

Telepractice and the KBIT-2 Revised

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 in thinking through ethical and legal practice issues.

The Kaufman Brief Intelligence Test (2nd ed.) Revised (KBIT™–2 Revised; Kaufman & Kaufman, 2022) can be administered in a telepractice context by using digital tools from Q-global®, Pearson's secure online-testing and scoring platform. Specifically, the Stimulus Book is on Q-global as a digital asset and can be shown to the examinee in another location via the screen-sharing features of teleconference platforms. Details regarding Q-global and how it is used are provided on the Q-global product page.

Professionals engaging in telepractice assessment may train facilitators to work with them on a regular basis 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 enable initial setup and adjust audiovisual equipment.

In times when social distancing is necessary (e.g., 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 social 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 facilitator must remain in the room, they should do so passively and unobtrusively and merely monitor and address the examinee's practical needs and any technological or administrative issues as necessary. The facilitator's role should be defined clearly by the examiner. The 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.

Conducting Telepractice Assessment

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

- 1. Telepractice Environment & Equipment
- 2. <u>Assessment Materials & Procedures</u>
- 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 the digital Administration Directions, but the examiner may also use the paper format. 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 teleconference platforms shrink the size of images, the examiner should verify the image size 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 because 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 displays images in the correct aspect ratio and does not stretch or obscure 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. Testing the audio should include an informal conversation before the administration where the examiner listens for any clicks, pops, or breaks in the audio signal that distorts or interrupts the examinee's voice. 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.

Teleconference Platform

A teleconference platform 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 teleconference platform 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 stand-alone peripheral camera that can be positioned to provide a view of the session from another angle or a live view of the examinee's progress is helpful. 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 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 subtests that elicit pointing responses (refer to Table 1) so that the examiner can see the examinee's real-time responses.

In a typical telepractice session, it is more feasible to make a document or moveable camera available in the examinee's location. However, although social 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 peripheral 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's responses if pointing responses are elicted. 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., books) to form an improvised stand upon which to position the device to provide a second-angle view of the examinee pointing at the screen. Typically, devices provide the best view of the examinee's screen and pointing responses when positioned in landscape orientation. Although using a smartphone as the peripheral camera is not 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 <u>Table 1</u>. 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 because 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).

Copyright

Permission must be obtained for access to copyrighted materials (e.g., Stimulus Book) as appropriate. Pearson has provided a letter of No Objection to permit use of copyrighted materials for telepractice via a teleconference platform and tools to assist in remote administration of assessment content during the COVID-19 pandemic.

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, if the examinee is 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.

Digital Asset

The examiner should practice using the digital Stimulus Book until its use is as smooth as an inperson administration. It is not recommended that the examiner display items from the paper Stimulus Book using the 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 Book is necessary, the examiner should display it as a digital asset on screen and point using the mouse cursor. Refer to <u>Table 1</u> for specific instructions by subtest.

Content Considerations

Review <u>Table 1</u> for the specific telepractice considerations for each subtest to be administered.

Table 1. Specific Telepractice Considerations by KBIT-2 Revised Subtest

Subtest	Considerations				
Verbal Knowledge	Requires high-quality audio 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 to choices if teleconference platform allows examiner to pass control of the mouse 				
Matrices	Requires high-quality video for examinee and examiner				
	 Examiner points to stimuli on screen using mouse 				
	 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 to choices if teleconference platform allows examiner to pass control of the mouse 				
Riddles	 Requires high-quality audio and video for examinee and examiner. 				
	• Items 1–8:				
	 Examiner points to stimuli on screen using mouse 				
	 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 to choices if teleconference platform allows examiner to pass control of the mouse 				

Input and Output Requirements and Equivalence Evidence

The examiner should consider the input and output requirements for each task and the evidence available for telepractice equivalence for the specific task type.

Telepractice Versus In-Person Administration

For the KBIT-2 Revised, both in-person and telepractice administration modes were used to establish the combined KBIT-2 Revised norms, making the same norms appropriate for either inperson assessment or tele-assessment. The results of three administration mode equivalence studies provided strong evidence of score equivalence whether using in-person or telepractice administration throughout the KBIT-2 Revised age range from 4–90 years. The results of all three studies are presented and discussed in the Evidence of In-Person Versus Remote Administration Mode Equivalence section in Chapter 5 of the KBIT-2 Revised Manual.

Previous research has compared results obtained in telepractice and in-person administration modes. Several tasks drawn from the Wechsler scales 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). A study of the Wechsler Abbreviated Scale of Intelligence (WASI; NCS Pearson, 1999) equivalence of telepractice administration compared with in-person administration in examinees with intellectual disability produced mean Full Scale IQ (FSIQ) scores that differed by less than 1 standard score point (Temple et al., 2010). A study of the Wechsler Intelligence Scale for Children (5th ed.; WISC-V; Wechsler, 2014) administered by telepractice compared scores assigned by a psychologist sitting in the room with the examinees and another psychologist interacting only through telepractice with the examinees in a small sample of children with specific learning disabilities. This research demonstrated that the primary index scores and the FSIQ corresponded to a high degree (Hodge et al., 2019). A similar study conducted on speech-language tests provided similar results (Sutherland et al., 2017). Other studies support equivalence of tasks that are similar to some of the KBIT-2 Revised subtests with nonclinical examinees using telepractice compared with in-person administration and scoring (Galusha-Glasscock et al., 2016; Wright, 2018a, 2018b). In addition, a meta-analysis of telepractice studies provides support for telepractice and in-person mode equivalence across a variety of neuropsychological tests (Brearly et al., 2017).

Although equivalence data on similar measures are relevant, practitioners should be mindful that more research is needed as described in Grosch et al. (2011). Also, most telepractice-based studies were conducted with volunteer subjects in controlled environments. When social distancing is key (e.g., during the COVID-19 pandemic) some examinations may need to occur in examinees' 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 inperson 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 in-person mode) multiple times to "practice examinees." Some studies that have established telepractice and in-person mode equivalence involve a professional facilitator. However, preliminary research conducted and described by Lana Harder (Stolwyk et al., 2020) with parents serving as inhome facilitators who managed audiovisual needs found no significant differences across modes. Finally, the examinee is typically in an office- or school-based setting. Therefore, if in-home assessment takes place, it is advisable to prepare a similar environment as much as possible as described in the Telepractice Environment & Equipment section.

Digital Versus Traditional Format

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 the Wechsler scales have produced evidence of equivalence when administered and scored via digital or traditional formats *to examinees without clinical conditions* (Daniel, 2012a, 2012b; 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, & Zhang, 2016; Raiford, Zhang, et al., 2016). However, it is important to note that these studies were not conducted remotely or via video conference.

Evidence by Subtest

Table 2 lists each KBIT-2 Revised subtest, the input and output requirements, the direct evidence of subtest equivalence in telepractice–in-person and digital–traditional investigations, and the evidence for similar tasks. The abbreviations in the Input and Output columns correspond to the various input and output requirements of each subtest, and a key appears at the bottom of the table. For example, brief spoken directions as an input requirement is abbreviated as BSD. The numbers in the evidence columns correspond to the studies in the reference list, which is organized alphabetically in telepractice and digital sections. For clarity, each study is denoted either T or D, with T indicating the study investigated telepractice–in-person mode and D indicating the study addressed digital–traditional format.

Table 2. KBIT-2 Revised Subtest Input and Output Requirements and Equivalence Evidence

Subtest	Input ^a	Output ^b	Direct evidence	Evidence for similar tasks ^c
Verbal Knowledge	BSD, GD, PS	BSR or PR, MC	T: KBIT-2 Revised-VK	T: 6, 7, 8, 11–VC, WD; 15–Oral Vocabulary (OV), General Information (GI); 14–Guess What (GW), Verbal
Matrices	BSD, CC, GD, PS	BSR or PR, MC	T: KBIT-2 Revised-MA	Reasoning (VR) T: 7–VP; 14–Concept Formation; 15–Odd Item Out D: 1, 2, 3, 4, 5, 6: VP, FW
Riddles	BSD, GD, PS, SS	BSR or PR, OE, SPR	T: KBIT-2 Revised-RI	T: 6, 7, 8, 11–VC; 15–OV, GI; 14–GW, VR

Note. a Input abbreviations: 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: 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.

^c Citations appear numbered in the references list. T = telepractice-in-person mode equivalence; D = digital-traditional format equivalence.

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 participate in the testing session appropriately and fully.

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 because of 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 teleconference platforms, 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

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 and check 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 1 for specific subtest telepractice considerations.

Collaborating With Facilitators

If used, the facilitator should assist with administrative and technological tasks and not 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 considering these 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.

For example:

"The KBIT–2 Revised was administered via remote telepractice using digital stimulus materials on Pearson's Q-global system, and a facilitator monitored the administration on-site during the live video connection using the (name of telepractice platform [e.g., Zoom]) platform."

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 a phone ringing or loud dog barking, person or animal unexpectedly walking into room, the examinee responding to other external stimuli). Notes may be recorded about these issues on the Record Form. 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.

For example:

"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 KBIT–2 Revised subtests have received validation in several samples for remote telepractice as described in the KBIT-2 Revised Manual, and the results are considered a valid description of the examinee's skills and abilities."

Conclusion

The KBIT-2 Revised was standardized in a telepractice mode, and this can be taken into consideration when utilizing this test via telepractice and interpreting results. 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 only in the following published context:

• KBIT–2 Revised Manual, digital Administration Directions, and digital Stimulus Book via Q-global

Any other use of the KBIT-2 Revised via telepractice is not currently recommended. This includes, but is not limited to, scanning the paper Stimulus Book, digitizing the paper Record Form, physically holding the Stimulus Book up to the camera's viewing area, or uploading the Manual onto a shared drive or site.

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Telepractice—In-Person Mode (See Table 2):

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