Telepractice and the KABC–II NU

The telepractice information in this document is intended to support professionals in making informed, well-reasoned decisions around remote assessment. This information is not intended to be comprehensive regarding all considerations for assessment via telepractice. It should not be interpreted as a requirement or recommendation to conduct assessment via telepractice.

Professionals should remain mindful to:

- Follow professional best practice recommendations and respective ethical codes
- Follow telepractice regulations and legal requirements from federal, state and local authorities, licensing boards, professional liability insurance providers, and payors
- Develop competence with assessment via telepractice through activities such as practicing, studying, consulting with other professionals, and engaging in professional development.

Professionals should use their clinical judgment to determine if assessment via telepractice is appropriate for a particular examinee, referral question, and situation. There are circumstances where assessment via telepractice is not feasible and/or is contraindicated. Documentation of all considerations, procedures, and conclusions remains a professional responsibility.

Several professional organizations and experts have provided guidance on telepractice assessment (American Psychological Association Services [APA Services], 2020; Association of State and Provincial Psychology Boards [ASPPB], 2013; Grosch et al., 2011; Inter Organizational Practice Committee [IOPC], 2020; Stolwyk et al., 2020) to assist professionals in decision making and ethical and legal practice issues.

The second edition of the Kaufman Assessment Battery for Children, Normative Update (KABC–II NU; Kaufman & Kaufman, 2018) can be administered in a telepractice context by using digital tools from Q-global®, Pearson's secure online testing and scoring platform. Specifically, Q-global digital assets (e.g., stimulus books) can be shown to the examinee in another location via the screen-sharing features of teleconferencing software. Details regarding Q-global and how it is used are provided on the Q-global product page.

A spectrum of options is available for administering this assessment via telepractice; however, it is important to consider the fact that the normative data were collected via in-person assessment. Telepractice is a deviation from the standardized administration, and the methods and approaches

to administering it via telepractice should be supported by research and practice guidelines when appropriate.

Professionals engaging in telepractice assessment may train facilitators to work with them on a regular basis in order to provide greater coverage to underserved populations (e.g., only two professionals within a 500-mile radius, shortage of school psychologists within a school district). If such a facilitator is well trained and in a professional role (i.e., a professional facilitator), they can present picture cards as well as adjust audiovisual equipment. This approach yields all of the published KABC–II NU composite scores that are available in in-person assessment mode. It is important to note that the published test structure for examinees age 3 years differs from that for examinees ages 4–18 years. For this reason, regardless of administration mode (i.e., in-person or remote), the composite scores for examinees age 3 are always fewer in number than those for examinees ages 4–18.

In times when physical distancing is necessary (such as the COVID-19 pandemic), using a professional facilitator may not be safe or feasible. If testing must occur under these conditions, it is possible that the examinee may participate without the help of an on-site facilitator. If the examiner determines that no facilitator is required, the examinee can assist with technological and administrative tasks during testing and should be oriented to these responsibilities before, and again at the beginning of, the session. An initial virtual meeting should occur in advance of the testing session to address numerous issues specific to testing via telepractice. This initial virtual meeting is described in the administrative and technological tasks portion of the Examiner Considerations section and referred to in various sections of this document. The examiner should consider best practice guidelines, the referral question, and the examinee's condition, as well as telepractice equivalence study conditions to determine if this is possible and appropriate. Independent examinee participation may not be possible or appropriate, for example, for examinees in certain age ranges (e.g., younger children), with low cognitive ability, or with low levels of technological literacy and experience.

If the examiner determines that the examinee cannot participate independently, and testing must occur under physical distancing constraints, the only facilitator available may be someone in the examinee's home (e.g., a parent, guardian, or caregiver). If the on-site facilitator is not in a professional role (i.e., nonprofessional facilitator), they can assist with technological and administrative tasks during testing and should be oriented to these responsibilities in the initial virtual meeting and again at the beginning of the session.

Professional and nonprofessional facilitators typically do not remain in the room with the examinee throughout the testing session. The examiner should plan to minimize (as much as possible) the need for the facilitator to remain in the room. In rare cases when the nonprofessional facilitator must remain in the room, they should do so passively and unobtrusively; they should merely monitor and address the examinee's practical needs, as well as any technological or administrative issues as necessary. The nonprofessional facilitator's role should be defined clearly by the examiner. The nonprofessional facilitator should only perform those functions the examiner approves and deems necessary. In any case, if a facilitator is necessary, it is preferred that the facilitator remain accessible.

A professional facilitator must be used to administer the following subtests for telepractice: Triangles, Rover, Story Completion, and Hand Movements. Omitting these subtests impacts the approach to deriving composite scores.

Under standardized in-person testing for a 3-year-old, only the global scale index—either Fluid-Crystallized Index (FCI) or Mental Processing Index (MPI)—and the Nonverbal Index (NVI) are derived. For in-person testing for 4- to 18-year-olds, depending upon the model chosen, either the FCI or the MPI, the NVI, and 4–5 scale indexes are derived (Simultaneous, Sequential, Learning, Knowledge, and Planning after age 7).

If a professional facilitator is not available and assuming all necessary subtests apart from Triangles, Rover, Story Completion, and Hand Movements are administered, substitution or proration may be used to obtain composite scores. Specific substitution rules are outlined in the KABC–II Q-global Manual on page 37 and proration guidelines appear on the subsequent page. The manual provides additional guidance on interpretive considerations. One substitution of a supplementary subtest for a core subtest is allowed. Proration is allowed for the global scale indexes, NVI, and (for ages 4–6 only) the Simultaneous Index. Table 1 summarizes the available approaches to obtaining composite scores without Triangles, Rover, Story Completion, and Hand Movements.

Table 1. Methods for Obtaining KABC–II NU Composite Scores Without Triangles, Rover, Story Completion, and Hand Movements

	Age(s)					
Composite score	**3**	**4**	**5**	**6**	**7–12**	**13–18**
Fluid-Crystallized Index (FCI)	prorate	prorate	substitute FR for TR	prorate	n/a	prorate
Mental Processing Index (MPI)	prorate	prorate	substitute FR for TR	prorate	n/a	prorate
Nonverbal Index (NVI)	prorate	prorate	prorate	prorate	prorate	prorate
Sequential/Gsm		✓	✓	✓	✓	✓
Simultaneous/Gv		prorate	substitute FR for TR	prorate	n/a	n/a
Planning/Gf					n/a	n/a
Learning/Glr		✓	✓	✓	✓	✓
Knowledge/Gc		✓	✓	✓	✓	✓

Note. Abbreviations are: FR = Face Recognition, TR = Triangles, n/a = not applicable because score cannot be obtained without the four subtests,

Conducting Telepractice Assessment

Conducting a valid assessment in a telepractice service delivery model requires an understanding of the interplay of a number of complex issues. In addition to the general information on Pearson's telepractice page, examiners should address five factors (Eichstadt et al., 2013) when planning to administer and score assessments via telepractice:

1. Telepractice Environment & Equipment
2. Assessment Materials & Procedures
3. Examinee Considerations
4. Examiner Considerations
5. Other Considerations

1. Telepractice Environment & Equipment

Computers and Connectivity

Two computers with audio and video capability and stable internet connectivity—one for the examiner and one for the examinee—are required. A web camera, microphone, and speakers or headphones are required for both the examiner and the examinee. A second computer screen or split-screen format on a large computer monitor for the examiner is helpful to allow a view of a Pearson-delivered digital manual or administration directions, but the examiner can also use the paper format manual or administration directions. The second computer screen or large screen also tends to make sharing test content more straightforward for the examiner.

Image/Screen Size

When items with visual stimuli are presented, the digital image of the visual stimuli on the examinee's screen should be at least 9.7" measured diagonally, similar to an iPad® or iPad Air®. Because some teleconferencing software shrinks the size of images, the image size should be verified in the initial virtual meeting. It is recommended that computer screens used for teleconference assessment be at least 15" measured diagonally. Smaller screens, such as those of iPad minis, small tablet PCs, and smartphones, are not allowed for examinee-facing content, as these have not been examined empirically and may affect stimulus presentation, examinee response, and validity of the test results. Similarly, presenting stimuli on extremely large screens has not been examined, so the same precaution applies. At the beginning of the testing session, the examiner may ask for a peripheral camera or device (as described later in this section) to be aimed at the examinee's screen to ensure that the examinee's screen is displaying images in the correct aspect ratio and not stretching or obscuring the stimuli image.

Audio Considerations

High-quality audio capabilities are required during the administration. An over the head, two-ear, stereo headset with attached boom microphone is recommended for both the examiner and examinee. Headphones with a microphone may be used if a headset is not available.

The examiner should test the audio for both the examiner and examinee in the initial virtual meeting and at the beginning of the testing session to ensure a high-quality audio environment is present. This is especially critical for Number Recall, Atlantis, and Riddles. Testing the audio should include an informal conversation before the administration where the examiner is listening for any clicks, pops, or breaks in the audio signal that distort or interrupt the voice of the examinee. The examiner should also ask if there are any interruptions or distortions in the audio signal on the examinee's end. Any connectivity lapses, distractions, or intrusions that occurred during testing should be reported.

Audiovisual Distractions

As with any testing session, the examiner should do everything possible to make sure the examinee's environment is free from audio and visual distractions. If the examiner is unfamiliar with the examinee's planned physical location, a visual tour of the intended testing room should be given during the initial virtual meeting. The examiner can then provide a list of issues to address to transform the environment into one suitable for testing. For example, remove distracting items, silence all electronics, and close doors. The examiner should confirm that these issues have been addressed at the time of testing. If possible, the examinee should be positioned facing away from the door to ensure the examiner can verify through the examinee's camera that the door remains shut and can monitor any interruptions. The examiner should confirm that all other applications on the computer, laptop, or peripheral device are closed, the keyboard is moved aside or covered after the session is connected, and alerts and notifications are silenced on the peripheral device. Radios, televisions, other cellular phones, fax machines, smart speakers, printers, and equipment that emit noise must be silenced and/or removed from the room.

Lighting

Good overhead and facial lighting should be established for the examiner and examinee. Blinds or shades should be closed to reduce sun glare on faces and the computer screens.

Teleconferencing Software

Teleconferencing software is required. Screen-sharing capability is required if anything other than items with verbal stimuli and responses are administered.

Video

High-quality video (HD preferred) is required during the administration. Make sure the full faces of the examiner and the examinee are seen using each respective web camera. The teleconferencing software should allow all relevant visual stimuli to be fully visible to the examinee when providing instruction or completing items; the view of the examiner should not impede the examinee's view of visual test stimuli.

Peripheral Camera or Device

A standalone peripheral camera can be used to provide a view of the session from another angle or a live view of the examinee's progress. Alternately, a separate device (e.g., a smartphone with a camera or another peripheral device) can be connected to the teleconference and set in a stable position to show the examinee's pointing or written responses. The device's audio should be silenced and microphone should be muted to prevent feedback. The examiner should guide positioning of the peripheral camera/device before administering Triangles, Rover, and Story Completion (if the subtests are going to be administered), and any subtests that elicit pointing or gestured responses (refer to Table 2) so that the examiner can see that the examinee's real-time responses are captured.

In a typical telepractice session, it is more feasible to make a document or moveable camera available in the examinee's location. However, while physical distancing is necessary, the only camera available may be a stationary camera integrated into the examinee's laptop or computer screen. It is unrealistic to expect examinees to have document cameras within their homes. It may be necessary for examiners to think creatively about how to use a smartphone or other device in the examinee's location to gain a view of the examinee when pointing at a screen. Before attempting this with an examinee, the examiner should work to become fluid and competent at directing examinees in these methods, which can require extensive practice with varied individuals and types of devices. In addition, this requires planning and practice in the initial virtual meeting to prevent technical difficulties, and so the examinee feels confident doing this when it is time.

Online instructional videos (e.g., here) demonstrate how a smartphone may be used with common household objects (e.g., a tower or stack of books, paper weight, ruler, and rubber band or tape) to create an improvised document camera for use during tasks involving pointing. Similarly, for multiple choice tasks, some examinees tend to point to responses rather than say the number or letter corresponding to their response, and other tasks (e.g., Verbal Knowledge and Face Recognition subtests; see Table 2) require the examinee to point at the stimuli. In this situation, other everyday household objects (e.g., books) could be used to form an improvised stand upon which to position the device to provide a second-angle view of the examinee pointing at the screen. A simple mirror behind the examinee has been used successfully to observe pointing responses. Typically, devices provide the best view of the examinee's screen and pointing responses when positioned in landscape orientation. While using additional cameras or devices/objects may not be an optimal solution for telepractice, it can be functional if executed well.

Screen-Sharing Digital Components

Digital components are shared within the teleconferencing software as specified in Table 2. There are two ways to view digital components in the Q-global Resource Library: through the pdf viewer in the browser window or full screen in presentation mode. Always use full screen (i.e., presentation) mode for digital components viewed by the examinee. This provides the cleanest presentation of test content without on-screen distractions (e.g., extra toolbars). Refer to *Using Your Digital Assets on Q-global* in the Q-global Resource Library for complete directions on how to enter presentation mode.

2. Assessment Materials & Procedures

Test Item Security

The examiner is responsible for ensuring test item security is maintained, as outlined in the Terms and Conditions for test use. The examiner should address test security requirements with the examinee (and facilitator, if applicable) during the informed consent process. The examiner should make it clear to the examinee/caregivers that the video should not be captured, photos should not be taken, and stimuli should not be copied or recorded, as this is a copyright violation. The examinee must agree that they will not record (audio or visual) or take photos or screenshots of any portion of the test materials or testing session, and not permit anyone to observe the testing session or be in the testing room (except for a facilitator, when necessary). Any test-related materials used in the testing session must be returned to the examiner.

Disruptions

The examiner should record any and all atypical events that occur during the testing session. This may include delayed audio or video, disruptions to connectivity, the examinee being distracted by external stimuli, and any other anomalies. These can be noted on the record form and should be considered during interpretation and described in the written report. Refer to Other Considerations for guidance on report writing.

Triangles

Triangles may only be administered when a professional facilitator is present. The plastic shapes and foam triangles should be provided to the professional facilitator before the testing session. *It is not recommended to allow a parent/guardian/caretaker to present the shapes and triangles, nor to attempt to have the examinee scramble or present their own shapes and triangles.*

Rover

Rover may only be administered when a professional facilitator is present. The dog and the Rover Stimulus Booklet should be provided to the professional facilitator before the testing session. *It is not recommended to allow a parent/guardian/caretaker to demonstrate how to move the dog for Rover, nor to attempt to have the examinee place the dog on the dot.*

Story Completion

Story Completion may only be administered when a professional facilitator is present. The Story Completion Stimulus Booklet and Cards should be provided to the professional facilitator before the testing session. *It is not recommended to allow a parent/guardian/caretaker to present the cards for Story Completion, nor to attempt to have the examinee line the cards up.*

Hand Movements

Hand Movements may only be administered when a professional facilitator is present. The hand movements cannot be presented by the examiner remotely because the movement requires touching a flat table in the same location as the examinee. *It is not recommended to allow a parent/guardian/caretaker to present the hand movements.*

Digital Assets

The examiner should practice using the digital assets until the use of the materials is as smooth as an in-person administration. It is not recommended that the examiner display items from paper stimulus books on a camera. Refer to *Using Your Digital Assets on Q-global* in the Q-global Resource Library for complete directions.

Gesturing

When gesturing to the stimulus books is necessary, the examiner should display them as digital assets on-screen and point using the mouse cursor. It may on occasion be necessary for the examiner to show four yellow cubes on the examiner's camera to explain the hidden block for Block Counting. Refer to Table 2 for specific instructions by subtest.

Content Considerations

Review Table 2 for the specific telepractice considerations for each subtest to be administered.

Table 2. Specific Telepractice Considerations

Subtest(s)	Considerations
Number Recall	• Requires high-quality audio for examinee and examiner • Examiner may not repeat any item except when teaching the task unless it was not heard because of technical problems
Word Order	• Requires high-quality audio and video for examinee and examiner • Examiner may not repeat any item except when teaching the task unless it was not heard because of technical problems • Peripheral camera/device should be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse • Examiner uses stopwatch
Hand Movements	• Requires high-quality audio and video for examinee and examiner • Examiner may not repeat any item except when teaching the task unless it was not heard because of technical problems • Professional facilitator should assist with telepractice administration of this subtest • New professional facilitators must be trained and practice until the facilitator's presentation of the hand movements is performed according to the directions in the KABC–II Q-global Easel 4 Administration Directions • If examiner will not have a view of examinee's responses, professional facilitator also must be trained in scoring • It is not recommended to allow a nonprofessional facilitator to demonstrate movements or administer the Hand Movements subtest • The hand movements should be made on a flat surface such as a table or desk. They should not be presented on any other surface because the impact of doing so has not been researched. • Peripheral camera/device should be placed in a stable position to show examinee's hand movements

Subtest(s)	Considerations
Block Counting	• Requires high-quality audio and video for examinee and examiner • On Sample B, if the child does not understand, the examiner uses four yellow cubes to demonstrate that there is a hidden block that must be counted. The child must have a clear view of the examiner's demonstration. • Examiner uses stopwatch
Conceptual Thinking	• Requires high-quality video for examinee and examiner • Examiner points with the mouse to stimuli on-screen • Peripheral camera/device should be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse
Face Recognition	• Requires high-quality video for examinee and examiner • Peripheral camera/device should be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse

Subtest(s)	Considerations
Rover	• Requires high-quality video for examinee and examiner • Professional facilitator should assist with telepractice administration of this subtest • It is not recommended to allow a nonprofessional facilitator to administer this task • New professional facilitators must be trained and practice until the facilitator's presentation of the task during instructions and items is performed according to the directions in the KABC–II Q-global Easel 2 Administration Directions • If examiner will not have a view of examinee's responses, professional facilitator also must be trained in scoring • The professional facilitator must be trained to present the stimulus book and to not allow the examinee to rotate the stimulus booklet • The stimulus booklet must lay flat on the table and may not be presented on a vertical screen because the impact of doing so has not been researched • Requires a print Rover Stimulus Booklet and the Rover dog in the examinee's location • Examiner uses stopwatch • Professional facilitator should demonstrate moving the dog during the sample items and should place the dog on the dot at the start of each item • Peripheral camera/device should be placed in a stable position to show examinee's movement of the dog

Subtest(s)	Considerations
Triangles	• Requires high-quality video for examinee and examiner • Professional facilitator should assist with telepractice administration of this subtest • It is not recommended to allow a nonprofessional facilitator or the examinee to present the shapes or triangles • New professional facilitators must be trained and practice until the facilitator's presentation of the shapes and triangles during instructions and items is performed according to the directions in the KABC–II Q-global Easel 3 Administration Directions • Items 1–4: If examiner will not have a view of examinee's constructions, professional facilitator also must be trained in scoring for these items • Professional facilitator should build a model to show sides of the foam triangles during instruction before Sample B and present the triangles for each subsequent item as outlined in the KABC–II Q-global Easel 3 Administration Directions while the examiner provides verbal instruction • Items 5–10, Sample B, and Items 11–27: Stimuli can be presented by the examiner on-screen • Examiner uses stopwatch • Peripheral camera/device should be placed in a stable position to show examinee's constructions
Gestalt Closure	• Requires high-quality audio and video for examinee and examiner • Examiner points with the mouse to stimuli on-screen for the Sample Item
Pattern Reasoning	• Requires high-quality video for examinee and examiner • Examiner points with the mouse to stimuli on-screen • Optional: Peripheral camera/device can be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse or can say the letter of the choice • Examiner uses stopwatch

Subtest(s)	Considerations
Story Completion	• Requires high-quality video for examinee and examiner • Professional facilitator should assist with telepractice administration and scoring of this subtest • It is not recommended to allow a nonprofessional facilitator to present the cards • New professional facilitators must be trained and practice until the facilitator's presentation and removal of the Story Completion Cards during instructions and items is performed according to the directions in KABC–II Q-global Easel 1 Administration Directions • New professional facilitators must be trained in scoring the subtest • Requires the Story Completion Stimulus Booklet and Story Completion Cards in the examinee's location • Stimuli should lay flat on the table or desk and may not be presented on a vertical screen because the impact of doing so has not been researched • Examiner uses stopwatch • Peripheral camera/device should be placed in a stable position to show examinee's placement of the cards • Professional facilitator should pick up the cards after each item and use them for scoring purposes
Atlantis Atlantis Delayed	• Requires high-quality audio and video for examinee and examiner • Examiner points with the mouse to stimuli on-screen • Peripheral camera/device should be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse
Rebus Rebus Delayed	• Requires high-quality audio and video for examinee and examiner • Examiner points with the mouse to stimuli on-screen • Items may precipitate a pointing or gestured response when naming symbols • Optional: Peripheral camera/device can be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at symbols if teleconference platform allows examiner to pass control of the mouse
Expressive Vocabulary	• Requires high-quality audio and video for examinee and examiner • Examiner can point with the mouse to stimuli on-screen

Subtest(s)	Considerations
Verbal Knowledge	• Requires high-quality audio and video for examinee and examiner • Examiner points with the mouse to stimuli on-screen • Optional: Peripheral camera/device can be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse or can say the letter of the choice
Riddles	• Requires high-quality audio and video for examinee and examiner • Items 1–8: Examiner points with the mouse to stimuli on-screen • Peripheral camera/device should be placed in a stable position that shows examinee's screen and provides a view of choices made nonverbally (e.g., pointing) • Examinee can use mouse or touchpad to point at choices if teleconference platform allows examiner to pass control of the mouse

Evaluating Equivalence Evidence

Examiners should review the current research available on equivalence between different modes of administration before proceeding to use remote administration of a standardized assessment with normative data collected via in-person assessment. When reviewing the literature, the examiner should consider the input and output requirements for each task, and the evidence available for telepractice equivalence for the specific task type. Direct evidence of equivalence for a specific task may be available because the task was researched in a study with results indicating no significant difference between telepractice and in-person assessment. Indirect evidence may also be reported in the literature for a task that is similar in construct and input/output demands to the standardized assessment being considered for remote administration and may help determine the examiner's level of confidence in applying the norms. For instance, a study demonstrating direct evidence for the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) Picture Naming subtest also demonstrates valuable indirect evidence for the WISC-V Vocabulary and CLQT+ Confrontation Naming subtests because Picture Naming, Vocabulary, and Confrontation Naming all require brief spoken directions with pictorial stimuli inputs with open-ended spoken response outputs. Examiners can have more confidence that the normative scores are valid when tasks have direct evidence showing equivalency between modes.

In reviewing the literature of telepractice–in-person and digital–traditional investigations, professionals should also be mindful of the age range and population (e.g., clinical group) of the research study to consider relevancy for the examinee. Greater caution is recommended when only indirect evidence of equivalency is available for a task, or when equivalence has not been established for a particular examinee's age range and clinical condition. However, it can be informative to consider any such available evidence when considering impact of remote administration on results and interpretation. Pearson Clinical Assessment is tracking and

aggregating the relevant equivalence evidence for our assessments, including the age range, population, direct evidence, and indirect evidence (see Evidence for Remote Assessment).

Evolving research has compared results obtained in telepractice and in-person administration modes. Several tasks similar to those of the KABC-II NU tasks have produced evidence of equivalence in telepractice and in-person modes for examinees with a variety of clinical conditions (Cullum et al., 2006, 2014; Galusha-Glasscock et al., 2016; Grosch et al., 2011; Hildebrand et al., 2004; Ragbeer et al., 2016; Stain et al., 2011; Temple et al., 2010; Wadsworth et al., 2018; Wadsworth et al., 2016). In addition, a meta-analysis of telepractice studies provides support for telepractice and in-person mode equivalence across a variety of tests (Brearly et al., 2017).

Multiple studies support equivalence of performance-based tasks assessed using remote and in-person administration and scoring with nonclinical child examinees (Wright, 2018a, 2018b, 2020). It is important to note that there is very little research on remote assessment of preschool children. Caution is advised when attempting remote assessment with this population.

While equivalence data on similar measures are relevant, practitioners should be mindful that more research is needed to establish equivalence in all ages and for all tasks on the KABC-II NU. Additional caveats and cautions are described in Grosch et al. (2011). Also, most telepractice-based studies were conducted with volunteer subjects in controlled environments. When social distancing is key (such as during the COVID-19 pandemic) some examinations may need to occur in patients' homes, and it should be noted that very little research has been done about remote assessment in private homes.

It is important to consider the conditions under which equivalence studies of telepractice and in-person assessment modes were conducted and attempt to reproduce these as closely as possible if testing via telepractice. Typical telepractice studies that support telepractice and in-person equivalence involve the examiner becoming very familiar with the teleconference platform by using it for its intended purpose for several hours and administering tests (even those that are familiar in face-to-face mode) multiple times to "practice examinees" (e.g., professional colleagues). Some studies that have established telepractice and in-person mode equivalence involve a professional facilitator. Notably, Harder et al. (2020) found no significant difference across modes with children tested in their homes with parents serving as in-home facilitators who managed audiovisual needs. Finally, the examinee is typically in an office- or school-based setting for most empirical investigations, with two exceptions. First, the aforementioned study by Harder et al. (2020) involved children tested remotely in their own homes. Second, 90% of the children tested in telepractice mode for Wright's 2020 investigation were tested in their homes with professional facilitators present. Regardless, if in-home assessment is taking place, it is advisable to prepare an environment similar to that described in the Telepractice Environment & Equipment section to emulate the environments used for most published equivalence research.

Telepractice involves the use of technology in assessment as well as viewing on-screen stimuli. For these reasons, studies that investigate assessment in digital versus traditional formats are also relevant. Several investigations of other performance-based cognitive tests have produced evidence of equivalence when administered and scored via digital or traditional formats to examinees without clinical conditions (Daniel, 2012; Daniel et al., 2014; Raiford, Zhang, et al., 2016). In addition,

equivalence has been demonstrated for examinees with clinical conditions, such as intellectual giftedness or intellectual disability (Raiford et al., 2014, Raiford, Zhang, et al., 2016), attention-deficit/hyperactivity disorder or autism spectrum disorder (Raiford et al., 2015; Raiford, Zhang, et al., 2016), or specific learning disorders in reading or mathematics (Raiford, Drozdick, et al., 2016; Raiford, Zhang, et al., 2016). However, it is important to note that these studies were not conducted remotely or via video conference.

Table 3 lists the input and output requirements of each task. The abbreviations in the Input and Output column correspond to the various input and output requirements of each task, and a key appears at the bottom of the table. For example, brief spoken directions as an input requirement is abbreviated as BSD.

Table 3. Input and Output Requirements

Task	Input[a]	Output[b]
Number Recall	BSD, SS	OE, SPR
Word Order	BSD, GD, PS, TP	PR
Hand Movements	BSD, MD	GMR
Block Counting	BSD, GD, MD, PS	BSR, IT, OE
Conceptual Thinking	BSD, GD, PS	BSR or PR
Face Recognition	BSD, CC, PS, TP	PR
Pattern Reasoning	BSD, CC, GD, PS	BSR or PR, MC
Rover	BSD, MD, PM	GMR, IT
Story Completion	BSD, GD, PM, PS	GMR, IT
Triangles	BSD, GD, MD, PM, PS	GMR, IT
Gestalt Closure	BSD, GD, PS	BSR, OE
Atlantis Atlantis Delayed	BSD, GD, PS, TP	PR
Rebus Rebus Delayed	BSD, GD, SP	SPR, OE
Expressive Vocabulary	BSD, CC, GD, PS, SS	BSR, OE, SPR
Verbal Knowledge	BSD, CC, GD, PS, SS	MC, PR, SPR
Riddles	BSD, CC, GD, PS, SS	BSR, OE, PR, SPR

Note. [a]Input abbreviations are: BSD = Brief spoken directions, CC = Color critical items, GD = Gestured directions, MD = Motor demonstration, PM = Physical manipulatives, PS = Pictorial stimuli, SP = Letters, digits, or symbols in print, SS = Spoken stimuli, TP = Timed presentation
[b] Output abbreviations are: BSR = Brief spoken response, GMR = Gross motor response, IT = Item-level time limit, MC = Multiple choice, OE = Open ended, PR = Pointing response, SPR = Spoken response

3. Examinee Considerations

Appropriateness

The examiner should first ensure that a telepractice administration is appropriate for the examinee and for the purpose of the assessment. Clinical judgment, best practice guidance for telepractice (e.g., APA Services, 2020; ASPPB, 2013; IOPC, 2020), information from professional organizations and other professional entities (e.g., licensing boards, legal resources, professional liability insurance providers, payors), consultation with other knowledgeable professionals, existing research, and any available federal or state regulations should be considered in the decision-making process. Consideration should be given to whether the necessary administrative and technological tasks involved in a telepractice session can be accomplished without influencing results.

Preparedness

Before initiating test administration, the examiner should ensure that the examinee is well-rested, able, prepared, and ready to appropriately and fully participate in the testing session.

Facilitator Role

If using a facilitator, the role of the facilitator must be explained to the examinee so participation and actions are understood.

Headset

It may not be appropriate or feasible for some examinees to use a headset due to behavior, positioning, physical needs, or tactile sensitivities, or if a headset is not available. Clinical judgment on the appropriate use of a headset in these situations should be used. If a headset is not utilized, the examiner's and examinee's microphones and speakers should be turned up to a comfortable volume.

Mouse

On some teleconferencing software, the examiner can pass control of the mouse to allow the examinee to point to indicate responses; this is an option if it is within the capabilities of the examinee. However, best practice guidelines provide cautions about this. For example, the IOPC guidelines suggest examiners be alert throughout administration, resume control of the screen once the task is finished, and never leave the computer unattended while the examinee has control over the examiner's computer (IOPC, 2020).

4. Examiner Considerations

Practice

During the telepractice setup, and before administering to any actual examinee, the examiner should rehearse the mechanics and workflow of every item in the entire test using the selected teleconferencing software so that the examiner is familiar with the administration procedures. For example, a colleague could be used as a practice examinee.

Standardized Procedures

The examiner must follow the administration procedures of in-person administration as much as possible. For example, if a spoken stimulus cannot be said more than once in in-person administration, the examiner must not say it more than once in a telepractice administration unless a technical difficulty precluded the examinee from hearing the stimulus.

Real-Time Troubleshooting

In order to conduct a smooth telepractice session, audiovisual needs and materials must be managed appropriately. The initial virtual meeting involves the examiner, examinee, and/or the facilitator (if used), and is the opportunity for the examiner to provide information about the audiovisual needs and materials. During the initial virtual meeting, the examiner should provide training in troubleshooting audiovisual needs that arise during the testing session, including camera angle, lighting, and audio checks. The examiner should provide verbal feedback to guide camera adjustment, checking the on-screen video shown by the peripheral camera/device to provide information about how to reposition it until the proper view is shown. The examiner should emphasize that no materials should be opened until the examiner provides instructions to do so, if applicable. The examiner should also expect to provide verbal guidance about these issues during the testing session. Refer to the Telepractice Environment & Equipment section and to Table 2 for specific subtest telepractice considerations.

Collaborating With Facilitators

If used, the facilitator is to assist with administrative and technological tasks and not to manage rapport, engagement, or attention during the testing session. The examiner should direct them not to interfere with the examinee's performance or responses. Any other roles and responsibilities for which an examiner needs support, such as behavior management, should be outlined and trained before the beginning of the testing session. The examiner is responsible for documenting all behaviors of the facilitator during test administration and taking these into consideration when reporting scores and performance.

5. Other Considerations

There are special considerations for written reports describing testing that takes place via telepractice. The professional completing the written report should state in the report that the test was administered via telepractice, and briefly describe the method of telepractice used. The

professional should also make a clinical judgment, similar to an in-person session, about whether or not the examiner was able to obtain the examinee's best performance. Clinical decisions should be explained in the report, including comments on the factors that led to the decision to conduct testing via telepractice and to report all (or not to report suspect) scores. In addition, it is recommended that the report include a record of any and all atypical events during the testing session (e.g., delayed video or audio, disruptions to connectivity, extraneous noises such as phone ringing or loud dog barking, person or animal unexpectedly walking into room, the examinee responding to other external stimuli). List and describe these anomalies as is typical for reporting behavioral observations in the written report, as well as any observed or perceived impact on the testing sessions and/or results, and consider these in the interpretation of results.

An example of a written report might include:

> "*The KABC–II NU was administered via remote telepractice using digital stimulus materials on Pearson's Q-global system, and a facilitator monitored the administration on-site using a printed record form during the live video connection using the [name of telepractice system, e.g., Zoom] platform. The remote testing environment appeared free of distractions, adequate rapport was established with the examinee via video/audio, and the examinee appeared appropriately engaged in the task throughout the session. No significant technological problems or distractions were noted during administration. Modifications to the standardization procedure included: [list]. The KABC–II NU subtests, or similar tasks, have received initial validation in several samples for remote telepractice and digital format administration, and the results are considered a valid description of the examinee's skills and abilities*."

Notes may be recorded about any testing issues on the record form.

Conclusion

This test was not standardized in a telepractice mode, and this should be taken into consideration when utilizing this test via telepractice and interpreting results. For example, the examiner should consider relying on convergence of multiple data sources and/or being tentative about conclusions. Provided that the examiner has thoroughly considered and addressed the factors and the specific considerations as listed above, the examiner should be prepared to observe and comment about the reliable and valid delivery of the test via telepractice. Materials may be used via telepractice without additional permission from Pearson in the following published contexts:

- KABC–II NU manuals, digital stimulus books, and associated administration materials via Q-global
- KABC–II NU via a Pearson-licensed telepractice provider/platform

Any other use of this test via telepractice is not currently recommended. This includes, but is not limited to, scanning the paper stimulus books, digitizing the paper record forms, holding the stimulus books physically up in the camera's viewing area, or uploading a manual onto a shared drive or site.

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