

# North Carolina Testing Program

## Test Development Process Item, Selection, and Form Development

End-of-Grade Assessments, End-of-Course  
Assessments, *NCEXTEND1* Alternate Assessments,  
and NC Final Exams

North Carolina Department of Public Instruction  
Accountability Services Division

Updated July 2017

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## **Item Development Process for End-of-Grade Assessments, End-of-Course Assessments, and NC Final Exams**

Prior to **Step 1**, the standards to be measured must be defined. The test development process begins after new content standards are adopted by the North Carolina State Board of Education. All item writers and reviewers are required to complete training modules via North Carolina-developed online training available through the NC Education site. The training includes a general course on item writing guidelines, including lessons on sensitivity and bias concerns. The writers and reviewers must also complete subject-specific courses on state-adopted content standards.

### **Step 1: Item Created**

Test items are written by North Carolina-trained item writers, including North Carolina teachers, educators, and/or curriculum specialists, and content specialists at Technical Outreach for Public Schools (TOPS) at North Carolina State University. All items are submitted through an online test development system. The item writer assigns the item

- a Clarifying Objective/Standard,
- a secondary Clarifying Objective/Standard (when appropriate),
- a Depth-of-Knowledge (DOK) rating (if applicable),
- a knowledge type and cognitive category (if applicable), and
- a category (when appropriate).

The item writer is also responsible for citing sources of any stimulus material for items.

### **Step 2: Item Evaluation**

TOPS Content Specialists review the item for accuracy of content, appropriateness of vocabulary (both subject-specific and general), adherence to item writing guidelines, and sensitivity and bias concerns. All content specialists look for contexts that might elicit an emotional response and inhibit students' ability to respond as well as contexts that students may be unfamiliar with for cultural or socioeconomic reasons. The specialists review the item's assigned:

- clarifying Objective/Standard,
  - secondary Clarifying Objective/Standard (if applicable),
  - DOK rating (if applicable),
  - correct answer/appropriate foils,
  - difficulty rating,
  - category (if applicable), and
  - knowledge type and cognitive category (if applicable).
- If the content of the item is not accurate or does not match an objective/standard, or if the DOK of the item is not appropriate, the item is revised or deleted.

- If necessary, the specialist should edit the stem and foils of the items for clarity and adherence to established item writing guidelines.
- If there are necessary revisions outside the technical scope of the specialist (such as artwork, graphs, or edits to ELA selections), the item is moved to **Step 3** for edits by Production staff.
- If the item contains stimulus material, the item is moved to **Step 3** for copyright checks by Copyright staff.

Once the item is accepted, the item is sent to **Step 4** (Teacher Content Review).

### **Step 3: Production Edits/Copyright Checks**

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production. Items with stimulus materials are reviewed by Copyright staff for copyright concerns and proper citation. Once the item is revised by Production or reviewed for copyrights, it is moved back to **Step 2** for another review by a Content Specialist.

### **Step 4: Teacher Content Review**

Teacher item-content reviewers are required to undergo the same training as item writers. Two North Carolina-trained item reviewers look for any quality issues or bias/sensitivity issues and suggest improvements, if necessary. The item writer at **Step 1** cannot review his/her items at **Step 4**. These trained reviewers evaluate the item in terms of

- alignment to grade-level content standard;
- content of item: accurate content, one and only one correct answer, appropriate and plausible context;
- a clearly written stem;
- motivated and plausible distracters;
- item-design conformity to North Carolina item writing guidelines;
- appropriate language for the academic content area and age of students; and
- bias or sensitivity concerns.

### **Step 5: Content Review and Reconcile Teacher Content Reviews**

A Content Specialist re-reviews the item for accuracy of content, appropriateness of vocabulary (both subject-specific and general), and checks to make sure the item is correctly keyed. The Content Specialist also carefully reviews all comments/suggestions from the content reviewers and makes any appropriate revisions. The Content Specialist may choose one of the following options:

- Send the item to **Step 6** (Production) if there are revisions required that are outside the technical scope of the Content Specialist.
- Send the item to **Step 7** (EC/EL/VI) if the item is ready for the next stage of review.
- Send the item back to **Step 4** (Teacher Review) if major revisions are made.
- Delete the item.

### **Step 6: Production Edits**

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 5** for review by a Content Specialist.

### **Step 7: Exceptional Children (EC), English Learners (EL), and Visually Impaired (VI) Review**

The EC/EL/VI specialist reviews the item for accessibility concerns for EC, EL, and VI students, such as accessibility of graphics for student with or without vision, and also considers accessibility in Braille. This review addresses concerns arising from bias or insensitivity issues, such as contexts that might elicit an emotional response and inhibit students' ability to respond or contexts that students may be unfamiliar with for cultural or socioeconomic reasons. Review of reading level of the item is considered along with stem and foil quality (stem is a clear and complete question; foils straightforward; no repetitive words; the grammar of the stem agrees with the foils; review modifying words and make suggestions for bold print and italics or removal; look for idioms and two-word verbs that may provide an accessibility issue for EL students).

### **Step 8: Reconcile EC/EL/VI Review**

A Content Specialist reviews comments/suggestions from the EC/EL/VI reviewer, and makes any necessary revisions. The Content Specialist should indicate in the comments whether any comments/suggestions from the reviewer were not approved and incorporated. The Content Specialist may choose one of the following options:

- Send the item to **Step 9** (Production) if there are revisions required that are outside the technical scope of the Content Specialist.
- Send the item to **Step 10** (Grammar Review) for review.
- Send the item back to **Step 4** (Teacher Review) if major revisions are made.
- Delete the item.

### **Step 9: Production Edits**

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 8** for another review by a Content Specialist.

### **Step 10: Grammar Review**

Editing staff reviews the item for grammatical issues. If the item had previously been sent back to **Step 8** by Editing, the editor should check that the suggested revisions were addressed.

- If the editor suggests revisions to the item, the item will move back to **Step 8** for review by a Content Specialist.
- If the editor approves the item as is, the item proceeds to **Step 11** (Security Check).

### **Step 11: Security Check**

Production staff checks to make sure no duplicate copy of the item exists in the test development databases. If there is a duplicate copy of the item or a requested revision was not made, then the item is flagged and sent back to **Step 8**.

### **Step 12: Content Lead Review and Reconcile**

Content Lead reviews the item and makes any necessary revisions and also reviews the item comment history to ensure all comments have been addressed. The Content Lead may choose one of the following options:

- Send the item to **Step 13** (Production) if there are revisions required that are outside the technical scope of the Content Lead.
- Move the item to **Step 14** (If approved, move item to **Step 14** NCDPI/Curriculum and Instruction Review).
- Send the item back to **Step 4** (Teacher Review) or **Step 2** if major revisions are needed/made.
- Delete the item.

### **Step 13: Production Edits**

Items needing revisions outside the technical scope of the Content Lead (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 12** for review by the Content Lead.

### **Step 14: NCDPI/Curriculum and Instruction Review**

NCDPI/Curriculum and Instruction Specialist reviews the item and assigns a clarifying objective or a content standard. The reviewer evaluates the item in terms of

- alignment to grade-level content standard;
- presence of one and only one correct answer;
- bias, insensitivity, or accessibility issues; and
- overall item quality.

The NCDPI/Curriculum and Instruction Specialist rates the item as acceptable, acceptable with revisions, or unacceptable and may provide additional comments.

### **Step 15: Reconcile Curriculum and Instruction Review**

A Content Specialist reviews comments/suggestions from the NCDPI/Curriculum and Instruction Specialist, and makes any necessary revisions. The Content Specialist should indicate in the comments if any comments/suggestions from the reviewers were not approved and incorporated. The Content Specialist may choose one of the following options:

- Send the item to **Step 16** (Production) if there are revisions required that are outside the technical scope of the Content Specialist.

- Send the item to **Step 17** (Grammar Review) for review.
- Send it back to **Step 2** if major revisions are needed or made.
- Delete the item.

### **Step 16: Production Edits**

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 15** for review by a Content Specialist.

### **Step 17: Grammar Review**

Editing staff reviews the item for grammatical issues. If the item had previously been sent back to **Step 15** by Editing, the editor should check that the suggested revisions were addressed.

- If the editor suggests revisions to the item, the item will move back to **Step 15** for review by a Content Specialist.
- If the editor approves the item as is, the item proceeds to **Step 18** (TMS Review).

### **Step 18: NCDPI/Test and Measurement Specialist Review**

A NCDPI/Test and Measurement Specialist (TMS) reviews for overall item quality. The TMS also checks that quality control measures have been followed by reading the comments from all previous reviews and verifying that the comments have been addressed by the Content Specialists. The TMS evaluates the item for

- alignment to grade-level content standard;
- verification there is one and only one correct answer;
- assigned Cognitive Process and Knowledge Type or DOK;
- bias, insensitivity, or accessibility issues; and
- overall item quality.

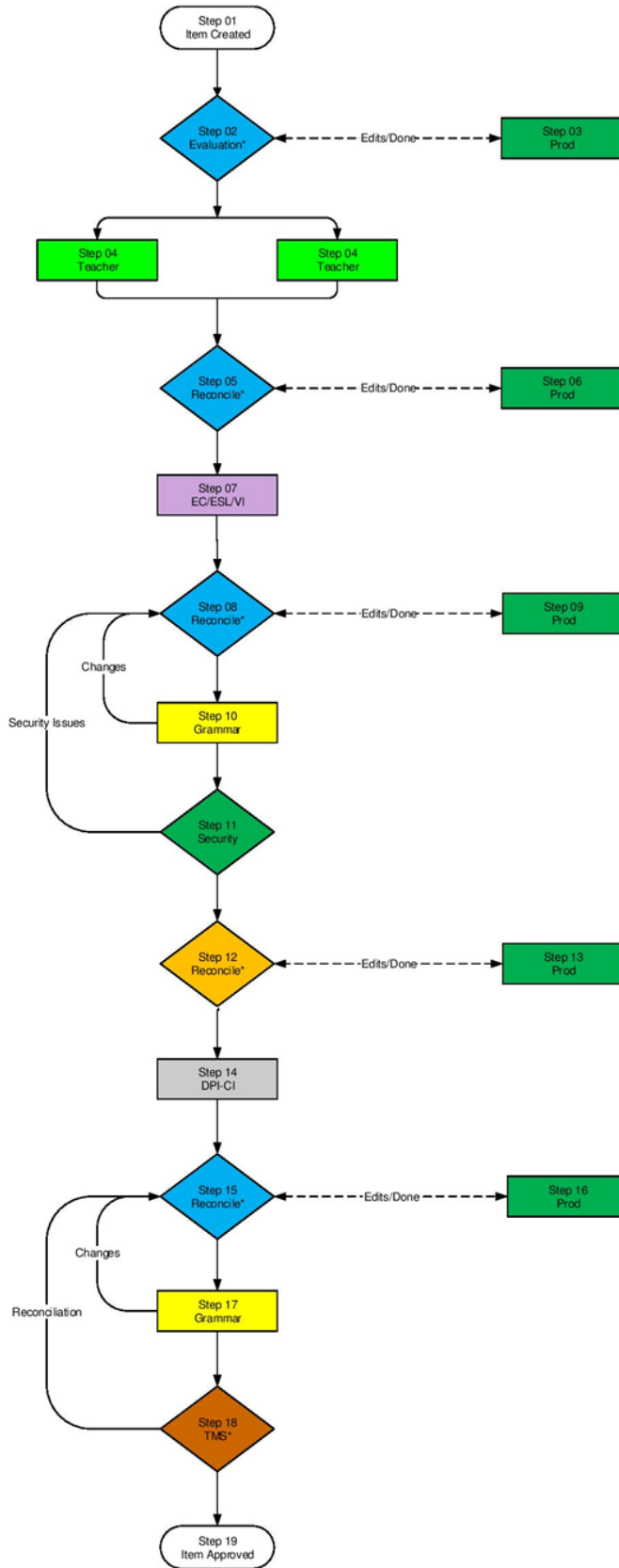
The TMS has four options when submitting the review:

- If the TMS approves the item as is, the item proceeds to **Step 19** (Item Approved).
- If the TMS indicates edits are needed, the item is moved back to **Step 15** for review by a Content Specialist.
- If TMS wants Curriculum and Instruction to see the item again, the TMS moves the item back to **Step 14**.
- The TMS can delete the item.

### **Step 19: Item Approved**

The item is now ready for placement on a form.

### Item Review



\* At these Steps, Items can be moved back to any previous step or removed from the Item Pool.

## **Selection Review Process for End-of-Grade Assessments, End-of-Course Assessments, and NC Final Exams**

Prior to Step 1, the English Language Arts (ELA) Content Specialist searches for appropriate selections for each assigned grade using criteria from NCDPI/Test Development staff, NCDPI/Curriculum and Instruction staff, and the North Carolina *Standard Course of Study*. The ELA Content Specialist also reviews the selections for any bias and sensitivity concerns.

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Offline

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### **Step 1: Folder Created**

The Content Specialist creates a folder (color-coded by genre) for the selection. A Selection Form Submission slip is completed with the necessary copyright information (Content Specialist's name, date, title, author, source, excerpts, photographs, etc., as well as copyright date and ISBN, if applicable, and the selection's readability score), and is attached to the inside of the folder. Any suggested edits are noted on the selection. A selection routing sheet is attached (includes grade level and title of selection) to the outside of the folder.

### **Step 2: Copyright Approval & Title/Author Search**

Editing staff

- determine if the selection is public domain, gratis, or copyrighted (if copyrighted, determine whether the publisher may be used or if there is a problem, such as excessive expense) and
- search all selection databases to determine if the selection is already in use.

### **Step 3: Content Approval**

The Content Lead evaluates the selection in terms of

- alignment to grade-level expectations,
- content and length of the selection,
- readability of the selection,
- bias or sensitivity concerns, and
- issues brought up by copyright review.

Based on review, the Content Lead can

- approve the selection as is;
- approve the selection with edits or additions (including edits to or addition of artwork); or
- delete the selection.

*NOTE:* If any edits or additions are made to the selection (including edits to or addition of artwork), the Content Specialist sends a new copy to the Copyright Staff so they can seek permission from the publisher if copyrighted should the selection be designated for inclusion in a form.

#### **Step 4: Exceptional Children (EC), English Learner (EL), and Visually Impaired (VI) Review**

The EC/EL/VI reviewer evaluates the selection for accessibility concerns for EC, EL, and VI students in terms of

- concerns because of bias or insensitivity issues, such as contexts that might elicit an emotional response and inhibit students' ability to respond and contexts that students may be unfamiliar with for cultural or socio-economic reasons;
- accessibility of graphics for students with or without vision;
- appropriateness for Braille;
- prior knowledge required to understand the selection; and
- unfamiliar vocabulary that cannot be understood from the surrounding context.

Based on review, the EC/EL/VI reviewer can recommend

- using the selection,
- using the selection with suggested edits, or
- not using the selection.

#### **Step 5: NCDPI/Test Measurement Specialist Review**

The NCDPI/Test Measurement Specialist (TMS) evaluates the selection in terms of

- alignment to grade-level expectations;
- content and length of the selection;
- readability of the selection; and
- bias or sensitivity concerns.

The TMS also evaluates

- any bias or sensitivity concerns raised by the EC/EL/VI reviewer and
- edits made by content at **Steps 1 and 3** or edits suggested in the **Step 4** review.

If the TMS rejects the selection, it is deleted from the pool. If the TMS approves the selection, it is moved to **Step 6**.

#### **Step 6: Prepare for Online**

Any issues noted in EC/EL/VI and TMS reviews are reconciled by a Content Specialist, and the selection is sent to production to be entered into the online test development system.

*NOTE:* If any edits or additions are made to the selection (including edits to or addition of artwork), the Content Specialist sends a new copy to the Copyright Staff so they can seek permission from the publisher if copyrighted should the selection be designated for inclusion in a test form.

**Step 1: Selection Created**

Production staff enters the selection into the test development system.

**Step 2: Compare Original**

Editing staff compares the original copy of the selection to what has been entered into the test development system and indicates any necessary corrections. The corrections may arise from discrepancies between the TDS and the original or from correctable errors in the original, such as grammatical errors, misspellings, or archaic/foreign spelling of words.

**Step 3: Creation Reconcile**

A Content Specialist resolves corrections indicated in **Step 2**. The Specialist indicates in the comments if any comments/suggestions from Editing staff were not approved and incorporated.

**Step 4: Creation Edits**

Production makes requested changes and selection is sent back to **Step 3** for a Content Specialist to confirm requested changes have been made.

**Step 5: NCDPI/Curriculum and Instruction Review**

A NCDPI/Curriculum and Instruction Specialist reviews the selection. The reviewer evaluates the selection in terms of

- alignment to grade-level expectations;
- content and length of the selection;
- readability of the selection; and
- bias or sensitivity concerns.

The Curriculum and Instruction Specialist rates the selection as acceptable, acceptable with revisions, or unacceptable. The Specialist can also include additional comments.

**Step 6: NCDPI/Test Measurement Specialist Review**

The NCDPI/Test Measurement Specialist (TMS) does a final review on the selection and reviews all comments from the NCDPI/Curriculum and Instruction Specialist. The TMS either approves the selection (with comments regarding revisions, if any) or deletes the selection from the pool.

### **Step 7: Reconcile Curriculum and Instruction Review and Test and Measurement Specialist Review**

A Content Specialist reviews any comments/changes requested by Curriculum and Instruction or by the Test and Measurement Specialist, and sends changes to **Step 8** (Production) to be made, if necessary. Once any changes are made, the selection is sent to **Step 9**.

*NOTE:* If any edits or additions are made to the selection (including edits to or addition of artwork), the Content Specialist sends a new copy to the Copyright Staff so they can seek permission from the publisher if copyrighted should the selection be designated for inclusion in a form.

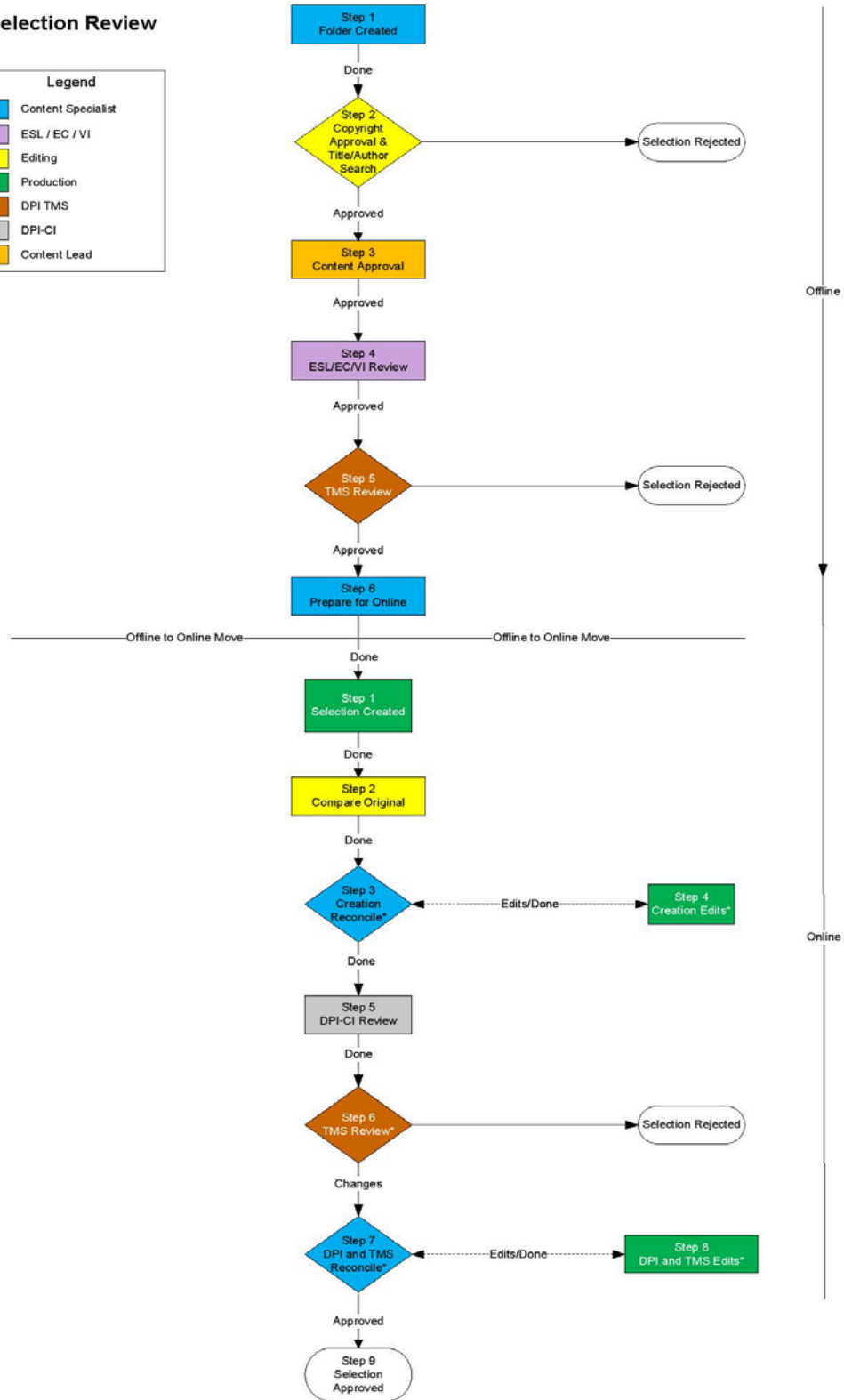
### **Step 8: Production Edits**

Production makes requested changes and selection is sent back to **Step 7** for a Content Specialist to confirm requested changes have been made.

### **Step 9: Selection Approved**

Selection is now ready to have items written.

## Selection Review



\* At these Steps, Selections can be moved back to any previous step or removed from the Selection Pool.

## **Operational Base Form Review Process for End-of-Grade Assessments, End-of-Course Assessments, and NC Final Exams**

Prior to Step 1, a NCDPI/Psychometrician chooses the test items for the initial placement of the preliminary base form, taking key balance into consideration.

### **Step 1: Ordered Item Numbers Supplied**

A Psychometrician creates the form, and uploads a file listing the Item IDs to populate the form. The form is sent to **Step 3** for form review. Forms can come back to this step from **Step 3** with suggestions for replacements, or from **Step 4** with suggestions for replacements or revisions (either the content of the item or for key issues). The Psychometrician can replace items or incorporate revisions. The Psychometrician sends the form to **Step 2** (Production Edits) for revisions to artwork, graphs, or ELA selections. After any revision, the Psychometrician sends the form back to **Step 3**.

### **Step 2: Production Edits**

Revisions to operational items such as artwork, graphs, and ELA selections are made by Production staff. If any revisions are made, the form is sent back to **Step 1** for review by a Psychometrician.

### **Step 3: Form Review**

A Content Specialist reviews

- the items on the form for content alignment and quality of content, and
- the form for conflicts or repetition of content.

If any items are replaced because of concerns regarding conflicts or repetition of content among items, or for quality concerns, the Content Specialist sends the form back to **Step 1** with comments for the Psychometrician. Otherwise, the form is sent to **Step 4** for Test Measurement Specialist Review.

### **Step 4: NCDPI/Test Measurement Specialist Review/Key Balance**

This review step is conducted to ensure that the form is ready for Outside Content Key Check (i.e., the form is ready to send to printer).

- This review covers both item- and form-level quality.
- The Test and Measurement Specialist (TMS) reviews each item, including any comments. Suggestions for revisions to items are made as needed.
- After reviewing the quality of each item, the form is evaluated in terms of cueing, repetition, content coverage, and balance across Depths of Knowledge and Types/Cognitive Processes.
- The key balance of the form is checked. If the key balance needs adjusting, these

suggestions are made by the NCDPI/TMS and submitted to the Test Development Section Chief who will approve/disapprove and the form is returned to **Step 1**.

After reviewing each item, the TMS can add form-level comments and suggested improvements, and can

- send the form back to **Step 1** with suggestions for replacements or revisions,
- move the form to **Step 5** (Reconcile), or
- delete the form from the pool.

### **Step 5: Reconcile**

At this step, the form is sent for Outside Content Key Check. The Content Specialist reviews the form comments to ensure any suggested replacements or revisions have been addressed and that any approved replacements or revisions have been made correctly. If any replacements or revisions need adjusting, the Content Specialist moves the form back to **Step 1** with comments. Otherwise, the form moves to **Step 6** (Outside Content Key Check).

### **Step 6: Outside Content Specialist Key Check**

An Outside Content Specialist reviews the form by answering each item and providing any comments and/or suggestions.

### **Step 7: Reconcile Outside Content Review**

A Content Specialist checks the keyed response from the Outside Content Review against the key for each item and reviews all comments and/or suggestions from the Outside Content Expert. Any key disagreements are reconciled, and any comments and/or suggestions from the Outside Content Specialist are addressed.

### **Step 8: NCDPI/Psychometric Review/Key Balance**

A Psychometrician

- reviews comments/suggestions from the Outside Content Specialist and from Editing staff, with consultation with the TMS and Content Specialists;
- checks key agreement with the Outside Content Specialist and resolves any disagreements through consultation with the TMS and Content Specialists;
- makes any approved revisions, or indicates revisions for Production staff to make, and sends the form to **Step 9** (Production Edits); and
- reuploads the form if any items are replaced.

### **Step 9: Production Edits**

Revisions to items outside the technical scope of the Psychometrician (items such as artwork, graphs, and ELA selections) are made by Production staff. Once the revisions are made, the form is sent back to **Step 8** for review by a Psychometrician.

### **Step 10: Grammar Review**

Two editors independently review the form for grammatical and/or formatting issues, providing comments and/or suggestions as needed.

### **Step 11: Content Lead Review/Finalize Form**

A Content Lead reviews the base form and reviews all comments from Editing staff and addresses any suggestions. The Content Lead reviews the form comment history to ensure all comments have been addressed. After reviewing the form, the Content Lead either

- approves the form, and moves it to **Step 12** (Item Placement) (The form is cloned when the Content Lead approves the form, so all the needed versions of the base form will be at **Step 12** for item placement.) or
- moves the form back to **Step 8** if any edits to operational items need review.

### **Step 12: Item Placement**

A Content Specialist places approved items in the embedding slots. The Content Specialist needs to check that

- the placed items match the layout files for the version of the base form,
- the items embedded for experimental use are of good quality,
- the items do not cue operational items or other embedded items,
- the keys of the embedded items do not create an unbalanced key for the overall form, and
- as a group, the items' difficulty and Depth of Knowledge or Knowledge Type/Cognitive Process are consistent with the surrounding base form.

After placing the items, the Content Specialist may choose one of the following options:

- Send the form to **Step 13** (Production Edits) for revisions to artwork, graphs, or ELA selections.
- Send the form to **Step 14** (Cueing Check).
- Delete the form.

### **Step 13: Production Edits**

Revisions to embedded experimental items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 12** for review by a Content Specialist.

### **Step 14: Cueing Check**

The Content Specialist and TMS review the entire form to check that the embedded items do not create cueing or repetition issues and that the embedded items' quality is acceptable. The TMS also should make sure the key balance is adequate. After the review, the Content Specialist can replace or revise embedded items based on the review. The Content Specialist then moves the form to **Step 15** for Outside Content/Grammar check.

### **Step 15: Outside Content Specialist Key Check and Grammar Check**

An Outside Content Specialist and Editing staff member each review the embedded items. The Outside Content Specialist reviews the embedded items by working and answering each item and providing any comments or suggestions as needed; Editing staff reviews the items for any grammatical and/or formatting issues, providing comments and/or suggestions as needed.

### **Step 16: Reconcile**

A Content Specialist checks the keyed response from the Outside Content Review against the key for each item and reviews all comments and/or suggestions from the Outside Content Expert. Any key disagreements are reconciled and any comments and/or suggestions from the Outside Content Expert are addressed. The Content Specialist also reviews suggestions from Editing staff and makes any necessary revisions.

If any items require substantial revisions, the item should be replaced and the form sent back to **Step 15**.

The Content Specialist can

- send the form to **Step 17** (Production Edits) for revisions to artwork, graphs, or ELA selections,
- send the form to **Step 18** (TMS Final Review), or
- delete the form.

### **Step 17: Production Edits**

Revisions to embedded experimental items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 16** for review by a Content Specialist.

### **Step 18: Test Measurement Specialist Final Review**

The TMS reviews the form, considering the comments from the **Step 15** reviews to ensure all comments have been addressed properly. The key balance of the form is checked. The TMS makes any needed edits to items. The TMS can send to **Step 19** for revisions. Then the TMS sends the form to **Step 20** (Final Grammar).

### **Step 19: Production Edits**

Revisions to operational items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 18** for review by the TMS.

### **Step 20: Final Grammar Review**

An Editor reviews the entire form for grammatical and/or formatting issues, providing comments and/or suggestions as needed.

### **Step 21: Final Manager Review**

A Content Manager reviews comments/suggestions from the Final Grammar Review or **Step 24** (Compare) and makes any necessary revisions to embedded items. The Manager checks the form for overall quality and reviews the form comment history to ensure all comments have been addressed.

After reviewing the form, the Content Manager may choose one of the following options:

- Approve the form and send it to **Step 23** (Audio Approval) if the form will be recorded online.
- Approve the form and send it to **Step 24** (Compare) if the form will be unrecorded or on paper only.
- Send the form to **Step 20** (Psychometrician) if there are suggested revisions to operational items for the Psychometrician to consider.
- Send the form to **Step 22** (Production Edits) for revisions to artwork, graphs, or ELA selections.
- Reject the form.

### **Step 22: Production Edits**

Revisions to embedded experimental items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 21** for review by a Content Manager.

### **Step 23: Audio Approval**

A Content Specialist reviews the audio for each item and either approves the audio or indicates it needs correction. After all items' audio has been approved, the form is sent to **Step 24** (PDF/Online Check).

### **Step 24: PDF/Online Check**

At this step, Production staff exports the form as a document and formats the document per formatting guidelines. The form is placed in a folder with a signoff sheet.

- Two Editors review the form for formatting concerns as well as any grammatical issues.
- A Content Specialist reviews the form for content and evaluates any comments and or suggestions from Editing reviews. If there are any edits to embedded items to execute in the online test development system, the Content Specialist indicates with each item what edits are approved and sends the form back to **Step 21**. Any suggestions that are rejected should be noted in the form comments. Any suggested edits to operational items that Content staff feel warrant consideration are directed to the TMS and Psychometrician for consideration.
- A Content Manager makes any approved edits in the online test development system and sends the form to **Step 23** for recorded online forms or **Step 24** for unrecorded or paper-only forms.

- After production staff makes corrections to the paper copy, the file is converted to a PDF and printed. The printed copy undergoes the same review as bullets 1–3 above.
- After the PDF of the form is approved, the form is sent to **Step 25** (Final Freeze/Export). If the forms are also offered online, the online forms will also be sent to **Step 25**.

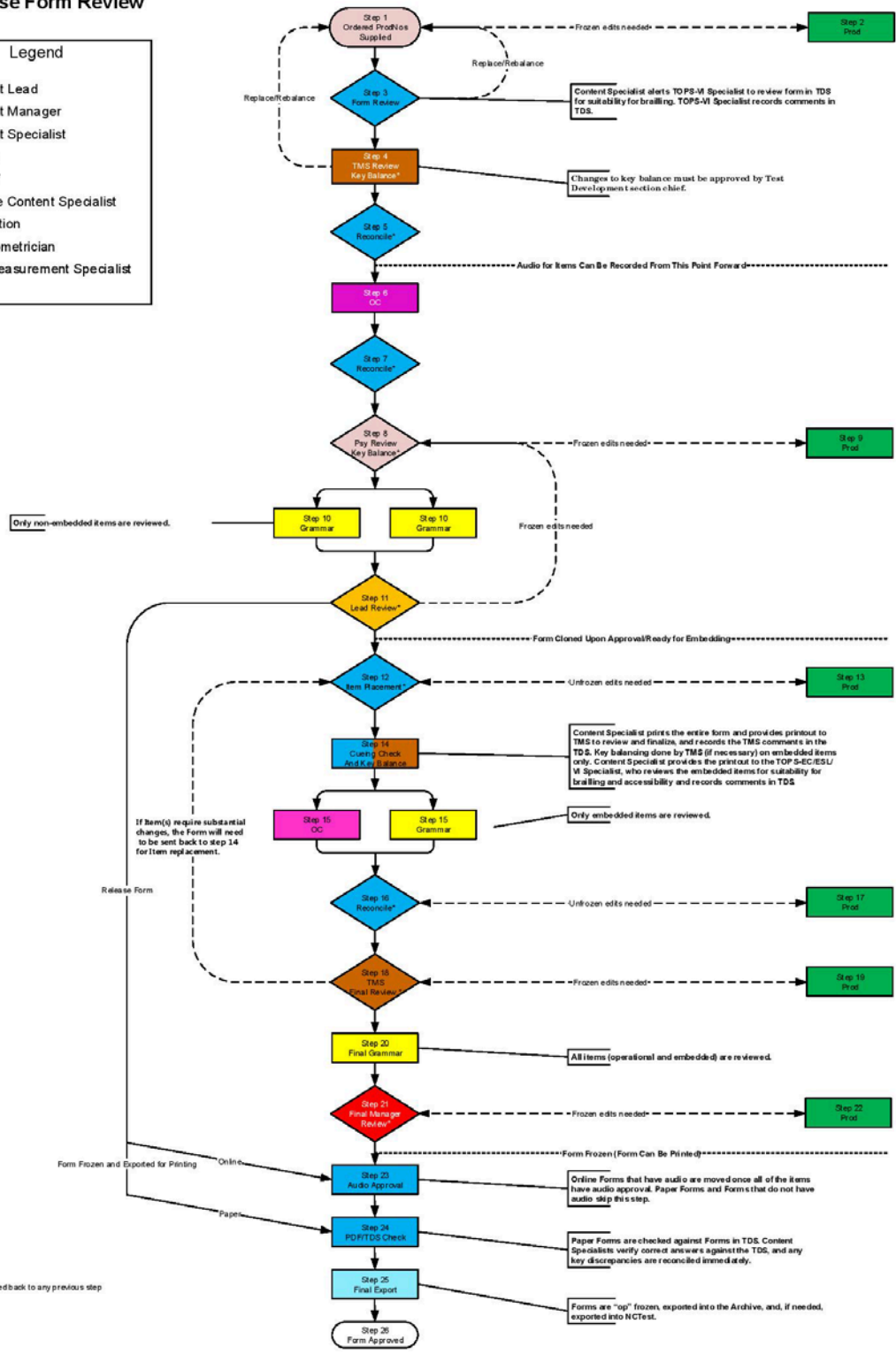
### **Step 25: Final Export**

The form, all items, and any selections are operationally locked to prevent any revisions. This is to ensure that the published versions of the form, items, and selections are preserved electronically. Any online forms undergo checks in a variety of platforms to ensure that each item's content displays correctly and audio files for non-ELA subjects read correctly.

### **Step 26: Form Approved**

The form is approved for administration.

# Embedded Base Form Review



\* At these Steps, Forms can be moved back to any previous step or removed from the Form Pool.

## Item Development Process for the *NCEXTENDI* Alternate Assessments

Prior to **Step 1**, the standards to be measured must be defined. The test development process begins after new content standards are adopted by the North Carolina State Board of Education. All item writers and reviewers are required to complete training modules. The training includes a general course on item writing guidelines, including lessons on sensitivity and bias concerns. The writers and reviewers must also complete subject-specific courses on the Extended Content Standards.

### Step 1: Item Created

Test items are written by North Carolina-trained item writers, including North Carolina teachers and/or curriculum specialists, and Content Specialists at Technical Outreach for Public Schools at North Carolina State University. All items are submitted on paper. The item writer assigns the item

- an Extended Content Standard and
- a secondary Extended Content Standard (when appropriate).

The item writer is also responsible for citing sources for any stimulus material to an item.

### Step 2: Item Evaluation

Content Specialists review the item for accuracy of content, appropriateness of vocabulary (both subject-specific and general), adherence to item writing guidelines, and sensitivity and bias concerns. All Content Specialists (subject and the EC/EL/VI specialist) look for contexts that might elicit an emotional response and inhibit students' ability to respond as well as contexts that students may be unfamiliar with for cultural or socioeconomic reasons. The specialists review the item's assigned

- Extended Content Standard
- secondary Extended Content Standard (if applicable), and
- key/appropriate foils.
- If the content of the item is not accurate or does not match an objective/standard, the item is revised or deleted.
- If necessary, the specialist should edit the stem and foils of the items for clarity and adherence to established item writing guidelines.
- If there are necessary revisions outside the technical scope of the specialist (such as artwork, graphs, or edits to ELA selections), the item is moved to **Step 3** for edits by Production staff.
- If the item contains stimulus material, the item is moved to **Step 3** for copyright checks by Copyright staff.

Once the content specialist has spent the needed time on the item and certifies that it is ready to be on a form, the items is sent to **Step 4** (Teacher Content Review).

### Step 3: Production Edits/Copyright Checks

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production. Items with stimulus materials are reviewed by Copyright staff for copyright concerns and proper citation. Once the item is revised by Production or reviewed for copyrights, it is moved to **Step 2** for another review by a Content Specialist.

#### **Step 4: Teacher Content Review**

Teacher item reviewers are required to undergo the same training as item writers. At this step, two North Carolina-trained item reviewers look for any quality issues or bias/sensitivity issues and suggest improvements, if necessary. One of the teacher reviewers is an exceptional children's teacher, and the other is a general education teacher.

The exceptional education teacher pays particular attention to the item's appropriateness for student populations with moderate to severe intellectual disabilities. Both trained reviewers evaluate the item in terms of

- alignment to grade-level content standard;
- content of item: accurate content, there is one and only one correct answer, appropriate and plausible context;
- cognitive category;
- being clearly written;
- motivated and plausible distracters;
- design conforming to North Carolina item writing guidelines;
- appropriate language for the academic content area and age of students; and
- bias or sensitivity concerns.

#### **Step 5: Reconcile Teacher Content Reviews**

A Content Specialist carefully reviews all comments/suggestions from the content reviewers and makes any appropriate revisions. The Content Specialist may choose one of the following options:

- Send the item to **Step 6** (Production) if there are revisions required that are outside the technical scope of the Content Specialist.
- Send the item to **Step 7** (EC/EL/VI) if the item is ready for the next stage of review.
- Send it back to **Step 4** (teacher review) if major revisions are made.
- Delete the item.

#### **Step 6: Production Edits**

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 5** for review by a Content Specialist.

#### **Step 7: Exceptional Children (EC), English Learner (EL), and Visually Impaired (VI) Review**

The EC/EL/VI Specialist reviews the item for accessibility concerns for students with significant cognitive disabilities along with concerns for EL and VI students, such as accessibility of graphics for students with or without vision and also considers Braille accessibility. This review addresses concerns owing to bias or insensitivity issues such as contexts that might elicit an emotional response and inhibit students' ability to respond and contexts that students may be unfamiliar with for cultural or socioeconomic reasons. Review of reading level of the item is considered along with stem and foil quality (stem is a clear and complete question, foils are straightforward, no repetitive words, the grammar of the stem agrees with the foils, idioms do not provide an accessibility issue).

### **Step 8: Reconcile EC/EL/VI Review**

A Content Specialist reviews comments/suggestions from EC/EL/VI Specialist and makes any necessary revisions. The Content Specialist should indicate in the comments if any comments/suggestions from the reviewers were not approved and incorporated. The Content Specialist may choose one of the following options:

- Send the item to **Step 9** (Production) if there are revisions required that are outside the technical scope of the Content Specialist.
- Send the item to **Step 10** (Grammar Review) for review.
- Send it back to **Step 4** (teacher review) if major revisions are made.
- Delete the item.

### **Step 9: Production Edits**

Items needing revisions outside the technical scope of the Content Specialist (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 8** for another review by a Content Specialist.

### **Step 10: Grammar Review**

The Editing staff reviews the item for grammatical issues. If the item had previously been sent back to **Step 8** by Editing, the editor should check that the suggested revisions were addressed.

- If the editor suggests revisions to the item, the item will move back to **Step 8** for review by a Content Specialist.
- If the editor approves the item as is, the item proceeds to **Step 11** (Security Check).

### **Step 11: Security Check**

Production staff checks to make sure no duplicate copy of the item exists in previous test forms or released items. If there is a duplicate copy of the item, then the item is returned to **Step 8** and flagged.

### **Step 12: Alternate Assessment Lead Review**

The Alternate Assessment Lead reviews the comment history to ensure all comments have been addressed in terms of assessing students with significant cognitive disabilities. The Alternate Assessment Lead may choose one of the following options:

- Approve the item and move it to **Step 13** (Content Lead Review).
- Send it back to **Step 8** (Content Specialist Review) if revisions are requested.

### **Step 13: Content Lead Review and Reconciliation**

The Content Lead reviews the item and makes any necessary revisions and also reviews the item comment history to ensure all comments have been addressed. The Content Lead may choose one of the following options:

- Send the item to **Step 14** (Production) if there are revisions required that are outside the technical scope of the Alternate Assessment Lead.
- Approve the item and move it to **Step 15** (Test and Measurement [TMS] Review).
- Send it back to **Step 2** if major revisions are made.
- Delete the item.

### **Step 14: Production Edits**

Items needing revisions outside the technical scope of the Content Lead (such as artwork, graphs, and ELA selections) are revised by Production staff. Once the item is revised by Production staff, it is sent back to **Step 13** for review by the Content Lead.

### **Step 15: Test Measurement Specialist Final Review**

A TMS reviews for overall item quality and alignment. The TMS also checks that quality control measures have been followed by reading the comments from all previous reviews and verifying that the comments have been addressed by the Content Specialists.

The TMS evaluates the item for

- alignment to grade-level content standard;
- verification there is one and only one correct answer;
- cognitive category;
- bias, insensitivity, or accessibility issues; and
- overall item quality.

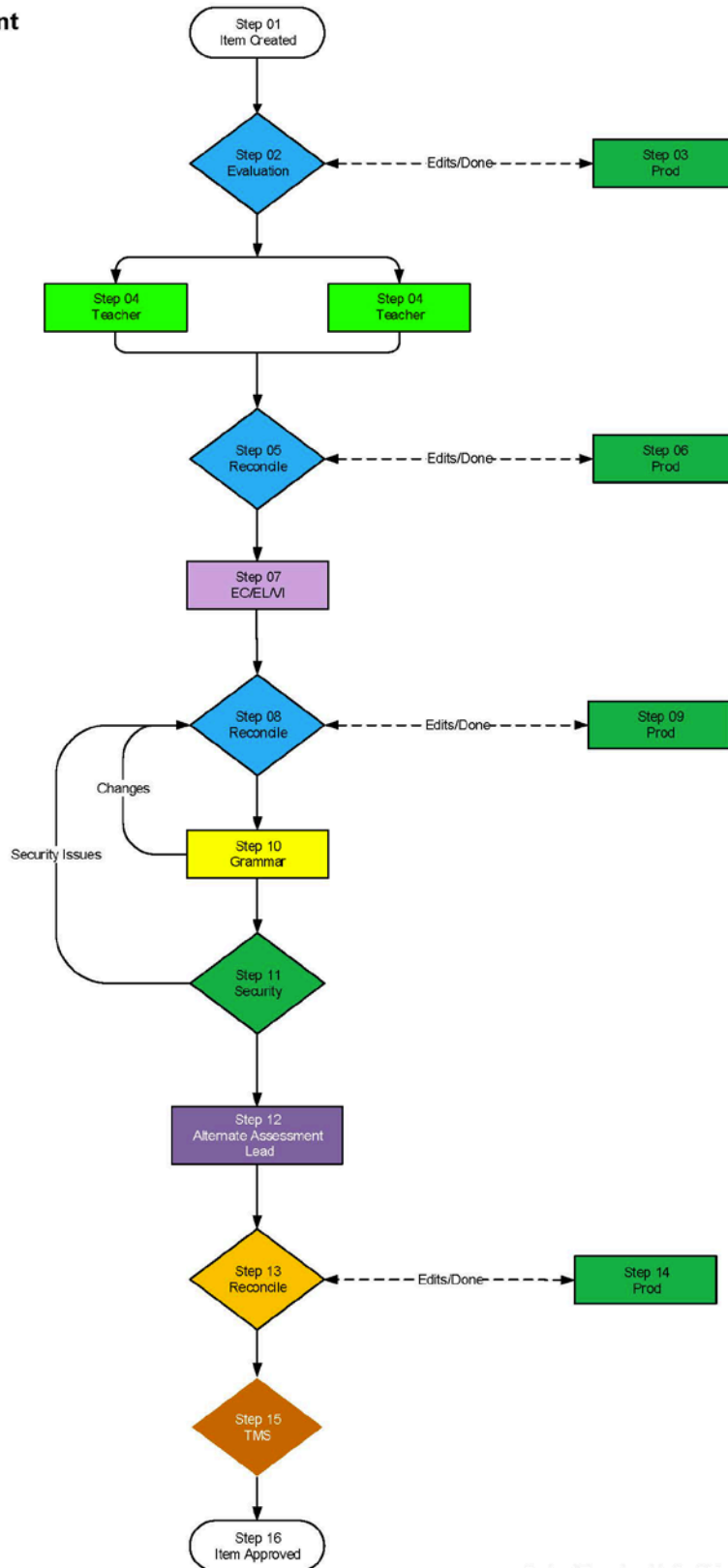
The TMS has these options when submitting the review:

- If the TMS approves the item as is, the item proceeds to **Step 16** (Item Approved).
- If the TMS indicates edits are needed, the item proceeds to **Step 8** for review by a Content Specialist.
- The TMS can also choose to **delete** the item.

### **Step 16: Item Approved**

The item is now ready for placement on a form.

## Alternate Assessment Item Review



Revised Thursday, July 27, 2017

## Selection Review Process for the *NCEXTEND1* Alternate Assessments

Prior to Step 1, an English Language Arts Content Specialist searches for appropriate selections for each assigned grade using criteria from Test Development staff, Instruction and Curriculum staff, and the North Carolina *Extended Content Standards*. The ELA Content Specialist also reviews the selections for any bias and sensitivity concerns.

### Step 1: Folder Created

The Content Specialist creates a folder (color-coded by genre) for the selection. A Selection Form Submission slip is completed with the necessary copyright information (specialist's name, date, title, author, source, excerpts, etc., as well as copyright date and ISBN, if applicable) and the selection's readability score, and this is attached to the inside of the folder. Any suggested edits are noted on the selection. On the outside of the folder, a selection routing sheet is attached (includes grade level and title of selection). The Content Specialist also works with Production to create graphics to illustrate content in the selections.

### Step 2: Grammar Check and Copyright Approval & Title/Author Search

The editing staff

- reviews for grammatical issues,
- determines if the selection is public domain, gratis, or copyrighted (if copyrighted, determine whether the publisher may be used or if there is a problem, such as excessive expense) and
- searches all selection databases to determine if the selection is already in use.

### Step 3: Content Reconcile

Issues noted in Copyright reviews are reconciled by a Content Specialist.

The Content Specialist reviews once more to ensure that the selection has:

- alignment to grade-level expectations,
- appropriate content, selection length, readability,
- no bias or sensitivity or copyright concerns.

Based on review/reconciliation, the Content Specialist can:

- approve the selection as is, move to **Step 5**
- send the selection to **Step 4 Production** for edits or additions, including artwork (If any edits or additions are made to the selection including edits to or addition of artwork, the Content Specialist sends a new copy to the Copyright Staff so they can seek permission from the publisher if copyrighted).

#### **Step 4: Production Edits**

- Production staff makes edits to artwork. Once revisions are made, the selection is sent back to **Step 5** for another review by a Content Specialist.

#### **Step 5: Alternate Assessment Lead Review**

The Alternate Assessment Lead evaluates the selection for accessibility concerns for EC, EL, and VI students in terms of

- accessibility for students with significant cognitive disabilities;
- content and length of the selection;
- readability of the selection;
- concerns owing to bias or insensitivity issues, such as contexts that might elicit an emotional response and inhibit students' ability to respond and contexts that students may be unfamiliar with for cultural or socioeconomic reasons;
- accessibility of graphics for students with or without vision;
- appropriateness for Braille;
- prior knowledge required to understand the selection; and
- unfamiliar vocabulary that cannot be understood from the surrounding context.

Any suggested edits are noted on the selection. Based on the review, the Alternate Assessment Lead can recommend to

- use the selection,
- use the selection with suggested edits, or
- not use the selection.

#### **Step 6: Content Reconcile**

Any issues noted in the Alternate Assessment Lead review are reconciled by a Content Specialist.

- *NOTE:* If any edits or additions are made to the selection (including edits to or addition of artwork), the Content Specialist sends a new copy to the Copyright Staff so they can seek permission from the publisher if copyrighted. Selections needing revision outside the technical scope of the Content Specialist are revised by Production Staff at **Step 7**.

#### **Step 7: Production Edits**

- Production staff makes edits to artwork. Once revisions are made, the selection is sent back to **Step 6** for another review by a Content Specialist.

### **Step 8: Test Measurement Specialist Final Review**

The Test Measurement Specialist (TMS) evaluates the selection in terms of

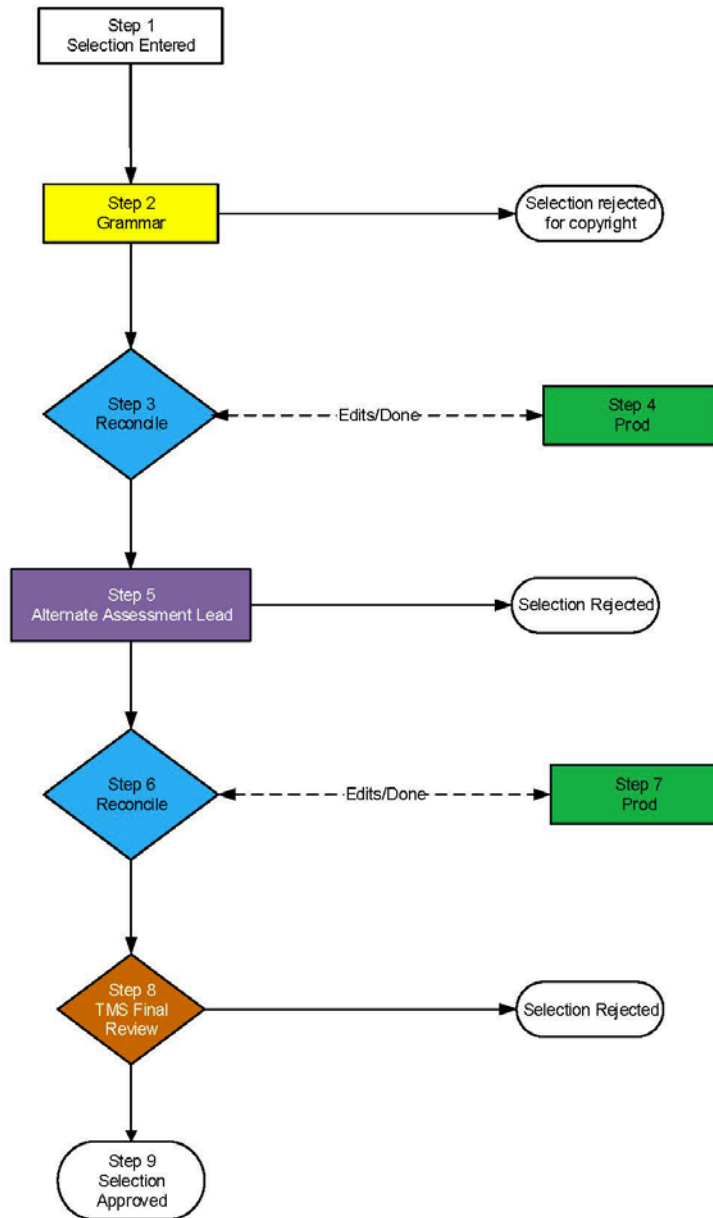
- alignment to grade-level expectations,
- content and length of the selection,
- readability of the selection, and
- bias or sensitivity concerns.

The TMS also evaluates

- any bias or sensitivity concerns raised by the Alternate Assessment Lead review and
- edits made by Content at **Steps 1 and 3.**
- If the TMS rejects the selection, it is deleted from the pool. If the TMS approves the selection, then it moves to **Step 9.**

**Step 9: Selection Approved** Selection is now ready to have items written to it.

## Alternate Assessment Selection Review



Revised Thursday, July 27, 2017 8:37:09 AM

## **Operational Form Review Process for the *NCEXTEND1* Alternate Assessments**

Prior to Step 1: Psychometrician reviews the test items for the initial placement in the form, taking key balance into consideration.

### **Step 1: Select Item Numbers**

A Psychometrician selects/approves the items to populate the form. The Psychometrician can send the form to **Step 2** (Production Edits) for revisions to artwork, graphs, or ELA selections, if needed, or sends the form to **Step 3** for content review or for replacements, if needed the Psychometrician approves any item replacement or revisions.

### **Step 2: Production Edits**

Revisions to items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 1** for review by the Psychometrician.

### **Step 3: Form Review/Reconciliation**

A Content Specialist reviews

- the items on the form for content alignment and quality of content, and
- the form for conflicts or repetition of content.

If any items need to be replaced owing to concerns regarding conflicts or repetition of content among items, or for quality concerns, the Content Specialist sends the form back to **Step 1** with comments for the Psychometrician. Otherwise, the form is sent to **Step 4**, TMS review.

### **Step 4: Test Measurement Specialist Review**

This review step is conducted to ensure that the form is ready for Outside Content Key Check (i.e., the form is ready for students).

- This review will cover both item and form-level quality.
- The Test Measurement Specialist (TMS) will submit a review for each item, including any comments. Suggestions for revisions to items should be made only when necessary.
- After reviewing the quality of each item, the form should be evaluated in terms of cueing, repetition, and content coverage.
- The key balance of the form is checked. If the key balance is poor, the TMS will suggest which items' foils to reorder and what the key ought to be. Any suggestions for key balance edits must be approved by the Test Development Section Chief and the form returned to **Step 1**.

After reviewing each item, the TMS can add form-level comments and suggested improvements, and can

- send the form back to **Step 1** with suggestions for replacements or revisions,
- move the form to **Step 5** (Reconcile), or
- delete the form from the pool.

### **Step 5: Reconcile**

At this step, the form is ready for Outside Content Key Check. The Content Specialist should review the form comments to ensure any suggested replacements or revisions have been addressed and that any approved replacements or revisions have been made correctly. If any replacements or revisions were made incorrectly, the Content Specialist moves the form back to **Step 1** with comments. Otherwise, the form moves to **Step 7** (Outside Content Key Check).

**Step 6: Production Edits**

Revisions to items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 5** for review by a content specialist.

**Step 7: Outside Content Specialist Key Check**

An Outside Content Specialist reviews the form by answering each item and providing any comments and/or suggestions. This review must be done on-site.

**Step 8: Reconcile Outside Content**

Content Specialist checks the keyed response from the Outside Content Review against the key for each item and reviews all comments and/or suggestions from the Outside Content Expert. Any key disagreements are reconciled, and any comments and/or suggestions from the Outside Content Specialist are addressed. Forms needing revision outside the technical scope of the Content Specialist are revised by Production at **Step 9**.

**Step 9: Production Edits**

Revisions to items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 9** for review by a Content Specialist.

**Step 10: Psychometric Review/Key Balance**

A Psychometrician

- reviews comments/suggestions from the Outside Content Specialist and from Editing staff, with consultation with the TMS and Content Specialists;
- checks key agreement with the Outside Content Specialist and resolves any disagreements through consultation with the TMS and Content Specialists;
- makes any approved revisions, or indicates revisions for Production staff to make, and sends the form to **Step 11** (Production Edits); and
- checks the key balance.

**Step 11: Production Edits**

Revisions to items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 11** for review by the Psychometrician.

**Step 12: Grammar Review**

An editor reviews the form for grammatical and/or formatting issues, providing comments and/or suggestions as needed.

**Step 13: Reconcile Grammar Review**

A Content Specialist reviews the form and reviews all comments from Editing staff and addresses any suggestions. Forms needing revision outside the technical scope of the Content Specialist are revised by Production at **Step 14**.

**Step 14: Production Edits**

Revisions to embedded experimental items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 13** for review by a Content Specialist.

### **Step 15: Alternate Assessment Lead Review**

The Alternate Assessment Lead reviews the comment history to ensure all comments have been addressed in terms of assessing students with significant cognitive disabilities. The Alternate Assessment Lead may choose one of the following options:

- Approve the form and move it to **Step 16** (Test Measurement Specialist Final Review).
- Send it back to **Step 13** (Content Specialist Review) if revisions are requested.

### **Step 16: Test Measurement Specialist Final Review**

The TMS reviews the form, considering the comments from the **Step 15** review to ensure all comments have been addressed properly. The key balance of the form is checked. The TMS makes any needed edits to items. Then the TMS sends the form to **Step 18** (Final Grammar).

### **Step 17 Production Edits**

Revisions to items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 16**.

### **Step 18: Final Grammar Review**

An editor reviews the form for grammatical and/or formatting issues, providing comments and/or suggestions as needed.

### **Step 19: Final Manager Review**

A Content Manager reviews comments/suggestions from the Grammar Review and makes any necessary revisions. The Manager checks the form for overall quality and reviews the form comment history to ensure all comments have been addressed.

After reviewing the form, the Content Manager may choose one of the following options:

- Approve the form and send it to **Step 21**.
- Send the form to **Step 10** (Psychometrician) if there are suggested revisions to operational items for the Psychometrician to consider.
- Send the form to **Step 20** (Production Edits) for revisions to artwork, graphs, or ELA selections.
- Reject the form.

### **Step 20: Production Edits**

Revisions to items such as artwork, graphs, and ELA selections are made by Production staff. Once the revisions are made, the form is sent back to **Step 19**.

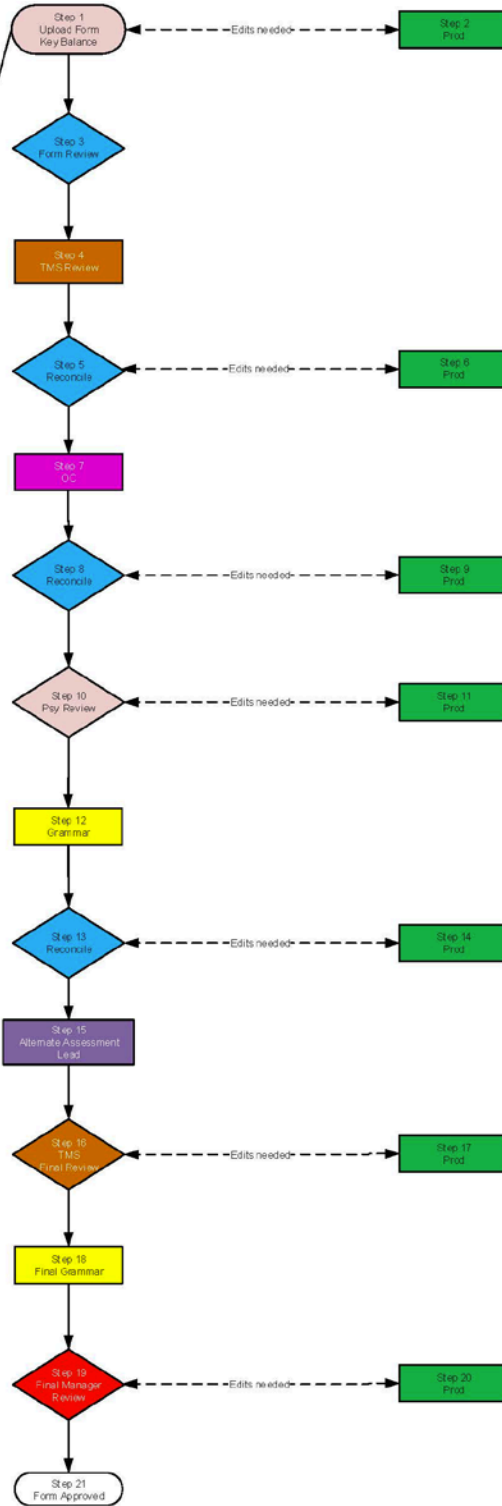
### **Step 21: Form Approved**

The form is approved for administration.

## Alternate Assessment Form Review



**Moving foils requires approval. Routing sheet must be completed.**



Revised Tuesday, July 18, 2017 10:18:49 AM