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## **Improving the quality of proficiency assessment: the german standardization approach**

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### **Abstract**

The article describes initiatives aiming to further quality assurance and improvement in the field of psychological assessment in general and proficiency assessment in particular. First, a categorization system that allows all previous initiatives in this field to be systematized will be presented. The German standard DIN 33430 and its “Requirements for Proficiency Assessment Procedures and Their Implementation” will then be introduced, and its defining characteristics relative to previous approaches elaborated. Finally, the current implementation of the Norm will be outlined and its potential for further development summarized.

Key words: assessment process, proficiency assessment, quality, test qualifications, test use, standards, guidelines

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**1. Improving the quality of psychological assessment: a review of national and international initiatives**

Various national and international initiatives aim to further quality assurance and improvement in the field of psychological assessment. Kersting and Püttner (2006) have elaborated a system that classifies the different approaches to quality assurance in psychological assessment along two dimensions: the means and the objectives of assessment. The means applied are (1) guidelines, (2) reviews or information, and (3) qualifications. The objectives are quality assurance in (a) the assessment process in general or (b) the assessment procedures (e.g., interviews, assessment centers, tests) and (c) user competencies in particular. Combinations 2a and 2c are not realized in practice (see Table 1).

Quality standards are usually implemented in the form of guidelines. These can (1a) relate to the design of the assessment process, (1b) provide information on or evaluation of procedures (e.g., tests), and (1c) describe the competencies required by those implementing the assessment. Most guidelines address more than one of these aspects. Elaborate evaluation systems going beyond general guidelines are available for tests only (2b).

Approaches aiming at competencies can be distinguished according to whether the requirements for those implementing the assessment are merely established in guidelines (1c) or whether there are specific (3c) curricula for qualifications to be gained and/or exams or certification programs. The objective of qualification (3) can be specific to particular stages of a process (3a) or certain procedures (e.g., a specific test) (3b), but may equally cover the entire process (3c). 2b, 3a, 3b, and 3c serve as substantiations or practical implementations of rather broadly defined guidelines, although the single substantiations cannot be clearly assigned to a specific guideline.

Table 1:

Classification of different approaches to quality assurance in personnel selection (according to Kersting and Püttner, 2006)

	(a) Assessment Process	(b) Assessment Procedure	(c) Competencies
(1) Guidelines			
(2) Information			
(3) Qualification			

*1.1 Guidelines*

The guideline approach is the most widespread. The “Standards for Educational and Psychological Testing” (American Educational Research Association [AERA], 1999), which were jointly developed by various American organizations, are particularly salient. They continue to serve as a model for various national (e.g., Australia; Davidson, 1997), international (e.g., the “International Guidelines for Test Use” of the International Test Commission [ITC], 2000, see below), and area-specific guidelines (e.g., the “Principles for the Validation

and Use of Personnel Selection Procedures” of the Society for Industrial and Organizational Psychology [SIOP], 2003, see below).

The first edition of the “Standards for Educational and Psychological Testing” was published in 1954; the fifth revised version has been in force since 1999 (AERA, 1999; Eignor, 2001). The Standards define criteria for the development and use of tests, with a particular focus on performance tests and questionnaires. There are three parts to the document currently in use. The first deals with test construction, evaluation, and documentation. A set of 123 standards provides detailed coverage of the topics (1) validity, (2) reliability, (3) test development and revision, (4) scales and norms, (5) test administration, scoring, and reporting, and (6) documentation. The second part is dedicated to fairness in testing comprises a total of 48 standards. This part also considers the testing of individuals of diverse linguistic backgrounds or individuals with disabilities. The guidelines emphasize the need to provide evidence for the construct equivalence of the test results across different subgroups. The third and final part establishes further 93 standards on testing applications, addressing specific fields of application such as testing for purposes of employee selection, promotion, or placement.

The “Principles for Validation and Use of Personnel Selection Procedures” (SIOP, 2003; [http://siop.org/\\_Principles/principles.pdf](http://siop.org/_Principles/principles.pdf)) clearly refer to the AERA Standards, but focus exclusively on personnel selection and on topics relevant in this context; e.g., job analysis; selection and decision strategies.

While the SIOP Principles and the AERA Standards focus on procedures and their application, the Task Force on Test User Qualifications (see, e.g., Turner, DeMers, Fox, & Reed, 2001), which was formed in 1996, pays attention to the competencies required of test users. Its guidelines provide a thorough description of the competencies needed depending on the context of application.

An approach is assigned to the guideline category (first row in Table 1), if it focuses on describing the competencies needed by test users, even if there is a smooth transition to the qualification approach (third row in Table 1; see section 1.3 below).

The International Test Commission (ITC, 2000) has pointed out that the internationalization of the test market calls for crossnational guidelines for test use. Accordingly, the ITC has developed International Guidelines for Test Use (see [www.intestcom.org](http://www.intestcom.org)). These Guidelines recommend that test users take responsibility for ethical test use and follow good practice in the application of tests. Both international homogeneous standards and local heterogeneous requirements can and should be met through a process of contextualization. The Guidelines make high demands on the user and give best-practice examples for all phases of assessment. An example contract between parties involved in the testing process is provided in an Appendix. Aspects to consider when making arrangements for testing people with disabilities or impairments are also listed in an Appendix. The term ‘test’ is purposefully given a broad definition within the scope of the Guidelines. Any procedure used for ‘testing’ is to be regarded as a ‘test,’ regardless of its mode of administration and whether it involves sets of questions or requires the performance of tasks or operations (e.g., work samples, psychomotor tracking tests).

As tests become used in increasing numbers of countries, and as tests developed in one country are translated or adapted for use in another, it becomes increasingly important to adapt psychological and educational tests for use in various different linguistic and cultural contexts. The ITC’s Guidelines for Test Translation and Adaptation are particularly relevant

here (see, e.g., Hambleton, 2001; [www.intestcom.org](http://www.intestcom.org)). Adaptations need to consider the whole cultural context within which a test is to be used. Indeed, the adaptation guidelines apply whenever tests are moved from one cultural setting to another – whether or not they need to be translated. The 22 ITC Guidelines cover four main categories: (1) cultural context, (2) technicalities of instrument development and adaptation, (3) test administration, and (4) documentation and interpretation. Recommendations include taking into account any potential “cultural distance” in areas such as language, family structure, religion, lifestyle, and value systems. Experienced translators should be engaged for translations and adaptations. A separate section is dedicated to the application of adapted tests in other cultural settings, sensitizing users to the potential influence of the situational conditions.

The development of stand-alone and Internet-delivered computer-based testing (see Bartram & Hambleton, 2006) has raised a number of issues relating to standards of administration, test security, test results, and control over the testing process. The “International Guidelines on Computer-Based and Internet-Delivered Testing” released by the ITC ([www.intestcom.org](http://www.intestcom.org)) pick up on these issues.

Specific guidelines have been developed not only for tests, but also for other assessment procedures. The Task Force on AC Guidelines (1989) has formulated “Guidelines and Ethical Considerations for Assessment Center Operations” (<http://www.assessmentcenters.org/pdf/00guidelines.pdf>), specifying 10 essential elements of an assessment center’s work: (1) job analysis, (2) behavioral classification, (3) assessment techniques gathering information for the evaluation of the dimensions previously determined by the job analysis, (4) multiple assessment (that may include tests, interviews, questionnaires, sociometric devices, and simulation techniques), (5) job-related simulations, (6) multiple assessors, (7) assessor training, (8) systematic procedures to record behavior, (9) reports of the observations made during each exercise, and (10) data integration.

In its “Guidelines for Best Practice in Selection Interviewing,” SHL ([www.shlgroup.com/uk/litigation/BestPractice/BestPractice\\_SelectInt.pdf](http://www.shlgroup.com/uk/litigation/BestPractice/BestPractice_SelectInt.pdf)) introduces different approaches to selection interviews (e.g., biographical interviews, competency-based interviews, behaviorally based criterion interviews, situational interviews) and develops suggestions for a best practice.

As illustrated by these examples, the assessment procedure (e.g., tests, assessment center, and interview) often takes center stage in guidelines (row 1b in Table 1). Recently, however, the process of holistic, decision-based assessment has begun to attract attention. A first draft of the “Guidelines for the Assessment Process” (GAP) of the European Association of Psychological Assessment (EAPA) has been published as a basis for discussion (Fernández-Ballesteros, De Bruyn, Godoy, Hornke, Ter Laak, Vizcarro, Westhoff, Westmeyer, & Zaccagnini, 2001). In this context, assessment is seen as a complex, four-phase decision process. In the first instance, the diagnostician formulates questions in accordance with the requirements of the customer. He or she then collects, interprets, and combines data systematically to provide well-directed answers. Varying numbers of substages are formulated for each of the four phases, giving a total of 96 individual guidelines.

### *1.2 Information and review approach*

The aim of the information and review approach is to contribute to quality assurance by providing users with appropriate and systematized information on assessment procedures (e.g., tests), based on formalized systems for the description and evaluation of these procedures. To date, systems of this type have been developed nationally. The North American BUROS system serves as an example (see Plake & Impara, 2001; <http://www.unl.edu/buros>). In the Netherlands the “Documentation of Tests and Test Research” published in 2000 documents 372 tests according to the so-called Cotan System (Evers, 2001), which serves as an exemplary realization of this approach. The system distinguishes itself not only in the quantity of documentation, but particularly in the quality of information and test evaluations that it provides for formalized test reviews. Each test is reviewed on seven criteria assigned to five main categories: (1) theoretical basis and soundness of the test development procedure, (2a) quality of the testing materials and (2b) the comprehensiveness of the manual, (3) norms, (4) reliability, (5a) construct validity, and (5b) criterion validity.

The European Federation of Psychologists Associations (EFPA) has now launched an initiative to develop a “common set of European criteria for test reviews” (Bartram, 2001, p. 180), based on the Dutch and British systems. The “EFPA Review Model for the Description and Evaluation of Psychological Tests” is available on the Internet (<http://www.efpa.be>). A form for the description and review of tests has been developed, and reviewers are provided with detailed instructions to secure standardized reviews. Aspects of the tests under review are rated on a four-point scale (ranging from “inadequate” to “excellent”).

### *1.3 Qualification approach*

The competencies required of individuals responsible for psychological assessments are usually described in guidelines. The qualification approach is concerned with the training and verification of these competencies. For example, qualifications acquired as part of a university degree can be distinguished from those obtained in part-time training programs. In some countries (e.g., Australia, Germany, Canada) regulations have been established to secure “safe testing,” with only individuals who have an academic degree being allowed to purchase tests.

Part-time training programs are offered in countries such as the Netherlands. Fully qualified psychologists specialized in the diagnostic field can be registered by the Dutch Association of Psychologists (NIP, Nederlands Instituut van Psychologen, <http://www.psynip.nl>). Candidates need to provide evidence of a university degree, training in psychological diagnostics, and three case studies under the supervision of an accredited psychologist (Evers, 1996). Great Britain is another country with a certification system for test users. In contrast to the Netherlands, however, members of other occupational groups are also eligible for certification. In order to acquire the certificate of testing, which is currently limited to the occupational field, candidates need to attend specific training courses and to take an exam (see Bartram, 1996, 2001). The courses, usually lasting five days, and the exams are run by individuals accredited by the British Psychological Society (BPS, <http://www.bps.org.uk>). In 2002, approximately 14,000 people held the Level A Certificate of Competence in Occupational Testing, and approximately 3,000 the advanced Level B Certificate.

## 2. The situation in Germany previous to the DIN initiative

Until 2002, German initiatives to further quality assurance in the field of psychological assessment focused on the guideline approach (first row in Table 1) and on the qualifications gained by psychologists during their university training (third row in Table 1).

The ethical principles espoused by members of the German Psychological Society (DGPs) and the Association of German Professional Psychologists (BDP) are fundamental guidelines (Berufsverband Deutscher Psychologen, 1989a, 1989b; see <http://www.bdp-verband.org/bdp/verband/clips/ethic.pdf>) addressing issues such as the use of professional titles, confidentiality, and the need to continue with professional development and training. The Work, Organizational and Business Psychology division of the Association of German Professional Psychologists (BdP) has published "Principles for Applying Proficiency Assessments in Industry and the Civil Services" (Sektion Arbeits-, Betriebs- und Organisationspsychologie im Berufsverband Deutscher Psychologen, 1980). The German translation of the AERA Standards published in 1998 is another example of the guideline approach (Häcker, Leutner, & Amelang, 1998). The "Standards of the Assessment Center Technique" (Arbeitskreis Assessment Center, 2004, see <http://www.arbeitskreis-ac.de>) apply to the specific procedures of assessment centers. First published in 1992, a second revised edition of these Standards, which are an example of row 1b in Table 1, has been in force since 2004.

The "Description of the Criteria for Test Evaluation" of the DGPs and the BDP (Berufsverband Deutscher Psychologen, 1986) is an example of the information approach (second row in Table 1). No uniform system of information on and evaluation of tests has yet become established, however.

The aim of the qualification approach was originally to achieve quality assurance through university training, the idea being that the competence of test users can be ensured by allowing only qualified psychologists to purchase psychological tests. This approach to quality assurance is out of step with day-to-day reality. In Germany alone, 30 to 50 million proficiency assessments are conducted in the fields of personnel selection, promotion, and placement each year (Wottawa & Oenning, 2002). In contrast, only 3,500 students are admitted to study all fields of psychology (e.g., clinical psychology, health psychology, social psychology, etc.) per year. As in other countries, psychological assessment is mainly conducted by nonpsychologists. According to an international study conducted by the ITC and the EFPA in 1996, 86.3% of all test users across 37 countries were not psychologists (Bartram, 2001, p. 175). The new DIN approach to quality assurance and improvement is not aimed exclusively at the occupational group of psychologists, but at a field of application, namely proficiency assessment (independent of the professional qualification of the individuals involved).

### 3. The German standardization approach: DIN 33430

In June 2002, the DIN 33430 was introduced in Germany and its “Requirements for Proficiency Assessment Procedures and their Implementation” were formulated.<sup>2</sup> As its name suggests, the Norm does not apply to all fields in which assessments are used, but only to proficiency assessments. The 15 pages of text and 7-page glossary have been published in German (DIN, 2002) and English (DIN, 2005); the English version is available for download under <http://www.bdp-verband.org/bdp/politik/clips/din33430en.pdf>. German-language descriptions of and commentaries on the Norm can be found in Heyse and Kersting (2004), Kersting and Heyse (2004), and Kersting and Püttner (2006).

The Norm creates the conditions necessary to unite the guideline and qualification approaches that have hitherto been pursued separately. The DIN approach differs from the initiatives for quality assurance and improvement described in the first section to the extent that its quality standards were formulated under the auspices of an established institution that is not a psychological association. The German Institute for Standardization (DIN, <http://www2.din.de/index.php?lang=en>) is a registered technological scientific association. Previous quality assurance initiatives were made by psychological associations or psychological stakeholders and were at best effective for members of those groups. Moreover, their effects were limited as the guidelines were not binding. The guidelines were often regarded as standards for the occupational group of psychologists, and nonpsychologists did not feel bound to psychological codes of conduct. The DIN, in contrast, sets standards for all individuals administering proficiency assessments, irrespective of their occupational group. The formal framework of the DIN ensures that the quality and qualification requirements formulated are disseminated efficiently. Moreover, DIN standards have inherent authoritative effects. Although the DIN is not a legal Norm, it reflects best practice. Unlike the guidelines of professional associations, it can be referred to in legal judgments. In Germany, Norms are used in court to determine the standards of a specific profession. Because the DIN standards can be presented as evidence in court (Deutsch, 1997, p. 1032; Kersting & Püttner, 2006), its effects can go beyond those of the previous internal guidelines, both in legal terms and with regard to the market economy. Although its application is voluntary, the mere existence of a Norm accepted as standard by important market participants imposes pressure on test users to abide by its principles.

A further novelty of the DIN approach is the possibility of comparing targets with actual outcomes. While guidelines merely formulate desired criteria, the DIN 33430 can serve as a basis for future certifications. Specifically, test users can acquire certification through external auditing in the context of the ISO 9000 series, thus demonstrating that requirements applicable to services and systems have been met. This can be achieved through cooperation among conformity assessment bodies and/or accreditation bodies.

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<sup>2</sup> In Austria, the OENORM D 4000 (Österreichisches Normungsinstitut, 2005) applies. This standard, which formulates requirements for processes and methods for the selection and development of human resources, refers explicitly to the DIN 33430 and, to a large extent, sets comparable standards.

### 3.1 Contents of the DIN 33430

The DIN 33430 covers the entire process of proficiency assessment, which is considered an integrative and holistic process. Hence, it does not merely cover procedures (e.g., tests), but also regulations and guidelines on the implementation of proficiency assessment procedures. It is not, however, appropriate for the isolated evaluation of an individual assessment instrument. The Norm refers to (1) the planning of job-related proficiency assessments, (2) the selection, integration, implementation, and evaluation of proficiency assessment procedures, (3) the interpretation of the results and formation of judgments, and (4) the qualifications required of the individuals taking an active part in the assessment process (DIN, 2005, p. 256f.). For each of these fields, standards are formulated on the manner in which information is acquired about the person assessed. The regulations and guidelines result in indirect advice being given on the development of proficiency assessment procedures. The DIN defines “procedures” as “investigation methods that have been tested in practice and scientifically substantiated, and administered in a standardized manner for proficiency assessment” (DIN, 2005, p. 259) and mentions suitability interviews, biographical questionnaires, job-related personality questionnaires, assessment centers, job trials, as well as particular tests.

The Norm outlines two different kinds of requirements: (1) quality criteria and standards for job-related proficiency assessment and (2) qualifications required of test administrators and support personnel. The first set of requirements corresponds to the objectives (a) assessment process and (b) assessment procedure in the classification proposed by Kersting & Püttner (2006) (see Table 1), the second set corresponds to the objective (c) of ensuring and improving competence.

#### 3.1.1 Quality criteria and standards for job-related proficiency assessment

Job-related proficiency assessment according to DIN 33430 requires a thorough job analysis of a workplace or training location, of job-related tasks or the circumstances of their execution. “Only those procedures that have a proven relevance to the requirements of interest are to be considered for job-related proficiency assessment” (DIN, 2005, p. 260). Objectivity, reliability and validity are quality criteria. If the proficiency assessment procedure is used with the intent to compare normative values, these values must correspond to the research question and the reference group for the candidates (DIN 2005, p. 262). The appropriateness of the norm values is to be evaluated at least every eight years. The reliability and validity of a procedure also have to be verified at least every eight years.

Thorough planning of proficiency assessments according to DIN 33430 requires that all aspects of the administration and evaluation of the procedures should be predetermined. For repeat-selection programs the rules are to be tested at least every three years. The requirements of the DIN 33430 are very detailed in places. For interviews and assessment centers for instance, evaluation categories with possible candidate responses or behavior patterns must be developed in advance. For written tests it must be clarified in advance how unattempted items will be handled (DIN, 2005, p. 263), etc. Instrument selection and combination and the evaluation method should be documented in such a way that the client can evaluate the entire procedure and the candidates’ proficiency.

The DIN stipulates that what is known as “procedure instructions” must be available for every procedure (not only for tests, but also for suitability interviews and assessment cen-



ters). A separate 4-page normative Appendix to the DIN specifies high requirements for the design of such procedure instructions. They must enable the administrator to critically assess and correctly implement the procedure. Procedure instructions include specifications permitting the objective administration, evaluation, and interpretation of the procedure. The idea underlying the DIN 33430 is that of a competent user (see section 3.1.3). However, this user can bring his or her competence to bear, only if he or she is provided with the information on a procedure (e.g., test) needed to make an evaluation. As such, the DIN 33430 makes high demands on the information content of procedure instructions. Information regarding the reliability values drawn from a single administration (e.g., internal consistency) is deemed to be inadequate, for example, if target aptitude characteristics are assumed to be stable over time and across situations. In this case, the re-test reliability should be determined or estimated by means of a suitable research design (DIN, 2005, p. 271). If statistical adjustment methods such as correction for attenuation or non-representative variability are used in determining the validity, both the original and the corrected values must be presented. All statistics concerning with the applied adjustment must also be listed. The original regression must always be presented with a statistically optimized estimation (e.g., multiple regression). Statistically optimized validity information is only permissible if these estimations could be replicated by another participant group within the scope of the proficiency assessment procedure and if the authorized assessment rules for the statistical optimization procedures are implemented (DIN, 2005, p. 272). Analyses on criterion validity according to the DIN 33430 (DIN, 2005, p. 273) must include reasoning regarding appropriateness of the criterion and its operationalization. The content and technical quality of the criterion measure must be presented in full. The appropriateness of the validity analysis design (e.g., retrograde, concurrent, or predictive) as well as the demographic characteristics (e.g., education level, age, work experience, etc.) of the examinees must be explained. Criterion validity must be discussed in reference to decision-theory points of view if a study in which proficiency assessment is the basis for selection and/or classification decision is used to demonstrate criterion validity (e.g., cut-off value recommendations, decision criteria information, and reflection of the prevailing conditions).

The authors of the present article have examined the extent to which the procedure instructions of established tests in Germany meet the documentation requirements of the DIN 33430. In most cases, the DIN 33430 criteria are not met in full, meaning that implementation of the DIN 33430 would result in an increase in quality.

The DIN 33430 provides further details on the procedure of proficiency assessments in the non-normative and merely informative “Guidelines for the Implementation of Job-Related Proficiency Assessment.” The procedures described for fields such as job analysis, information about the workplace, and pre-selection can be regarded as best practice. For instance, the DIN 33430 recommends that candidates should receive information about the workplace and the job they have applied for, as well as information about the planned course of the proficiency study, in advance.

### *3.1.2 Qualifications required of test administrators and support personnel*

The DIN 33430 does not merely cover proficiency assessment procedures, but also requires competent administrators and support personnel to select and conduct the procedure and to evaluate and interpret the results of the assessment. The DIN 33430 distinguishes between the “contractor”, on the one hand, and “assistants” on the other. A contractor is an

individual obligated to carry out a job-related proficiency appraisal in accordance to the Norm. The contractor is responsible for the planning and administration of the entire proficiency assessment, the evaluation and interpretation of results, as well as for reporting back to the client (DIN, 2005, p. 265). Assistants are individuals who administer or evaluate proficiency assessment procedures under the full responsibility, instruction, and technical supervision of the contractor. The amount of knowledge and supervised experience required by the DIN 33430 varies with the function of the individual concerned. Three successive stages of qualification can be distinguished.

(1) Contractors or assistants who participate in behavior observation and evaluation must have knowledge of the structural conditions of verbal information extraction procedures and relevant evaluation procedures; e.g. behavior observation and evaluation; operationalization of aptitude characteristics; definition and differentiation of observation units; rating/scaling methods and observation error/bias.

(2) Contractors or assistants who implement and evaluate aptitude interviews require additional knowledge of interview classification; handling of interview structures; interview techniques/formulation techniques; interview-related assessment criteria; areas of questioning and their legal permissibility.

(3) Beyond the aspects mentioned above, the contractor must meet further quality standards. For example, in-depth knowledge of job and requirement analysis, knowledge of testing procedures/instruments, and knowledge of proficiency assessments (e.g., knowledge of various proficiency assessment strategies) are expected.

#### **4. Qualification for proficiency assessment according to DIN 33430**

A frequent criticism of proficiency assessments is that they are conducted by poorly qualified individuals. The qualification approaches (column c in Table 1) outlined above aim to rectify this problem. The DIN 33430 specifies the competencies required of the contractor and assistants, meaning that relevant training programs and exams can be developed. The German Psychological Society (DGPs) and the Association of German Professional Psychologists (BDP) (Berufsverband deutscher Psychologen, 2004) have stipulated regulations for the training, examination, and licensing of users of proficiency assessments according to DIN 33430 ([http://www.bdp-verband.org/bdp/politik/2004/40920\\_ordnung.pdf](http://www.bdp-verband.org/bdp/politik/2004/40920_ordnung.pdf)). Contractors and assistants acquire the necessary knowledge in training programs covering the six modules listed in Table 2. The two one-day modules involve provision of information, but no exercises. The four two-day modules involve extensive exercises. The training for contractors (C) consists of modules 1 to 6 (see table 2). The training for Assistants Behavior Observation (ABO) comprises module 1 and 2 (see table 2). For Assistants Aptitude Interview (AAI) training includes modules 1, 2 and 3 (see table 2).

The knowledge covered by each of the modules is the basis for acquiring a license for proficiency assessment according to the DIN 33430. Licenses are issued after successful completion of the license exam. Three licenses can be acquired: (1) license for contractors (C), (2) license for Assistants Behavior Observation (ABO) and (3) license for Assistants Aptitude Interview (AAI). There are no specific academic requirements for admission to license exams and no previous training is required. Individuals aiming at license C must,

Table 2:  
Number and thematic contents of models for training according to DIN 33430

<i>Module</i>	<i>Content</i>	<i>Target group<sup>1</sup></i>	<i>Day(s)</i>
1	Introduction to the DIN Norm 33430	C, ABO, AAI	1
2	Behavior Observation and Evaluation	C, ABO, AAI	2
3	Aptitude Interview	C, AAI	2
4	Job Analysis	C	2
5	Statistical and method fundamentals	C	1
6	Evaluation of the Proficiency Assessment	C	2

<sup>1</sup>C = Contractor, ABO = Assistants Behavior Observation, AAI Assistants Aptitude Interview

however, provide evidence of supervised experience. The exam taken to acquire the license for the first time consists of several written tests corresponding to the training modules and contents listed in Table 2. More specifically, (1) license ABO: contents of modules 1 and 2 (two tests), (2) license AAI: contents of modules 1 to 3 (three tests) and (3) license C: contents of modules 1 to 6 (six tests). The content of the exams is documented in a book (Westhoff, Hellfritsch, Hornke, Kubinger, Lang, Moosbrugger, Püschel, & Reimann, 2005). Licenses are valid for five years, after which a new exam must be taken to renew the license. The examination board keeps records of license holders (see [http://www.dpa-bdp.de/spezpsych/register.php?table=liz\\_a&action=update&sort=Name](http://www.dpa-bdp.de/spezpsych/register.php?table=liz_a&action=update&sort=Name)). The examination fees must be paid by the candidate.

## 5. Initiatives related to the DIN 33430

There have been frequent criticisms that the DIN 33430 is not readily intelligible. This shortcoming is to be rectified by means of commentaries and examples (Hornke & Winterfeld, 2004; Westhoff et al., 2005). The practicability of the DIN 33430 has also been enhanced by checklists (see Hornke & Kersting, 2004, Kersting in press) allowing for an initial rough screening of the quality of proficiency assessments. As explained in section 4, the knowledge and experience of test users is verified through regulation of the training and examination of those licensed to implement proficiency assessments. Students can also prepare for license exams at university. On the one hand, universities have the opportunity to distinguish themselves by offering training programs to their students, external psychologists, and members of other occupational groups. On the other hand, they can contribute to quality improvement in the field of proficiency assessment. These measures require scientific supervision.

As yet, the DIN 33430 has not been expanded to an international Norm, neither has an organization-certifying system based on the DIN 33430 been established. The DIN 33430 would benefit from incorporating the information approach to serve as the basis for an authoritative system of reviews and information on tests (row 2 in Table 1). Reviews and information would be all the more convincing, and indeed intelligible to other occupational groups, if clear evaluation categories and conclusions were given.

## 6. Summary and discussion

Until 2002 quality assurance and improvement in Germany was based primarily on the guideline and qualification approaches, focusing on qualifications acquired at university. The DIN 33430 was the first system to integrate different approaches of quality assurance. One of the defining features of the DIN 33430 is that it does not apply to psychologists only, but to everyone working in the field of proficiency assessment. In Germany, the DIN 33430 can be presented as evidence in court and thus influence legal judgments. The approach is compatible with license exams and certifications in the context of ISO 9000f. Hence, the DIN 33430 can be used as a starting point for sound quality management in the field of proficiency assessment. Its high degree of standardization and clear regulation of competencies and responsibilities lend it high practicability and efficiency.

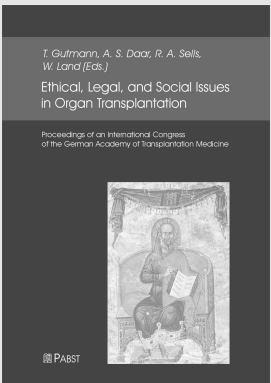
Hiring decisions based on the DIN 33430 standards are more valid and are compatible with legal regulations. Thus, the Norm can be expected to enhance public acceptance of proficiency assessment in general and the image of the hiring organization in particular. The DIN 33430 permits evaluations of both external and internal human resource services. Detailed clarifications and contracts with service providers can be cut short by referring to the DIN 33430. The documentation required by the DIN 33430 helps to establish a routine of processes. Documentation saves training time, explicates implicit knowledge, and protects against a loss of knowledge (e.g. through experts leaving an organization).

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