Assessment concessions for learners with impairments

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Assessing the abilities of learners with barriers to learning (BtL) is particularly difficult in the case of learners with severe physical difficulties or those who have little or no functional speech. We focus on the use of different types of assessment concessions as a basis for the development of more reliable assessments for those learners who are unable to participate in general assessment procedures. As the term assessment generally refers to a broad concept, including different types of evaluation procedures and strategies, we use the term assessment task in order to focus on a specific assessment tool as part of the process of providing access for learners with impairment to general assessment procedures. The requirements for different types of assessment concessions are contrasted, i.e. accommodations, adaptations, and modifications. A classification system for assessment concessions is critically discussed and strategies for further research are indicated.

Introduction

The current schooling reform taking place in the South African educational system promises to significantly change the nature of teaching and learning so that all learners will be provided with educational opportunities. In particular, White Paper 6: Building an Inclusive Education and Training System (National Department of Education, 2001) is in line with the Constitution of South Africa (1996) which guarantees fundamental rights to all its citizens and aims to ensure that all learners are afforded equal access to schooling. This includes learners who experience barriers to learning, as well as those who have prematurely exited the learning milieu, due to the inability of the education authorities to accommodate their learning needs.

One of the barriers experienced by learners with impairment, which in the past has led to drop out (or more insidiously to "push out"), has been that of assessment (National Department of Education, 2001). A shift from standardized tests, which have been created for, and standardized on, a population of typically developing individuals (who are able to construct satisfactory verbal, written or constructive motor responses) to more informal evaluation procedures used in the classroom, has been encouraged (Cohen & Spenceiner, 2003; Wagner, 1994). It is therefore imperative that learners with complex learning needs be afforded multiple pathways for both learning and assessment (Dalton et al., 1995).

Curriculum 2005 Assessment Guidelines for Inclusion (2002) clearly outline the commitment of the education system towards the importance of alternative or adaptive methods of assessment in an attempt to "minimize the impact of a range of intrinsic and extrinsic barriers upon the assessment performance of the learner" (National Department of Education, 2002:9). Various strategies are outlined to facilitate this process, for example, providing learners with more time to complete assessments, to have task instructions read to learners, to introduce a practical component to allow the learner to demonstrate competence "without having to use language", to develop a task to substitute the task being done by the rest of the class, etc. Most important, however, is the comment made in the document which refers to "the importance of achieving a balance between meeting individual needs of the learners while maintaining assessment validity, thus to address the barrier, not to compensate for it".

This article focuses on the need for educators to become more cognizant of the nature and types of assessment concessions that need to be considered in moving towards valid assessments of the abilities of children with severe disabilities, in particular those with little or no functional speech. Of particular importance is the differentiation of different types of concessions, i.e. accommodations and alternative assessments (including modifications and adaptations).

Educators have long been familiar with the input–output dimensions in relation to learning and the challenges related to obtaining a representative reflection of a learner's ability by means of assessment. Various research studies have been conducted investigating the impact of different evaluation strategies on typical and atypical school populations. For example, the results of the study conducted by Dalton et al. (1995) indicated that the format of the assessment is important. They found that the competency levels of the learners present very differently, depending on the mode of assessment. Comparison of pencil and paper assessments showed that learners both with and without learning difficulties fared better on the constructed diagram section than on the questionnaire and multiple-choice sections. These authors postulated that performance may be aided by visual representations, which may assist learners to recreate an appropriate schema for interpreting and responding to the problem. Bennett, Rock and Kaplan (1987) also found that the standardized and non-standardized versions of both the Scholastic Aptitude Test (SAT) and the Graduate Record Examinations (GRE) had equivalent reliability, with correlations found among sections for students with and without impairments. They also found that the factor structures of the standard and non-standard examinations for the SAT were comparable. Difficulty was reported to be similar for learners both with and without impairments, with the exception of the Braille version of the mathematical section of the SAT item.

Assessment revolves around an effort to describe the "intake" of the individual: thus what the individual is understanding and processing in order to assist the educator in facilitating further development (Von Tetzchner & Martenssen, 2000). Typically, the individuals' skill in using particular ways of responding to express themselves would be vitally important in determining the validity of the assessment response in reflecting the "intake" or understanding of the individuals.

The close link between the educator's understanding of the learners' ability and the educator's skill in facilitating the development of new knowledge based on previous knowledge is at the heart of effective teaching. This understanding enables the process of learning to be an active process of exchanges between educator and learner in order to facilitate the development of meaning. The process is, however, most challenging, as South Africa educators become more oriented towards outcomes-based teaching. A focus on outcomes reflects a traditional philosophical stance that implicates a direct relationship between performance (action) and ability. In traditional terms, this would refer to the stimulus–response association commonly used by behaviorists. Although the stimulus–organism–response (S–O–R) theorists acknowledged the role of the individual (organism) in this process, the description of the individual (organism) and processes related to how the individual receives and processes information remains a most difficult task. The more severe the expressive difficulties of the individual learner, therefore, the greater the challenge in minimizing a mismatch between ability and performance. Nowhere, however, is this process more challenging than working with learners who have little or no functional speech and who use augmentative and alternative communication systems (AAC). These learners typically show significant gaps between receptive and expressive language, which can be attributed largely to the expressive difficulties of the individual. AAC is therefore used in an effort to supplement the existing communication abilities of the individual or to replace natural speech and/or writing by using a variety of different communication strategies. These strategies can vary from using aided symbols, for example, graphic representation systems and/or unaided symbols, e.g. manual signs and gestures.
(Lloyd, Fuller & Arvidson, 1997:524). Smith (1996) elaborates on the difficulties experienced by AAC users by pointing out that, despite having the capability of creating fairly complex utterances, learners who use aided graphic representational systems (GRSs) often tend to produce restricted output patterns due to limitations imposed by the nature of the communication system.

Von Tetzchner et al. (1996) also described issues surrounding the input–output asymmetries in language development of learners who use AAC. Briefly, for learners who can hear and understand spoken language, but who rely on an AAC system for expressive communication, the primary mode of reception is through the aural modalities, whilst the primary mode of expression is not speech, but is either a graphic or manual representational system. This input–output mismatch (where both educator and learner use different modes of communication for production and comprehension) could have a profound impact on the learning of the learner who uses AAC. This asymmetry necessitates that the educator facilitates the process of finding ways in which learners can express themselves through aided or unaided means in order to decrease the potential gap between reception and expression. These issues highlight the necessity of educators to become more familiar with accommodations as part of assessment practice.

**Issues in assessment concessions**

Educators frequently modify instructional and assessment materials to make them more accessible to the student with impairments. However, data on the acceptability of making these concessions are limited (Arvidson, 2000). Concessions permitted during daily functioning in the classroom are often not allowed during assessment procedures. When reasonable accommodations are however permitted during the daily functioning in the classroom then they should be permitted in the assessment situation. An argument in support of this is that there should be methodological equivalence between teaching and assessment situations if evaluations are to be fair and a realistic reflection of the learner’s performance. The issue of methodological equivalence thus requires that the educator reflects on the nature of the strategies used during teaching and how these impact on assessment. It is therefore recommended that if concessions are to be executed reliably and successfully then educators should be familiar with the abilities and impairments of their learners who are receiving the necessary concessions required for meaningful participation. They should also be aware of which instructional concession strategies prevail in the day-to-day settings for each learner, as well as which concessions have previously been successfully utilized. This principle is emphasized in the Curriculum 2005 Assessment Guidelines for Inclusion (National Department of Education, 2002:7), “Support should therefore be seen as an integral part of the teaching and learning process in all schools. As assessment can never be seen as separate from this process, it is essential that support measures also focus on this”.

Until May 2002, guidelines in South Africa regarding acceptable testing accommodations were sketchy, weak and often further disadvantaged learners with impairments. Access to assessment concessions depended on the permission granted by education officials from the nine separate provincial and national educational departments. In some cases the criteria were so rigorous that even the most impaired of learners were not given access to these concessions whilst in other cases access to assessment concessions was more permissible in nature. A case in point is a secondary school learner (with severe athetoid cerebral palsy who utilizes a head stick to type on a computer) who was granted only 15 minutes extra per hour to complete summative assessments at the end of each school term. When an inquiry was made as to why only 15 additional minutes had been granted, the educator responded that “according to official guidelines that is all the extra time that he is permitted.” The misperception in the above scenario is the acceptance of an objective time-norm for all tests, regardless of the range of learners’ skills being evaluated. For example, the absence of a critical factor in the evaluation of a learner’s knowledge of history than it is in accountancy where speed of calculations could be important. Evaluating the impact of the changed time allocated for an assessment task on the actual cognitive processes targeted is pivotal. Similarly, extended time for a mathematics test could change the nature of the skill tested if part of the purpose of the test related to problem solving under time pressure. Time in itself is, however, often not a critical factor in the assessment of skills.

In the Curriculum 2005 Assessment Guidelines for Inclusion, time is specifically mentioned as one of the methods that can be used to increase learners’ access to assessments. As discussed above, however, the type of concession needs to be viewed against the backdrop of the purpose of the assessment to ensure assessment validity. The current situation is that assessment concessions given to South African learners with impairments still have unknown validity.

Studies that have been done on assessment concessions were mainly performed by using standardized tests in an attempt to study the impact of concessions on the validity of the test itself. Apart from the few research studies on concessions, test publishers themselves have conducted most of the research executed in the field, which in itself raises ethical issues for the practitioner (Thurlow, Ysseldyke & Silverstein, 1995). These issues highlight the difficulty and lack of clarity and understanding that prevail amongst educators and other professionals in relation to the purpose and scope of assessment concessions. Educators should be familiar with the assessment task content and format as well as understand what it means to invalidate the outcomes of an assessment. Although it could be argued that standardized tests are not commonly used by educators in South Africa anymore, the principle of the validity of assessment accommodations remains important as also pointed out in the Curriculum 2005 Assessment Guidelines for Inclusion.

With the publication of the Draft Guidelines for the Implementation of Inclusive Education (National Department of Education, 2002) it was envisioned that more discussion and reflection on suitable assessment concessions would follow. According to Phillips (1994), assessment alterations aim to compensate for the distortions in the learner’s assessment outcomes, which may be linked to the nature of the impairment, and not to the intrinsic knowledge and ability of the learner. The recommendations in this draft document reflect the stance that formal written assessments should be administered in such a manner as to ensure that the results of a learner with an impairment focus on the learner’s level of achievement, and not on the learners’ impaired sensory, motor or communicative skills, other than when it is those skills which the assessment intends to measure. If researchers and educators alike are committed to the view that research should guide practice, then it is imperative that additional research in the different aspects of assessment concessions is conducted. Furthermore, this information should be disseminated to the classroom educators so that learners with impairments will be able to participate meaningfully in classroom assessments.

As was the case in the USA (Phillips, 1994), it is safe to assume that requests from learners with impairments who require reasonable concessions such as a separate testing room, substantially more time, Sign Language interpreters, or computers, will be on the increase as learners become more aware of their educational rights and the impact of these concessions on their own performance. Ysseldyke and Thurlow (1997) described three types of learners with impairments. These include learners who need a different assessment because their curriculum is different from the one being tested, learners who can do wide-scale assessment tasks without concessions, and learners who can take wide-scale tests with concessions. They estimated that 15% of the learners with impairments require concessions and the remaining 85% could be included in wide-scale testing without concessions. The use of concessions therefore requires a systematic approach to the nature of concessions that can be allowed as well as those that may be denied within specific educational and vocational contexts.

**The different types of assessment concessions**

Before proceeding with a more in-depth discussion on assessment...
concessions, it is important to discuss the differentiation between assessment adaptations, modifications, and accommodations. An adaptation is defined as a change made to the content of the test in order to adapt it for a different purpose. This implies that the basic assessment tool is altered to allow it to be used more flexibly in a different context. In this way assessments can be adapted, for example, to a specific cultural context by substituting some of the inappropriate terms with more locally relevant terms. For example, the word "diaper" can be substituted by the word "nappy" or "braaivleis" for "barbeque". Similarly, assessments can be modified by simplifying instructions or changing the vocabulary in the test to make them more accessible to learners. For example, "indicate in the appropriate space below" can be substituted with "make a cross next to the correct sentence". Essentially, therefore, the changes are of such a nature that they make the assessment tool more flexible for use, but they do not imply differences in relation to the content of the test.

In contrast to an adaptation, a modification is considered as a change in the content of the assessment, i.e. where certain sections are deleted to allow for different content items to be included in the assessment. In the outcomes-based assessment context this would imply that the educator could give an assessment on the same topic to learners on different levels by changing the nature of the questions. The outcomes of these assessments would thus be different, as the assessment criteria would be different. Typically the level of equivalence between the two tools used in the assessment process. Clearly, what constitutes a modification or adaptation is largely dependent on the purpose of the assessment and the specific skills targeted by the assessment.

Assessment accommodations can be defined as changes in ways that tasks are administered and presented or changes to how students respond to assessment tasks (Elliott, Kratochwill, & Schutte, 1998). Thurlow et al. (1995) discuss two factors that impact on assessment accommodations. These are the setting of the assessment (which refers to the place of assessment and whether it is conducted in a group or individually) and timing of the assessment (which includes extended time, additional breaks during assessment and extended assessments over days or sessions). According to Phillips (1994), it was general practice in the past to allow assessment concessions for learners with severe physical impairments in the US. These would include learners who were unable to write (due to a temporary or permanent impairment) and those with blindness. Generally these impairments were readily observable and easy to identify and there was therefore no need to verify the existence of the impairment. The authenticity of the impairment was obvious even to the untrained person. The appropriateness of the accommodations was not questioned as most of the accommodations implied a mere elimination of a physical barrier for example: the introduction of a computer for writing; a scribe; a voice activated software program; or a Braille version of the test as well as a keyboard to provide learners with blindness access to a computer.

From the discussion above, the potential difficulties in differentiating between adaptations, modifications, and accommodations are evident. A good example of the relatedness of these terms comes to the fore in issues relating to test translations. Test translations traditionally can be regarded as an accommodation, provided that the content of the test is not changed. However, direct translations of tests are often not possible, in which case modifications (e.g. different items or content) or adaptations (e.g. different descriptive terms) need to be made.

In conclusion, in an attempt to highlight the different types of assessment concessions and the respective terminology, the difference between modifications, adaptations, and accommodations is summarized in Table 1. This table explores the nature of the changes in accommodations as logistic (amendments), thus more specific to the assessment procedures/responses, whilst the modifications (content changes) and adaptations (changes to content and structure) are described as alterations substantially. There is thus little equivalence between these three types of assessment concessions would also differ. Modifications and adaptations would typically imply lower levels of equivalence in relation to the original assessment tool as various changes were made to the content and structure which might impact the level of difficulty and complexity, as well as the nature of the outcomes. The more extensive the changes or modifications, the lower the equivalence in relation to the original assessment tool.

**Assessment task equivalence**

As educators and parents become more aware of the barriers to assessing learners with a broad range of impairments (i.e. learners with intellectual impairments, dyslexia and attention deficit hyperactive disorders) a more systematic reflection on the issue of assessment concessions becomes important. This is particularly relevant as many of these impairments are not necessarily visible or easily identifiable and often need to be verified. In addition, some of the concessions necessary, e.g. for the learner with intellectual impairments, might alter the nature of the test and would thus significantly affect the meaning and interpretation of the assessment outcomes. This may occur as the impairment is often intertwined with the skills that the educator wants to measure; therefore allowing the concessions may change the task significantly. This leaves the assessor with the dilemma of whether substituting a different skill for the one measured by the original assessment is an option.

The debate therefore focuses on the unrelatedness of the type of concession and the skills used to the skill outcomes measured. For example, in the assessment of reading, many activities require an oral response. For learners who are not able to produce recognizable words or sound approximations this task becomes unrealistic to perform. If the reading task is altered by requiring, for example, that the individual indicates which out of four printed words is the target word, the original identification task is altered to that of a closed-set recognition task (Smith & Blischak, 1997). In terms of memory demands, recognition memory is less rigorous in nature than recall memory. For recognition memory the learner is only required to recognize a stimulus when it is presented, whilst on the other hand, recall memory involves a two-stage process of retrieval and reconstruction of previously learned information (Light & Lindsay, 1991).

The validity of the assessment concession thus focuses on whether a particular concession is appropriate by considering its effect on the validity of the inference that will be made from the measurement. Three aspects which need to be considered in the concessions of assessments include: the purpose of the assessment (i.e. whether it is base-line, formative, diagnostic, evaluative, or summative), the skills to be measured (i.e. learners with reading difficulties should not have to solve mathematical problems which are embedded in long paragraphs of complex vocabulary), and the inferences that the test user wants to make from the measurement outcomes. Therefore, the bottom line is whether the scores with and without concessions are comparable. Concessions must not subvert the purpose of the test. Wagner (1994) claims that instead of compromising the outcomes of the assessment measurements, assessments should incorporate simple and flexible response requirements that minimize discrimination within the confounds of the assessments.

**The classification of test accommodations**

The South African Qualification Authority requires that the learners who receive accommodations are in no way advantaged or disadvantaged by the alterations to the testing procedures (National Department of Education, 2002). Degrees, diplomas and certificates cannot have different meanings for different people, which implies that there needs to be a level of standardization unless non-standard procedures are acknowledged which could impact on the nature of the certification. The type of concessions made to assessments varies, depending on the number and nature of changes needed to the assessment conditions. It is however important to reflect more systematically on issues relating to the nature of concessions in order to enhance understanding of the kind of changes they may induce on the assessment task. Wasson, Tynan and Gardiner (in Arvidson, 2000) organized concessions as...
Equivalence particularly important to test format. Accommodations changed. Table 1 describes classification system, based on Arvidson (2000).

- **Pre-task considerations** refer to emotional states (e.g. attitude and motivation), physical states (e.g. level of fatigue, status of health), and factors in the environment (e.g. setting, acoustics, lighting, temperature, familiarity with examiner) which can influence performance.

- **Presentation** refers to the presentation of directions as well as the presentation of test materials. Increasing the volume can modify instructions, or they can be completely changed to become motoric directions. Changing the size or the color can change visual presentations, or presentations can be changed to become tactile presentations. These changes would therefore include printing the test in Braille, increasing the size of the font, and providing oral input in addition to written input. Practical implementation of such changes could imply that a person with blindness or a person with learning difficulties could have the test scanned into a computer and have the contents read via a program that uses a text-to-speech synthesizer. Changes would therefore be made to only the presentation of the test, whilst the content would remain the same.

- **Cognitive task** refers to the difficulty level of the task. As stated earlier, the cognitive task has to remain the same in the case of test accommodations. When test modifications or alternative testing are considered, the cognitive task and how it is modified becomes most relevant. This is however not discussed in detail here as the article focuses on test accommodations.

- **The response mode** refers to those accommodations where changes are made to the way in which the learner (who, for example, is unable to speak or write) responds to the questions posed. These would include changing from a written mode of response to an oral mode in the case of an individual who is either dyslexic or alexic; changing from a spoken response to a written response for a person who is unable to speak; using visual scanning and a switch to indicate choices, or using eye-gaze rather than ticking correct responses by hand for a person who is both physically disabled and unable to speak. Here a child could be asked to indicate via eye-gaze on an E-Tran (Eye-gaze transfer board) the correct word for a close procedure in a reading test. A child could also utilize a switch on a rotary scan to provide an answer to a mathematical problem posed. A child using a speech-generating device may participate in an oral presentation that was prepared beforehand using an iconic encoding technique, e.g. Minspeak™. The medium of expression can, however, have an impact on the cognitive functioning and meaning of responses. This is particularly relevant when learners are expected to learn to express themselves through writing as part of a broader aim of scientific expression, whilst the accommodations they use focus on oral expressive means of communication.

Follows: pre-task considerations, presentation, cognitive task, response mode, and additional factors. One or more concessions in these areas may be necessary to gather information. Table 2 describes the classification (Arvidson, 2000) in more detail.

Wasson, Arvidson and Lloyd (1997) expanded on the assessment concessions accommodations that can be made to obtain information from individuals with little or no functional speech. They pointed out that in addition to time allocated and response modes, instructions and feedback, test stimuli and the position of the test stimuli could be changed. The position of the test stimuli is particularly important to accommodate the negative impact of visual and physical impairment.

Thurlow et al. (1995) organized assessment concessions into four categories. These include presentation format, response format, setting of test and timing of test. In the presentation format he includes Braille editions of the assessment, magnifying equipment, oral reading of the assessment, manual signing of directions, and interpretation of directions. Setting of the assessment includes alone or in a carrel, within small groups, at home or within special educational classes. He refers to response format as concessions with regard to using templates for responding, marking responses in the assessment booklet, pointing to the correct response, responding orally, responding via sign language, using technology for written responses, and receiving interpretation and assistance with responses. Finally in the concession with regard to timing of the test he refers to extended time, more breaks during testing and extending the testing session over several days. Elliot et al. (1998) developed perhaps the most comprehensive classification system (assessment concession checklist) which organized 74 concessions into 8 domains including motivation, assistance prior to administration of the test, scheduling, setting, assessment directions, assistance during assessment, use of equipment or adaptive technology and changes in test format.

In considering the different categories of concessions, it is important to emphasize that more than one concession is often required. An example of multiple concessions would be for a learner with atethoid cerebral palsy who utilizes a head stick as a prosthesis to access his keyboard (response mode) to be given sufficient time to complete the test (time concession) in a separate room (setting of test) so as not to disturb the other learners’ levels of concentration. In addition, he may require time out of the assessment room to have treatment to his neck to eliminate the effects of pain and fatigue. The entire assessment could be given to him section by section to be completed over a period of time (scheduling concession).

Research on accommodations for people with little or no functional speech

Very little research has been conducted to investigate if changes in response modes impact on learner performance. It is clear that if the modification on the response mode taps into the same cognitive demands as the non-modified response modes then the outcome would not interfere with the construct of the assessment. However, if the modification requires that the learner process information in a different manner then correlation between the two assessment modes was not regarded to be high. A study by Arvidson (2000) compared 48 typical learners’ performance on a task using two response modes, namely, scanning and direct selection. This study provides empirical evidence which suggests that fourth grade learners without impairments were neither advantaged nor disadvantaged by utilizing scanning over direct selection on a standardized multiple choice assessment task. This study further concluded that the modifications in the mode of response did not interfere with the assessment task construct.

Wagner (1994) also examined possible adaptations for the administration of a formal test, the Peabody Picture Vocabulary Test – Revised (PPVT–R) (Dunn & Dunn, 1981) on individuals who are neither able to articulate oral nor motor responses. The response mode was
modified from requiring the participants to point to pictures numbered 1 – 4, to merely indicating “yes or no”, or binary communication. Indication of “yes, no” responses was either two separate idioms or one signal to represent “yes” and the absence of the signal to represent “no”, as this was reported to have the potential for accurate communication. The Pearson product-moment correlation coefficient between the standardized and adapted administration of the PPVT – R was 0.94. This study found that in using the binary administration protocol educators and therapists could have great certainty, although not conviction, with the results’ validity.

A third study conducted by Casey (2004) investigated the comparison of a non-spoken response mode (eye-gaze) and a spoken response mode in an assessment of phonological awareness. Forty-eight typically developing Grade 1 children from four classes were assigned to two groups. They were individually required to respond to 90 phonological awareness questions using eye-gaze to indicate their choice (Yes/No) on a transfer board (E-tran). No significant differences were found which confirmed the equivalence of the two modes of response. The use of eye-gaze as a response mode for this group therefore proved to be valid for this particular test context.

Conclusion

From the above, it is clear that assessment concessions for learners with impairments is a complex issue that requires extensive research and reflection to guide practice. The main challenge relates to the extent to which the concessions made measure the same constructs or skills relative to the original assessment task. The validity of the modified assessment task would therefore impact on the level of inferences that can be drawn from the assessment outcomes. Clearly more specific research on concessions needs to be conducted to provide guidance to educators in the classroom.

Specific issues that need to be addressed in future research include:

• The development of criteria to facilitate decision-making on the manner in which assessments and procedures need to be modified. If questions are formulated in a certain way, e.g. Yes/No responses, then eye-gaze as a response mode, amongst others, can be explored.

• Investigations on the impact of specific assessment concessions on outcomes measures of students, e.g. by investigating changes to procedures, material, and response mode. Taking the same assessment task and systematically changing the concessions to reflect a different part of the assessment administration could do this.

• Investigations into the specific amendments (accommodations) that have research support in relation to reliability and validity, e.g. the impact of time extensions on performance in different assessment tasks.

• Specific guidelines of types and severity of impairments that qualify for assessment with concessions and those that do not.

• In-depth investigation of strategies to address how to report on outcomes obtained using assessment concessions.

• Investigations to determine the nature and extent of the impact of assessment concessions that are congruent/non-congruent with teaching methodologies in relation to the outcomes of the assessment outcomes.

References


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