised by Dean Peabody (1967). More specifically, we studied the possibility of combining bi-factor modeling and item content manipulations in an attempt to better isolate the core descriptive psychopathic traits from socially desirable responding.

Following Peabody’s (1967) design, 20 items were written to capture the low and the high end of the interpersonal/affective factor of psychopathy using both a desirable and an undesirable wording approach (e.g., “I like to witness the suffering of others,” and “I am good at performing jobs that require being cold and unemotional,” to capture emotional deficits).

Participants were a community sample of adults ( $n = 208$ ), and a large sample of job applicants ( $n = 2,835$ ). The community sample also provided responses to the Paulhus’ Impression Management/Self Deception scale,

the Levenson Self-Report Inventory, and the Inventory of Callous Unemotional Traits. Preliminary results supported the proposed separation between the hypothesized descriptive and evaluative latent influences. In both samples, a bi-factor model isolated a general factor related to evaluation from a specific factor capturing the core interpersonal/affective features of psychopathy. Items had loadings on both factors in a way that was perfectly consistent with the manipulation of descriptive and evaluative contrasts. In the community sample, the general evaluative factor was more related to a measure of social desirability, and the specific factor was more related to the other inventories of psychopathic traits.

### Final considerations

Applications of modern psychometric techniques in Brazil hold the promise of providing researchers and practitioners with more precise and less biased assessments of psychological variables. Moreover, network modeling and item development procedures that take into account distinct item content components might render new insights about the causal structure underlying psychological data.

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## NEWS

### In memoriam Robert Roe (1944-2016)

Prof. Robert Roe has passed away in February 2016. This is a terrible loss for international psychology. Robert Roe had retired from Maastricht University in 2009, and had accepted a honorary position at the University of Leipzig, the city where he passed away. Robert Roe has made as a scientist significant contributions to Work and Organizational Psychology. He was a prolific author, publishing over one hundred articles in scientific journals, about 80 book chapters and over 30 books as author or editor.

But he may remain best known for his gift and unrelenting energy in bringing scientist together. He was one of the initiators of the European Network of Work and Organizational Psychology (ENOP). He initiated the series of conferences which later became known as the biennial EAWOP conference. Indeed, he was one of the founders of the European Association of Work and Organizational Psychology (EAWOP), for which he acted as founding President (1991). More recently, he was President of EFPA, the European Federation of Psychological Associations, a position he held until August 2015. In this position, as through his whole career, he worked to motivate all relevant stakeholders towards cooperation - he succeeded to fulfill his dream of having all European countries as members of this

important association. He had a crucial role the development of the European Certificate in Psychology (Europsy). He has been an great champion for psychology, advocating its relevance and working to improve the image and reputation in the eyes of the public and of policy makers.

His contributions have been acknowledged with a large number of awards, among others the EAWOP Life Time Achievement Award, the Fellowship of the International Association of Applied Psychology (IAAP), the Fellowship of the Maastricht Research School of Economics of Technology and Organization and the Special Award for Contributions to EAWOP.

Robert Roe was a friend of the International Test Commission. He has visited during the past dozen of years almost all the ITC conferences, and has been a presenter or keynote speaker in several of them. He did consider the work and the international impact of the ITC to be highly important and often spoke publicly in support of our organization. Though not directly involved in the ITC Council, he has been an important supporter, always ready for helpful consultation and wise advice. He will be remembered by his friends in the ITC.

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### Farewell from the outgoing editor of TI

This is my last issue as editor of TI, I have enjoyed the work, my colleagues and of course, all that I have learnt from your excellent contributions. However, it is time to move on, have fun, do part-time consultancy and not for profit activities. By the time you read this, I will be concentrating on the fun part, via travels in a bright yellow camper van and motorcycles, mountain biking, skiing and enjoying my fabulous ariel yoga (picture of Jan in vampire pose). Peace, Health and Happiness, it has truly been a pleasure.



Jan Bogg