Case Study
Factors that support timely delivery of accessible formats

**Prepared for the
National Instructional Materials Access Center (NIMAC)**

NiMAC

January 31, 2026

**TRUE N RTH
EVALUATION**

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Executive Summary

The NIMAC contracted with True North Evaluation in November 2024 to conduct a mixed methods case study to explore factors that support the timely delivery of accessible formats. In collaboration with NIMAC leadership, True North Evaluation finalized the case study design (including sample and questions), data collection methodology, and instrumentation (online survey and interview protocol). Quantitative and qualitative data answered case study questions and sub-questions (listed in italics below).

After pilot testing the survey with case study states (Ohio, Oregon, Utah), the survey was administered widely between August-October 2025 to target audiences in case study states and via national channels; 329 surveys were completed. Simultaneously, True North Evaluation conducted 24 interviews (1:1 and focus group interviews) with a total of 119 participants.

Question 1: What are the positive benefits to timely delivery of newly created accessible instructional materials when NIMAS files for the materials are already in the NIMAC system?

Timely delivery was defined as students who need accessible formats receiving them at the same time as when their peers receive educational materials. Over two-thirds of respondents endorsed all benefits to timely delivery that were presented on the survey. Benefits of timely delivery, from most to least frequently endorsed, include equitable access to instructional materials, independence, active learning, psychological well-being, academic achievement, ownership of learning, reduced stigma, and positive relationships among students with print disabilities and their peers. Through qualitative feedback, participants suggested two additional benefits: timely delivery meets legal requirements and supports teacher effectiveness.

Sub-question 1a: What is the timeline for delivery of newly created accessible instructional materials when 1) NIMAS files for materials are already in the NIMAC system, 2) NIMAS files are not in the NIMAC system and materials are added to the Watchlist, and 3) materials are not within scope for NIMAS?

Participants reported that timelines for delivery of accessible formats are shortest when NIMAS files are in the NIMAC system. Median timelines for delivery when NIMAS files are in the NIMAC system ranged from two months (braille for STEM materials) to less than two weeks (accessible digital text materials). These timelines were shorter than the median timelines for delivery when materials are added to the NIMAC Watchlist, which ranged from nearly three-and-a-half months (braille for STEM materials) to approximately 3 weeks (accessible digital text materials). Respondents expressed difficulty specifying delivery timelines because of the breadth and complexity of materials and the variability in timelines based on each educational material.

Timelines reported by case study participants were consistent with NIMAC's internal tracking data from three recent calendar years (2021-2023), indicating that it takes a median of 34-38 days for NIMAS files to be acquired from publishers, certified, and accessible in the NIMAC system after they are submitted to the NIMAC Watchlist.

Overall satisfaction with timelines for delivery of accessible formats was relatively low, with respondents reporting their lowest satisfaction when accessible formats are not within scope for NIMAS and their highest satisfaction when NIMAS files are already in the NIMAC system.

Sub-question 1b: What impacts the timely delivery and use of accessible instructional materials best formatted to meet students' needs, as specified in their IEP?

Participants consistently reported that, on a regular basis, students with visual impairments and print disabilities use accessible formats that are less than ideal (based on their IEPs), as well as use different curricula from their peers. Over half of survey respondents reported that students use accessible formats that are less than ideal "often" or "always." Associated negative impacts include decreased academic achievement, increased teacher stress and responsibility, and mental health consequences for students. Nearly two-thirds of survey respondents were dissatisfied with students' ability to access and use accessible formats.

Nearly one-half to two-thirds of survey respondents endorsed a range of factors that negatively impact use of accessible formats, including lack of instructional support, pressure on teachers to use the most readily-available and least expensive format, lack of AT, the cumbersome nature of some accessible formats, the use of "backup" materials as students wait for appropriate accessible formats, and students' lack of familiarity with some formats. Qualitative feedback noted challenges associated with AT, materials that claim to be accessible but are not, and student preferences that are not respected. Statistically significant differences between states indicate that the structures and systems that facilitate the use of accessible formats (e.g., systems that facilitate AT and instructional support) likely differ across states.

Question 2: What practices, including procurement contracts, facilitate the timely delivery of accessible instructional materials?

Participants indicated many factors that facilitate timely delivery, organized into three domains: production practices, practices at the state, regional, district, and school level, and NIMAC practices. Regarding production practices, nearly three-quarters of survey respondents indicated the facilitation of timely delivery when accessible formats are already available at a central location in a state or district. Qualitative feedback illuminated two additional facilitators: local resources for accessible media production (e.g., local braille transcribers) and a streamlined production system.

With regard to practices at the state, regional, district, and school level, over three-quarters of survey respondents indicated the facilitation of timely delivery when requests for first-time production of accessible formats are made well in advance of when they are needed. Two-thirds of respondents endorsed a centralized workflow within a SEA, LEA, or Regional District system to process requests.

Participant feedback regarding the NIMAC was consistently positive. The vast majority of NIMAC Users (91%) agreed that "The NIMAC Watchlist request system is a valuable service for serving students when NIMAS files have not been received by the publisher." Over two-thirds of NIMAC Users and publishers also indicated that timely delivery is facilitated by NIMAC staff who provide effective and timely TA.

Participants stressed the importance of effective communication among relevant stakeholders. Across domains that facilitate timely delivery, there were statistically significant differences. While differences by respondent role are expected given that only a subset of roles are directly involved in searching for accessible formats or working directly with AMPs, differences by state suggest that states have varying degrees of experience utilizing the Louis Database of Accessible Materials and effectively working with and supporting AMPs.

Sub-question 2a: What practices, including those unrelated to compliance with the NIMAS requirement, hinder the timely delivery of instructional materials?

Participants identified a wide array of practices that hinder timely delivery. Regarding procurement-related factors, three-quarters of survey respondents indicated that timely delivery is hindered when materials are purchased at the school level and do not include the NIMAS requirement in procurement contracts. Additional factors endorsed by over half of respondents related to turnover among SEA/LEA staff responsible for procurement contracts, lack of awareness among SEA/LEA staff who coordinate procurement contracts, and neither the NIMAS requirement nor NIMAS file deadlines consistently included in procurement contracts. Qualitative feedback illuminated an additional hindrance to timely delivery: Curriculum decisions that are made without input from Special Educational professionals.

The two most frequently endorsed NIMAC-related factors that hinder timely delivery were misunderstandings about the NIMAC and NIMAS files, and a lack of understanding or awareness of the NIMAC. Participants suggested strategies to address challenges, including comprehensive trainings on effectively using NIMAS files, especially for large-print production.

With regard to production, the most frequently endorsed factor, by nearly three-quarters of survey respondents, was delays associated with obtaining a physical copy or PDF of the instructional material before the accessible format can be created. Additional factors selected by approximately two-thirds of survey respondents related to lack of communication between

those making curriculum decisions and publishers, staffing challenges that impact the capability of AMPs to produce accessible formats, and limited capability of AMPs to produce some accessible formats. Qualitative feedback further emphasized issues with insufficient lead time for the production of accessible formats.

At the state, district, regional, and school level, the two most commonly endorsed challenges, by over two-thirds of survey respondents, pertained to lack of communication: district-level or itinerant teachers (e.g., TVIs) who are unlikely to learn about district curriculum decisions, and curriculum changes at the state or district level that are not communicated to schools and teachers. Qualitative feedback illuminated an additional hindrance to timely delivery: lack of understanding of accessibility requirements and how to obtain accessible formats. Other qualitative feedback regarding state, district, regional, and school-level practices suggested communication to be a root cause for many challenges to timely delivery, juxtaposing the earlier finding that communication can be a key facilitator of timely delivery as well.

Challenges to timely delivery in charter schools mirrored those at state, district, regional, and school levels. Over two-thirds of survey respondents indicated three hindrances: Lack of familiarity with special education and the process for obtaining accessible formats among charter school administrators, lack of resources needed to obtain accessible formats, and lack of accountability systems to promote timely delivery. Qualitative feedback illuminated an additional factor: Frequent use of teacher-created, non-traditional, and digital materials that are difficult to make accessible.

Statistically significant differences across roles in the endorsement of factors that hinder timely delivery indicated that LEA, ESD, regional, and cooperative agency staff were less likely to endorse challenges associated with the NIMAS requirement not being included in procurement contracts and deadlines for NIMAS file production not included in procurement contracts. These findings are concerning since educational materials are often purchased at the LEA level by staff who may not be aware of NIMAC-related factors involved in accessible format production. A number of statistically significant differences across states highlight how each has unique strengths and challenges that impact processes for accessible format production.

Sub-question 2b: How can the NIMAC help SEAs and LEAs understand and implement strategies for consistent inclusion of the NIMAS requirement in procurement contracts?

Approximately 75% of survey respondents were not familiar with and had not been involved in procurement contract processes for educational materials. Of those with some familiarity, more than half indicated that the NIMAS requirement is never or rarely included in procurement contracts. This is problematic given that the NIMAS requirement in procurement contracts is the only legal mechanism for requiring publishers to submit NIMAS files to the NIMAC repository.

Participants provided insight into strategies to help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts. Over two-thirds of survey respondents endorsed strategies that involve trainings with procurement staff, General Education Departments, and Special Education Departments, as well as the development of educational materials about the NIMAC and the NIMAS requirement. Approximately half of respondents endorsed the creation of a designated position that focuses on outreach to states and LEAs to provide guidance and TA. Qualitative feedback illuminated two additional strategies: Creating a standardized workflow that includes the NIMAS requirement and creating a national requirement or law. Many strategies were endorsed most frequently by IMC/IRC staff and NIMAC Users, suggesting that these groups will likely be important partners for increasing awareness of the importance of including the NIMAS requirement in procurement contracts.

Recommendations

Using insights from quantitative and qualitative survey and interview data analyses, participant suggestions, and evaluator observations, True North Evaluation offered the NIMAC several recommendations to enhance its ongoing efforts to facilitate more timely delivery of accessible formats. Recommendations include: Explore opportunities to build greater awareness of accessible formats and provide education about the benefits of timely delivery to relevant stakeholders; Explore strategies to ensure that state AT centers and other AT agencies are aware of AEM and accessible formats and understand how AT and AEM work together; Explore opportunities to provide extra support for states without an IRC and to promote the establishment of IRCs in states that do not have them; Consider ways to publicly highlight the success of the NIMAC and NIMAC Users, to increase awareness of the NIMAC as well as utilization of NIMAS files; Continue to leverage input from NIMAC Users in the improvement of the NIMAC online system; Explore ways to help AMPs acquire PDFs and physical copies of materials, possibly using contract language that requires either PDFs or hard copy books at the same time as the NIMAS deadline; Explore strategies for connecting with LEA-based and other local AMPs to help them learn about the use of NIMAS files; Consider partnering with organizations that currently provide AMP training (or may plan to do so) and integrate the use of NIMAS files in existing or new training programs; Explore the development of resources for SEAs and LEAs that provide basic information about ordering timelines and options for obtaining accessible formats; Explore ways to support charter schools in their efforts to provide timely delivery of accessible formats; Disseminate the findings of this report widely to facilitate shared understanding and cooperation about factors that impact timely delivery; Consider mechanisms to address systems change and implementation issues pertaining to AMPs, compliance with new Title II requirements of the ADA, communication at state, regional, district, and school levels, and the role of the NIMAC, NIMAS files, and the importance of including the NIMAS requirement in procurement contracts.

Introduction

Description of Case Study Project

The NIMAC contracted with True North Evaluation in November 2024 to explore factors that support the timely delivery of accessible formats. The primary strategy would be a mixed methods case study involving an online survey and interviews, administered in select states (Ohio, Oregon, and Utah) as well as nationally. Instruments would collect quantitative and qualitative data to address key questions: 1) What are the positive benefits to timely delivery of newly created accessible instructional materials when NIMAS files for the materials are already in the NIMAC system? 2) What practices, including procurement contracts, facilitate the timely delivery of accessible instructional materials? Survey and interview protocols would also inform sub-questions regarding timelines for delivery of newly created accessible instructional materials; impacts to timely delivery and use of accessible instructional materials; practices that hinder timely delivery; and strategies for the NIMAC to implement to support State and Local Education Agency efforts to include the NIMAS requirement in procurement contracts.

In response to the NIMAC Request for Service, True North Evaluation proposed a case study approach that would rely heavily on collaborative planning and continuous communication; meaningfully planned data collection activities informed by deep understanding of the NIMAC and case study questions, as well as observation of technical assistance (TA); use of mixed methods (surveys, interviews, evaluator observation, and review of extant data) with multiple sources to allow for triangulation and meaningful interpretation of findings; and objective, high-quality data analyses and reporting to inform case study questions. Upon selection, and over the next 12 months, True North Evaluation worked closely with NIMAC leadership[1] across three phases: 1) case study planning, 2) case study design and instrumentation development, and 3) data collection. This report is the product of a fourth phase: data analysis and reporting.

To understand deeply the nuances associated with the initial case study request,[2] True North Evaluation met weekly with the NIMAC between November 2024—April 2025. These one-hour virtual meetings provided True North Evaluation context about the NIMAC's role in supporting the production and delivery of accessible formats by other agencies. The meetings helped with finalization of case study questions (see below) and allowed True North Evaluation to develop and refine two tables for identifying potential data sources for the case study and mapping

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[1] Both the Project Director, Nicole Gaines, and Manager, Elizabeth Schaller, participated in all planning and implementation stages of the case study with True North Evaluation.

[2] The NIMAC Request for Services stated, "Our area of interest for the present case study is to examine the positive benefits to timely delivery when NIMAS is required by the states and districts in procurement contracts, as opposed to the challenges to timely delivery when this does not happen."

questions to relevant audiences. The *Table of Data Sources* listed committees and groups (e.g., Trustee Advisory Committee, NIMAC User Group, NIMAC Advisory Council) that could provide input on case study design, including target audiences and outreach strategies, as well as opportunities to collect data (e.g., American Printing House (APH) Annual Meeting, NIMAC User Trainings) and extant data sources (e.g., NIMAC State Usage Data, NIMAC 2024 Annual Performance Report). The *Table of Survey Items by Data Source* served as a guide for mapping case study questions to survey items, interview prompts, NIMAC Exit Ticket Surveys administered after trainings, and target audiences (e.g., State Coordinators, Accessible Media Producers, Publishers and Vendors).

Also, during this stage, to learn more about the NIMAC, its services, and its target audiences, True North Evaluation observed its User Group Meeting (3/13) and its spring trainings for State Coordinators (3/4), Accessible Media Producers (3/5), and Authorized Users and hybrid State Coordinators (3/12). These trainings also provided an opportunity to pilot test questions (via NIMAC Exit Ticket Surveys) that would be included in the Case Study Survey.

By the end of April 2025, three case study states were identified[3] and had consented to participation: Ohio, Oregon, and Utah.

In May 2025, the second phase of the case study began: Case Study Design and Instrumentation. True North Evaluation scheduled initial meetings with key contacts in each state, identified by the NIMAC. These included the Director of Utah State Instructional Materials Access Center (meeting on 5/27); Oregon Department of Education's Low Incidence Disability Specialist, BVIS Technology Professional Development Specialist, and Textbook and Media Center Staff (meeting on 5/29); and Ohio's Assistive Technology (AT) & Accessible Educational Materials (AEM) Center at OCALI Program Director, Production Specialist, Materials Specialist, and Project Staff (meeting on 5/13). At each meeting, True North Evaluation learned about state structures and systems for delivering accessible materials, identified target groups for survey administration and interviews, and discussed logistics regarding communication protocols and school calendars. In June 2025, True North Evaluation sent customized post-meeting emails to each case study state, proposing next steps and timelines according to information discussed.

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[3] An initial list of 7 case study states was developed with the NIMAC. They represented states that the NIMAC worked closely with and that seemed to include NIMAS language in procurement contracts with some regularity, possibly indicating more effective systems for accessible format production and delivery. True North Evaluation drafted an outreach email describing the case study and its flexible, customized approach to data collection. The NIMAC sent the email, to which some declined the invitation, some provided mixed or partial responses, and others welcomed the opportunity to contribute to the study.

During this stage (May—July 2025), True North Evaluation met biweekly with the NIMAC, exchanged frequent email communications, and developed the survey and interview protocol (see Appendices A and B). Ongoing communications with case study states, including impromptu meetings on request (e.g., with Oregon on 6/30), informed implementation plans.

Additionally, to inform instrument development and administration processes, True North Evaluation attended NIMAC meetings with its Advisory Council (5/6) and User Group (6/10) and collected data via in-person observation and NIMAC Exit Ticket Surveys for Publisher Trainings Part 1, Part 2, Part 3 (trainings on 6/24, 6/25, 7/8, 7/9, 7/22). These efforts allowed for early pilot testing of survey items and analysis of data that informed case study questions.

In June and July 2025, True North Evaluation developed the Case Study Survey to address case study questions, refined items with NIMAC input, identified audiences suitable to answer specific questions, and embedded skip logic accordingly. Extensive rounds of pilot testing ensured accuracy of skip logic and survey items. To ensure that appropriate terms and role categories were relevant/meaningful for various target audiences in case study states, True North Evaluation sent the survey to each case study state for review. Ohio and Oregon suggested minor adjustments to role categories, resulting in the decision to use a separate survey link for each case study state as well as a fourth survey link for national distribution (respondents to the national survey indicated their state). In summary, the case study survey was finalized and uploaded to True North Evaluation's Survey Monkey platform, and four links and QR codes were created.

Simultaneously, True North Evaluation developed 1) the protocol for 1:1 and focus group interviews, and 2) an Interview Tracking Sheet to track outreach to target audiences, including dates of initial emails, follow-up communications, and scheduled interviews. The NIMAC had access to this sheet so they could check in real time the status of interview efforts.

Between August-October 2025, True North Evaluation managed the third phase of the case study: Data Collection. On August 13, True North Evaluation sent a detailed email to each case study state which contained the state's unique survey link and instructions for dissemination through previously agreed-upon channels. Each email also identified next steps for scheduling focus group interviews with previously identified leaders (e.g., Special Education Directors) and groups (e.g., Curriculum Teams, AT & AEM Center Staff, Online Charter Schools). Overall, in this three-month period, the Case Study Survey was administered broadly through multiple channels in case study states, NIMAC trainings, and national events (see methodology below). Interviews were coordinated, scheduled, and conducted, supported by best practices such as interview reminders and follow-up thank you emails (see methodology below). Relevant items continued to be included on NIMAC Exit Ticket Surveys for fall events: NIMAC Back-to School

Meetings with State Coordinators (9/3/25) and Authorized Users (9/10/25). In addition to continuing observation of NIMAC trainings, True North Evaluation attended in-person the APH Annual Meeting in Louisville, KY (10/15/25) and conducted two focus group interviews.

Case Study Questions

The survey and all interviews (1:1 and focus group) were designed to collect data to answer two key questions, each with subcomponents:

1) Question 1: What are the positive benefits to timely delivery of newly created accessible instructional materials when NIMAS files for the materials are already in the NIMAC system? [Timely delivery = having materials at the same time as other students]
   a. Sub-question 1a: What is the timeline for delivery of newly created accessible instructional materials when 1) NIMAS files for materials are already in the NIMAC system, 2) NIMAS files are not in the NIMAC system and materials are added to the Watchlist, and 3) materials are not within scope for NIMAS (e.g., OER, trade materials, some digital files)?
   b. Sub-question 1b: What impacts the timely delivery and use of accessible instructional materials best formatted to meet students' needs, as specified in their IEP?
2) Question 2: What practices, including procurement contracts, facilitate the timely delivery of accessible instructional materials?
   a. Sub-question 2a: What practices, including those unrelated to compliance with the NIMAS requirement, hinder the timely delivery of instructional materials?
   b. Sub-question 2b: How can the NIMAC help SEAs and LEAs understand and implement strategies for consistent inclusion of the NIMAS requirement in procurement contracts?

Methodology

As described earlier, the Case Study Survey was structured to inform case study questions, using skip logic to present items relevant to specific audiences. It was designed to collect both quantitative and qualitative data; closed-ended and rating items were followed by open-ended questions that provided respondents the opportunity to explain and clarify multiple and forced-choice items in their own words. See Appendix A for the Case Study Survey.

Each state received its own survey link, with terminology tailored for staff roles and regional district structures. A fourth survey link was used nationally and included an item for respondents to indicate their state. All four survey links were accompanied by QR codes for presentation during virtual events (e.g., NIMAC trainings), sharing on PowerPoint slides during

in-person events (e.g., APH Annual Meeting), and inclusion in states' social media, newsletters, and other dissemination efforts (e.g., listservs).

True North Evaluation coordinated with each case study state (OH, OR, UT) a plan for survey dissemination (using a unique link created for the state) and interviews (1:1 and focus group). Once the Case Study Survey was finalized, True North Evaluation and the NIMAC decided to administer it widely. Similarly, to capitalize on relationships already established in case study states, they decided to conduct as many interviews as possible with target audiences knowledgeable about special education, the needs of students with an Individualized Education Program (IEP), or the practices (e.g., procurement, production) impacting timely delivery of accessible instructional materials. Thus, at the end of the Case Study Survey and at the end of interviews, recommendations for additional interviewees were solicited.

Interviews were conducted via Zoom, except for two in-person focus groups conducted during the 2025 APH Annual Meeting. At the beginning, the interviewer explained that participant identities would remain confidential and asked for permission to record interviews. All participants consented, except for one virtual interview and one in-person interview where recording was logistically impractical (notes were taken during these two interviews). The interviewer recorded interviews via Zoom and used the audio files to create verbatim transcripts. The transcripts were then imported into Dedoose, a qualitative software program. An initial codebook was developed based on *a priori* codes that reflected the topics of interview questions, which mapped to case study questions and pre-determined answer options to survey items. Codes were added to the codebook to capture additional themes, as needed. Please see Appendix B for the Interview Protocol.

Given the snowball sampling method that True North Evaluation and the NIMAC planned for survey distribution, myriad avenues (e.g., social media, listservs, monthly meetings, newsletters) across case study states and national opportunities were used by the following groups:[4]

> *Ohio*: AT & AEM Center powered by OCALI, Teaching All Learners Center, Curriculum Workgroup, Department of Education & Workforce Office for Exceptional Children, State Support Teams, Ohio Leadership Advisory Council, Outreach Center for Deafness and Blindness, Ohio Center for Deafblind Education, Ohio Deaf and Blind Education Services

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[4] These represent avenues known to True North Evaluation. It is possible that case study states disseminated the Case Study Survey through additional channels not listed (i.e., unknown to True North Evaluation). Additionally, some of the avenues listed were coupled with virtual presentations at monthly meetings, where True North Evaluation was invited to present the case study and share the survey link.

- *Oregon*: Oregon Department of Education Curriculum Team, Regional Inclusive Services Supports, Regional Education Service Districts, Special Education Directors, State TVI Professional Learning Team, Oregon Textbook & Media Center, Baker Web Academy (online charter school), Charter School Administrators, Oregon DeafBlind Project
- *Utah*: Utah State Instructional Materials Access Center, Utah State Board of Education, State Director of Special Education, Network of Special Education Directors, LEA Curriculum Directors, Charter School Directors, Visual Impairments Program at the University of Utah, Utah Schools for the Deaf and Blind
- *National*: NIMAC Users (State Coordinators, Authorized Users, Accessible Media Producers, Publishers and Vendors), NIMAC Braille 2000 User Group, NIMAC Duxbury User Group, National Prison Braille Network, Instructional Resource Centers for the Blind or Visually Impaired (IRCBVI), Bookshare, various state organizations with interest in the case study or established systems for timely delivery (e.g., Iowa Instructional Materials Center, North Carolina Department of Public Instruction, Pennsylvania Training and Technical Assistance Network, Texas Education Agency, Wisconsin Center for the Blind and Visually Impaired

As a result of this broad outreach, coupled with persistent and prompt communications with case study states throughout the data collection phase, survey response and interview participant numbers were high (see Case Study Findings). Specific survey response rates, however, were not possible to calculate given the latitude and encouragement given to case study states for sharing their unique survey link.

Case Study Findings

Below are the quantitative and qualitative findings from the survey and all interviews. Please see Appendix A for the Survey and Appendix B for the Interview Protocol.

Summary of Interviews

A total of 24 interviews[5] were completed with 119 participants (see Table 1). All interviews were conducted virtually, except for two focus group interviews that were conducted in-person at the 2025 American Printing House (APH) Annual Meeting (with the Prison Braille Forum and with leaders from State Instructional Resource Centers (IRCs)). For all virtual focus group interviews, participants were from the same state, and over three-quarters (79%) were conducted with the three case study states. To gather additional perspectives, we also conducted interviews with participants from Texas, North Carolina, and Iowa. Overall, interview participants represented a range of stakeholders, including NIMAC Users, State Education Agency (SEA) staff, Local Education Agency (LEA) and Education Service District (ESD)[6] staff, Regional Agency and Cooperative staff, IRC staff, school staff (e.g., teachers, principals), and accessible media producers (AMPs).

Table 1. Summary of Case Study Interviews

Case Study State, Event, or Other State of Interest	Total # of Completed Interviews	Total # of Participants[7]
Ohio	7	23
Oregon	9	34
Utah	3	7
APH Annual Meeting	2	47
Iowa	1	3
North Carolina	1	4
Texas	1	1
Totals	**24**	**119**

Survey Response Data

As noted above, the online survey was distributed through four distinct links (one for each case study state, and a national link for all other states). The number of respondents for each survey

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[5] The term "interviews" includes both 1-on-1 interviews and focus group interviews.

[6] In Washington and the case study state of Oregon, the term "Education Service District (ESD)" is used instead of "Local Education Agency (LEA)."

[7] 2 participants participated in 2 focus group interviews.

and their respective states are presented in Table 2. A total of 329 survey responses from 38 states are included in this report.[8]

Table 2. Respondent Information by Survey

Survey	Respondents (*n*)[9]	States Represented[10]
Ohio	101	Ohio
Oregon	49	Oregon
Utah	51	Utah
National	128	Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, Wisconsin
Total	**329**	

Survey respondents represented a variety of roles, as shown in Figure 1. Thirty percent of the survey respondents indicated they were NIMAC Users. Of the 82 school staff who completed the survey, 66% worked at public schools, 21% at charter schools, 6% at schools for specific populations (e.g., visually impaired populations), 6% at "Other" schools (e.g., Special Day School), and 1% at private schools. These school staff included teachers of special education students, including teachers of students with visual impairments (TVIs), general education teachers, school administrators, braille producers, paraprofessionals, and other related service providers and specialists (e.g., instructional support specialists).

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[8] Response rates cannot be determined given the snowball sampling method that was used to distribute the survey through key partners and stakeholders.

[9] A total of 395 respondents started the survey. The final sample size of 329 includes respondents who answered at least 1 substantive question.

[10] Some individuals from each case study state received the national survey through our outreach attempts. Although these individuals completed the survey through the national survey link, they are included with their case study state throughout this report.

Figure 1. Survey Respondents by Role[11]
(*n* = 329)

Role	Percentage
LEA or ESD Staff	26%
School Staff	25%
Regional Agency or Cooperative Staff	16%
Instructional Materials or Resource Center Staff	13%
SEA Staff	10%
Publisher or Conversion Vendor	6%
Accessible Media Producer	4%
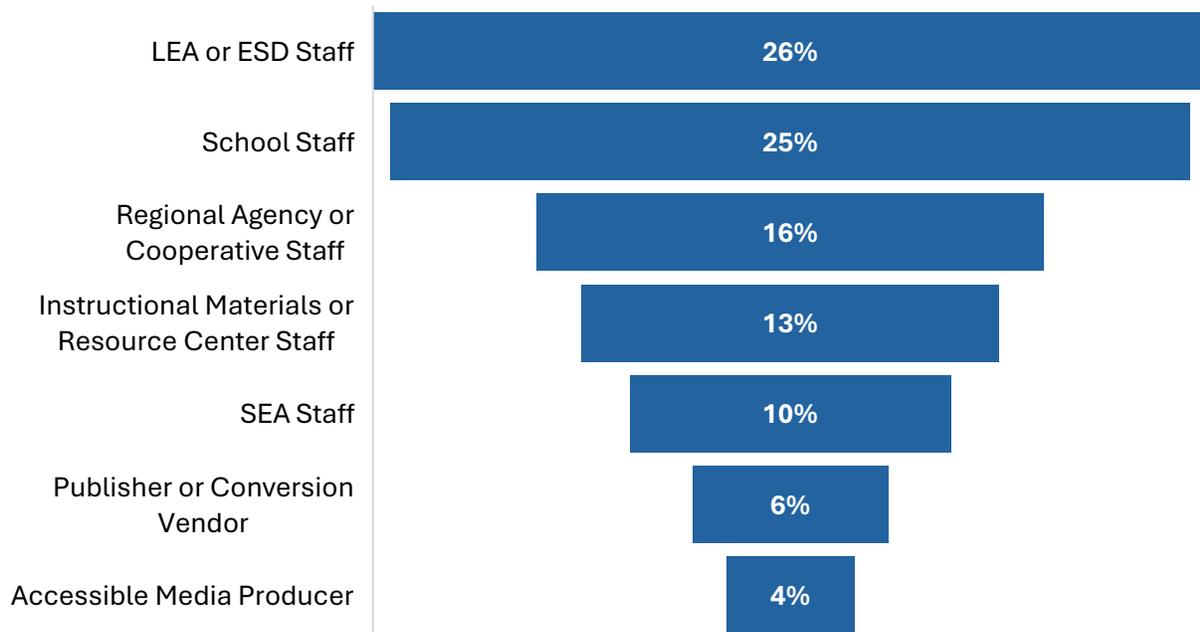
There are a few noteworthy differences in roles across the surveys. Among respondents who were Regional Agency or Cooperative Staff, the majority (77%) were from Ohio. Among numerous other roles including Instructional Materials Center (IMC) or IRC staff, Publishers or Conversion Vendors, Accessible Media Producers, and NIMAC Users, the majority completed the national survey (69%, 80%, 93%, and 75%, respectively).

Benefits of Timely Delivery

Survey respondents were asked, "What are the positive benefits of timely delivery of accessible formats for students with print disabilities?"[12] Survey respondents were able to select multiple positive benefits of timely delivery (all of which are presented in Figure 2). Over 90% of respondents selected three benefits: "Promotes equitable access to instructional materials," "Promotes independence among students with print disabilities," and "Promotes active learning among students with print disabilities." At least three-quarters of respondents selected "Supports the psychological well-being of students with print disabilities" (85%), "Facilitates academic achievement among students with print disabilities" (85%), and "Facilitates ownership of learning among students with print disabilities" (75%). The two least endorsed

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[11] Respondents were asked to choose their role from a list of options, all of which are presented in Figure 1.
[12] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

items, still selected by over two-thirds of respondents, were "Reduces stigma associated with print disabilities" (69%) and "Supports positive relationships among students with print disabilities and their peers" (67%).

Figure 2. Benefits of Timely Delivery[13]
(*n* = 312)

Benefit	Percentage
Promotes equitable access to instructional materials	93%
Promotes independence among students with print disabilities	91%
Promotes active learning among students with print disabilities	91%
Supports the psychological well-being of students with print disabilities	85%
Facilitates academic achievement among students with print disabilities	85%
Facilitates ownership of learning among students with print disabilities	75%
Reduces stigma associated with print disabilities	69%
Supports positive relationships among students with print disabilities and their peers	67%
Other	4%

When comparing the pattern of responses displayed in Figure 2 across the three case study states as well as the national survey, there were *two statistically significant findings.* Specifically, respondents in Ohio were more likely than other respondents to endorse "Supports the psychological well-being of students with print disabilities" as one of the positive benefits of timely delivery, ($\chi^2(3) = 11.12$, *p* < .05, standardized residual = 2.3; see Figure 3). In addition, respondents to the national survey were less likely to endorse this same item ($\chi^2(3) = 11.12$, *p* < .05, standardized residual = 2.0; see Figure 3). These findings may suggest that stakeholders in Ohio have a heightened awareness of the psychological benefits of timely delivery among students with print disabilities compared to stakeholders in other states.

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[13] 8 respondents selected "Don't Know" (these responses are not included in the figure). 13 respondents selected "Other" and described additional benefits of timely delivery, which are included in the qualitative analysis described below.

Figure 3. Benefits of Timely Delivery: Differences by Location[14]
(*n* = 312)
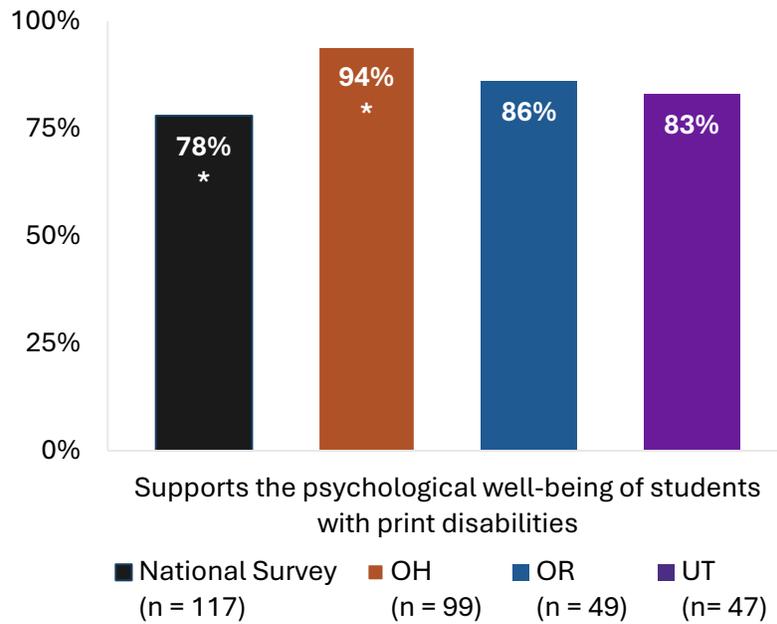
When examining positive benefits of timely delivery across respondent roles,[15] there were *two statistically significant findings*. IMC/IRC staff were less likely than other respondents to endorse "Promotes active learning among students with print disabilities" as one of the positive benefits of timely delivery (Fisher's exact test *p* < .05; see Figure 4), indicating that IMC/IRC staff may be less likely to recognize the impact of timely delivery on active learning. In addition, NIMAC Users were less likely to endorse "Supports the psychological well-being of students with print disabilities" (78%; *n* = 96) compared to respondents who were not NIMAC Users (88%; *n* = 216; $\chi^2(1)$ = 5.03, *p* < .05), suggesting that NIMAC Users may be less aware of the impact of timely delivery on students' psychological well-being.

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[14] 8 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

[15] When examining statistically significant differences across respondents' roles, we examined 5 role categories: 1) LEA, ESD, and regional/cooperative agency staff, 2) school staff, 3) IMC/IRC staff, 4) SEA staff, and 5) AMPs, publishers, and conversion vendors. We also examined differences between NIMAC Users and respondents who were not NIMAC Users.

Figure 4. Benefits of Timely Delivery: Differences by Role[16]
(*n* = 312)
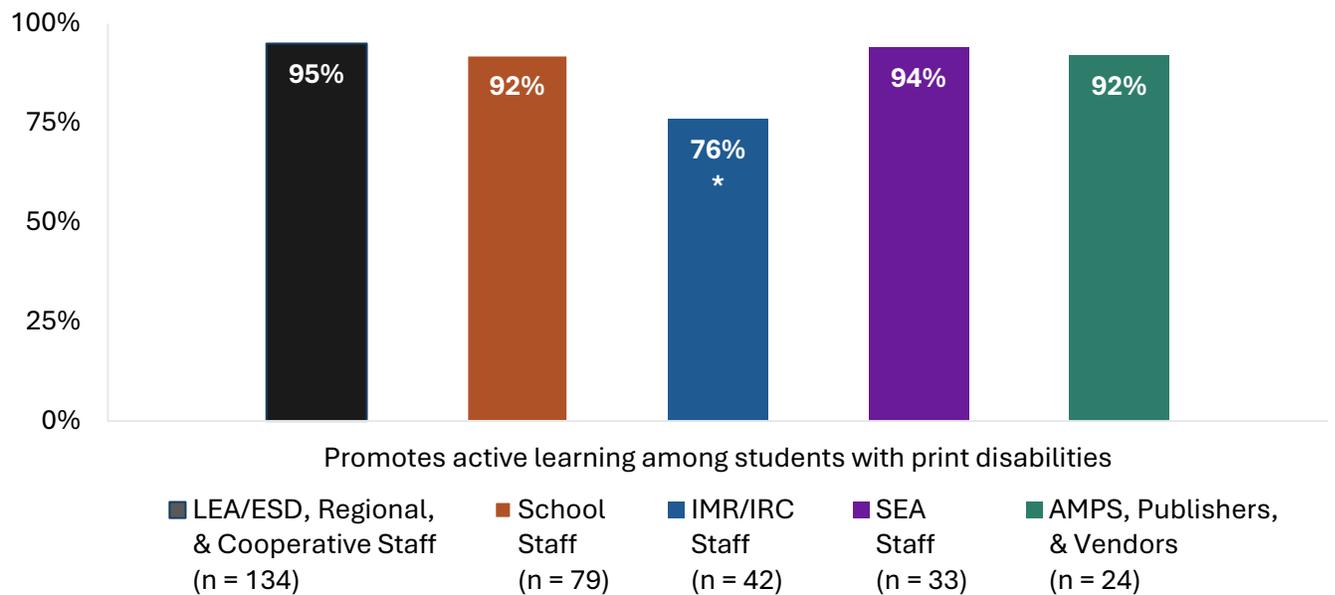
To supplement quantitative findings from surveys, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe the benefits of timely delivery of accessible formats. Survey respondents were given the opportunity to suggest other benefits and to explain their selections.

Participant[17] descriptions of the benefits of timely delivery are presented by theme in Table 3. Many provided qualitative responses that were consistent with the positive benefits of timely delivery presented in the survey and listed in Figure 2. The three benefits described most often were facilitation of academic achievement (86 excerpts[18]), promotion of equitable access to instructional materials (55 excerpts), and support of students' psychological well-being (44 excerpts). In addition to the benefits of timely delivery presented in the survey, two additional themes emerged from the qualitative data: timely delivery meets legal requirements (13 excerpts) and supports teacher effectiveness (9 excerpts).

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[16] 8 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

[17] Throughout the report, the term "participants" refers to interview participants and may include survey respondents who provided qualitative data in response to open-ended survey questions.

[18] "Excerpts" refer to short segments of text (e.g., sentences or short passages) from open-ended survey responses and interview transcripts. In qualitative data analysis, excerpts are identified and then examined to determine themes in the data. Multiple excerpts may come from the same participant. Excerpts throughout this report are presented verbatim and corrected only for grammar or readability.

Benefit of Timely Delivery	Representative Quotations
Facilitates academic achievement (86)[20]	When students with print disabilities are able to access the same material at the same time as their peers, the learning process continues without interruptions. (OH)
	I have had students use the print materials, and it gives them access to the same materials as their peers. This is critical for them to get the same educational benefits as their peers. (OR)
	It's very hard to learn without access to the learning material used by everyone else in the classroom. When materials aren't available at the same time that they're available to peers, our students are at an immediate disadvantage. Lack of access to materials can be very disheartening, and it's hard for students to bounce back once the materials do become available. Students can also fall behind on content when materials are unavailable, adding extra stress and work demands that are not experienced by their peers. (OR)
	Students should not have to use mental and social capacity worrying about how they will access the curriculum. If they don't receive accessible formats, they are worrying about what they are going to do. If they have accessible formats, they can focus on accessing the instructional materials and being part of their classroom. (OR)
	If the student doesn't have in their hands the material they need to follow along the class and to read with the others and to understand what they're talking about, it really is a hindrance to learning. (UT)
	If materials are not provided in a timely manner, how can they be expected to learn and thrive? (CO[21])
	Many students with print disabilities are behind their sighted peers because their materials are not always available at the same time. (MO)
	When students have access, they can achieve and learn academic content. Our students deserve to be in a position where they can access materials that help them learn and not only have to always depend on others to provide the information. (WA)
Promotes equitable access to instructional materials (55)	Timely means access. Timely means you're getting instruction and able to access your education at the same time that your peers are able to. And if you can't, then there's a problem. (OH)
	It comes down to access. Blind and visually impaired students need to have immediate access to accessible educational materials to ensure that they are provided with the same opportunity for learning as their peers without a visual impairment. (OH)

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[19] For all tables labeled "Qualitative Descriptions" or "Representative Quotations," the identified themes emerged from participants' responses to open-ended survey and interview questions. These themes were not generated from survey-supplied items.

[20] Numbers in parentheses indicate the number of excerpts associated with each theme.

[21] Respondents to the national survey indicated their state.

Benefit of Timely Delivery	Representative Quotations
	Equitable opportunity and access for learning requires that each student has their unique needs addressed in real time for each situation they encounter during their school day. (OH)
	I think the most important thing about the timely delivery of accessible formats is that it allows students the same opportunities as their peers to participate in their education. (OH)
	I had one teacher that told me…, "Well, [the student] just doesn't need to do this assignment." And I said, "Well, then are all your students not gonna do this? Because that's equity." (OR)
	We want students with visual impairments to be included and have the same access to education as other students. Timely delivery is absolutely necessary to achieve that. (IA)
	It levels the playing field for students with print disabilities. It puts them at the same level as all other students. (ND)
	Let me use the opposite: Would you pick a child out of class for any reason, and then just give them the materials an hour or a day later than their classmates? Of course not. That would be discrimination. So kids with disabilities need materials at the same time as their peers. (VA)
Supports psychological well-being (44)	What I think ends up happening is it plays into students' emotional state of thinking, "Now I'm the one who is having to ask my teacher to do more and I don't want to have to do that, or I'm the one who's causing the class to slow down." It really plays into how they're feeling about themselves, even though it's entirely not their fault. (OH)
	Getting materials that allow students to access learning will allow them to be more independent and more like their peers. All of which allows them to feel better about themselves. (OH)
	Middle schoolers and high schoolers have all of their elementary years of not being able to access materials and not being able to participate. So, most of them, as a defense, shut down or act out, and they become the high schoolers that just have their AirPods in and their heads down and are not participating at all. So, catching them early and providing them access teaches them that just because you're not able to read with your eyeballs doesn't mean you're not smart, or just because you can't write using a pencil doesn't mean you're not smart and don't have things to contribute. So, it's kind of giving them the confidence to participate and setting them up for success in those future years. (OR)
	It helps students to keep up with peers, helps them to succeed academically, and makes them feel valued (cared for). (OR)
	I believe that having accessible formats helps all of us feel better about our abilities and our place in the world. (UT)
	I have witnessed firsthand the value of timely materials with blind or vision students. Receiving their materials at the same time as their peers not only helps them academically but sends a powerful message that they are valued. (UT)

Benefit of Timely Delivery	Representative Quotations
	Students who need accessible formats have a lot of anxiety about their learning materials. (UT)
	It's stressful for students when the class is learning and has materials to look at, but the visually impaired student has to remember everything without text to follow along. (IA)
	The student I work with gets really upset if she does not have her materials to follow along or help answer the questions. (IA)
	Having accessible materials when others do makes them feel important. (NC)
	I work at a school for the blind and visually impaired. Many of our students arrive at our school behind their sighted peers in grade level. This is primarily caused by lack of access to timely instructional materials and often results in a sense of failure and a false sense that they lack the ability to learn. (TX)
Promotes active learning (27)	It makes a big difference if a student has the information when needed so they can participate along with the class. (OH)
	For our students, the positives are that they actually get to participate in the activities in real-time fashion. (OH)
	Students being able to actively participate in their education. If they don't have the materials, they can't. But when they do have them, you can frontload material, and they can participate with their peers at the same time. (OH)
	Having accessible formats at the same time as their peers means there is true equity in having the ability to truly engage in real time. (NC)
	Providing materials in accessible formats in a timely manner is a great practice because it ensures that students with print disabilities can fully access and engage with the curriculum alongside their peers. (TX)
Promotes independence (21)	There's nothing more frustrating than being given a piece of paper and being told your aide can read it to you. So, if you have an accessible educational material in advance, or at the same time, at least you are independent. (OH)
	There's this concept called learned helplessness, and if everyone is constantly doing something for that student with print disabilities, then why should they bother to learn skills on their own to access materials? It doesn't foster independence to constantly have things being read to you or for you. (OH)
	Independence is what we want to see from our individuals with disabilities and accessible formats foster independence for students with print disabilities. (OH)
	It gives them some autonomy, some independence, so they do not have to rely on an aide sitting next to them, or another student to tell them what's going on, or have to raise their hand and once again say, "I can't see that. Can you explain it?" Because a lot of kids won't even do that. So, then they don't feel like they can ask those questions, and then they fall even farther behind. (OH)
	The students with print disabilities do not have to rely on other people for accessing material which enables them to increase independence. (UT)
	We are trying to make our students as independent as possible and that includes having their materials ready and in proper format at the same time as their peers. (DE)

Benefit of Timely Delivery	Representative Quotations
Supports positive relationships (18)	Accessible formats allow students to access what all students are able to access which allows for a true least restrictive environment and sense of belonging with peers. It is critical for student success and learning as well as the ability to have a substantive role in class discussions, projects, etc. (OH)
	I would add socially… it is good for kids to feel a part of the class. (OR)
	When students with print disabilities have their materials available when their peers have textbooks, they can work together and not be isolated or get behind. (UT)
	It also can help facilitate peers' view of those with visual impairments by realizing things can still be done at the same time, in the same way, and without another adult facilitating it. (VA)
Meets legal requirements (13)	Timely delivery ensures the school can deliver FAPE [Free Appropriate Public Education]. (OH)
	Students with print disabilities deserve access to timely materials. It is a right, and any delay or challenge in getting materials at the same time as their peers is a civil rights violation. (OR)
	I believe we need to rely more on the fact that this is a legal requirement rather than convincing folks why it's a good idea. (OR)
	By law, students need to have materials at the same time as their peers. (IA)
	Students with disabilities (print, visual) are legally entitled to FAPE [Free Appropriate Public Education] and accessible materials. There is no other justification needed beyond this. (VA)
	IDEA [Individuals with Disabilities Education Act] 2004 requires that accessible materials be provided in an accessible format and a timely manner. (SC)
Supports teacher effectiveness (9)	It allows for the teacher to easily include all students in the educational expectations and experiences at the same time and level as their peers. (OH)
	Another positive is that for students who are in general education classes, it doesn't interrupt the instruction and is less worrisome for the teacher because the students are coming to class prepared. (OH)
	If students can get access to accessible formats at the same time as their peers, the teachers aren't scrambling trying to find that same book or something in a different format. (OH)
	Anything that can be done ahead takes away the stress and time put on the vision teacher to find the material and a way to make it accessible; this means more direct support between the vision teacher and student. (CA)
	Prevents staff labor related to providing an alternative resource, unnecessarily burdening staff responsible for the student's education program. (National Technical Assistance Center)
	Timely delivery of accessible materials for students with visual impairments allows Teachers of Students with Visual Impairments [TSVIs] to focus on other necessary instruction and supports. It especially reduces the amount of time TSVI's spend accommodating print materials for students who need braille. (TX)
	It supports meaningful access by giving all students the opportunity to succeed [and] helps teachers plan and differentiate instruction effectively. (TX)

Benefit of Timely Delivery	Representative Quotations
Reduces stigma associated with print disabilities (8)	It helps to reduce that sense of otherness with the kids if they're immersed in the same materials. Even if it looks a little bit different, other kids kind of understand that they're just like us, just doing it a slightly different way. This obviously promotes a little bit more collegiality and understanding. (OH)
	When students don't have the materials they need to participate with their peers, they become outcasts immediately even if peers do not mean to do this. (OH)
	Timely delivery is especially important because it allows the student to be involved as their peers with the content and their environment. If it became a "norm" to have timely delivery of accessible formats, the stigma would be reduced. (OH)
	Without equitable and timely access to the same educational materials, our students with print disabilities are further isolated or "othered." (OR)
Facilitates ownership of learning (6)	I expect that when all my other peers get something, I'm going to get it too. So, when that doesn't happen, I feel confident to speak up and say, "Hey, what happened here? This shouldn't happen in the future." Whereas as if our expectation is always less than, then we're not speaking up, we don't feel comfortable advocating for ourselves, and it just snowballs and perpetuates into the future. (OH)
	Equitable access to materials supports active classroom participation, independence, and ownership of the learning process. (MA)
	The most important benefit of timely delivery is so the students can be independent and take ownership for their learning. Without access to accessible materials, the students learn to have lower expectations of themselves. Ultimately, this affects their success after high school. (VA)

Timeline for Delivery of Accessible Educational Materials (AEM)

Select survey respondents (i.e., NIMAC Users, AMPs) were asked, "How familiar are you with general timelines for delivery of newly created accessible formats?" As indicated in Figure 5, nearly two-thirds of respondents were familiar with general delivery timelines (32% were "very familiar," and 29% were "moderately familiar").

Figure 5. Familiarity with General Timelines for Delivery of Newly Created Accessible Formats
(*n* = 100)
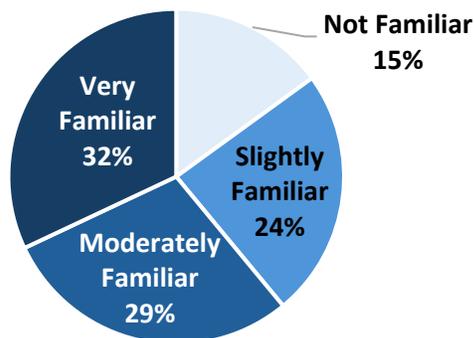
Respondents who were at least "slightly familiar" with general timelines for delivery (*n* = 85) were asked to indicate the average timeline for delivery of four accessible formats (braille for STEM materials, braille for non-STEM materials, large print materials, and accessible digital text materials (e.g., DAISY, EPUB)) under two different circumstances: 1) when the NIMAS files are already in the NIMAC system, and 2) when the materials are added to the NIMAC Watchlist.[22] As shown in Tables 4 and 5,[23] the median timeline for delivery of each accessible material is shorter when NIMAS files are in the NIMAC system compared to when materials are added to the NIMAC Watchlist. For example, the median timeline for delivery of braille for STEM materials is 2 months when the NIMAS files are in the NIMAC system compared to 3.4 months when materials are added to the NIMAC Watchlist.

Table 4. Timelines for Delivery When NIMAS Files are in the NIMAC System[24]
(*n* = 30)

Accessible Format	Median (Number of Months)	Average (Number of Months)	*n*
Braille for STEM materials	2.0	3.3	21
Braille for non-STEM materials	1.9	2.6	20
Large print materials	1.1	1.2	14
Accessible digital text materials	0.3	0.5	16

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[22] Respondents were asked about the timelines for delivery of accessible format "materials" within each category (e.g., braille for STEM materials) and were not limited to a specific type of material (e.g., textbooks). Therefore, the timelines for delivery should be interpreted as applying to a range of materials within each category (e.g., braille for STEM materials could include textbooks, workbooks, lab manuals, etc.).

[23] Median and average timelines are presented. For this analysis, median values are more reliable because the median is less sensitive to extreme values (especially when the sample size is relatively small).

[24] Respondents provided a total of 82 responses to the questions about timelines for delivery. Of these responses, 71 (87%) were used to calculate the median and average timelines for delivery. Some responses could not be used because they were too vague (e.g., "it can take weeks or longer") or lacked validity (e.g., responses that were implausible). If respondents indicated a range for the timeline of delivery (e.g., 2 to 3 months), the average of the 2 numbers was used.

Table 5. Timelines for Delivery When Materials are Added to the NIMAC Watchlist[25]
(*n* = 15)

Accessible Format	Median (Number of Months)	Average (Number of Months)	*n*
Braille for STEM materials	3.4	4.3	11
Braille for non-STEM materials	2.4	2.6	10
Large print materials	1.8	2.7	5
Accessible digital text materials	0.8	0.6	5

Survey respondents provided additional comments about the timeline for delivery of each accessible format, yielding a total of 40 excerpts.[26] Nineteen of these excerpts (48%) described how timelines vary based on the length and complexity of the material. Respondents described the challenge of determining specific delivery timelines for broad categories of accessible formats (e.g., braille for STEM, large print), explaining how timelines vary based on "the number of tactile graphics required," "the subject as to how much reformatting needs to take place," "the number of pages," and "the size of the file." Other excerpts identified factors that facilitate or hinder timely delivery of accessible materials (e.g., current workload of AMPs, how quickly AMPs can obtain a physical copy of the material) and are included in the qualitative analyses in forthcoming sections.

To further explore timelines for delivery of accessible materials, a separate analysis was conducted using NIMAC's internal tracking data for when materials are submitted to the NIMAC Watchlist and when the NIMAS files are subsequently provided by the publisher, certified by NIMAC, and accessible in the NIMAC system. Using this data from three recent calendar years (2021-2023), we calculated the amount of time it takes for a NIMAS file to be certified and accessible in the NIMAC system after a NIMAC Watchlist request is submitted. As displayed in Table 6,[27] the median number of days from submission of a Watchlist request to the NIMAS file being certified and accessible in the NIMAC system ranged from 34 to 38 days. With knowledge of the Watchlist request timeline, we can more clearly understand potential delays to timely delivery of accessible formats when NIMAS files are not in the NIMAC system.

Table 6. Number of Days from Submission of Watchlist Request to NIMAS File Certified and Accessible in the NIMAC System

Year	Number of Watchlist Requests Processed[28]	Average (Number of Days)	Median (Number of Days)	Range (Number of Days)
2021	131	59	36	4 – 186
2022	170	50	38	1 – 152
2023	241	40	34	1 – 244

Survey respondents who were NIMAC Users were also asked to rate their satisfaction with the timeline for delivery of accessible formats under three separate conditions: 1) when the NIMAS file is already in the NIMAC system, 2) when the NIMAS file is not in the NIMAC system and is added to the NIMAC Watchlist, and 3) when accessible formats are not within scope for NIMAS (e.g., online educational materials, trade materials, some digital files). Respondents used a 4-point Likert scale where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. As displayed in Figure 6, respondents' satisfaction is highest when the NIMAS file is already in the NIMAC system (3.1), followed by when the NIMAS file is not in the NIMAC system and is added to the NIMAC Watchlist (2.7). Respondents' satisfaction is lowest when accessible formats are not within scope for NIMAS (2.4). Overall, the agreement ratings on the 4-point scale were not strong, indicating only moderate satisfaction with timelines for accessible formats.

Figure 6. Satisfaction with Timelines for Delivery of Accessible Formats[29]

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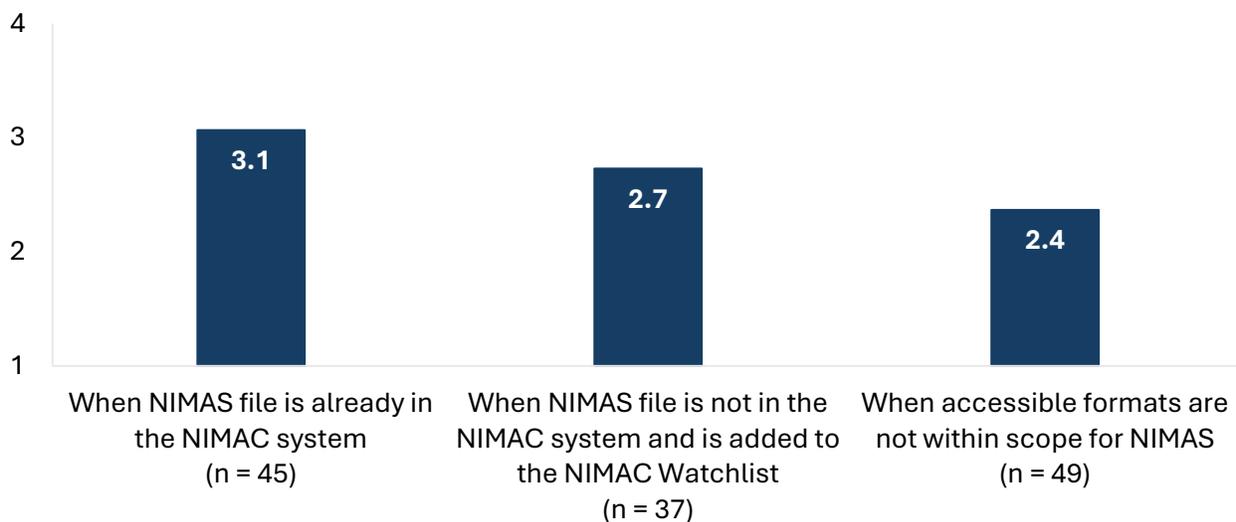
[25] Respondents provided a total of 33 responses to the questions about timelines for delivery. Of these responses, 31 (94%) were used to calculate the median and average timelines for delivery. Two responses could not be used because they were too vague (e.g., "it can take weeks or longer"). If respondents indicated a range for the timeline of delivery (e.g., 2 to 3 months), the average of the 2 numbers was used.

[26] Respondents' access to concrete data regarding timelines for delivery is unknown, so their comments should be interpreted with caution (i.e., their answers may be rough estimates rather than based in factual data).

[27] Median and average timelines are presented. For this analysis, median values are more reliable because the median is less sensitive to extreme values (e.g., unusually long wait times that are not representative of typical situations).

[28] "Watchlist Requests Processed" do not include requests that were duplicated, requests for materials exempt from NIMAS or already in the NIMAC system, requests fulfilled by the provision of an alternative file, requests dropped by the user, or requests that were never fulfilled.

[29] When asked about their satisfaction with timelines for delivery, respondents selected "Don't Know" 25 times when the NIMAS file is already in the NIMAC system, 33 times when the NIMAS file is not in the NIMAC system and

Respondents were given the opportunity to explain their satisfaction ratings and offer suggestions for facilitating more timely delivery of accessible formats. A total of 20 excerpts were identified, with nine (45%) describing how timelines for delivery are improved when NIMAS files are already in the NIMAC system (see Figure 7 for representative quotations). Other excerpts highlighted additional factors that hinder or facilitate timely delivery of accessible formats, and these excerpts are included in the qualitative analyses in forthcoming sections.

Figure 7. Representative Quotations: How Timelines for Delivery are Improved When NIMAS Files are Already in the NIMAC System

💬 *"When we don't have a NIMAS file, it can add several months to our already long turnaround times. This would also cause us to fall behind on timely delivery." (UT)*

💬 *"Having access to NIMAS files helps speed up the braille production process. When NIMAS files have not been added to NIMAS or are not available, it really impacts the delivery of these materials to our students." (CO)*

💬 *"It makes delivery so much quicker if materials are in NIMAC. I can assign the materials to a vendor and they can start transcription. If not, all materials must be scanned, which is time consuming." (CT)*

💬 *"The turnaround time is so much quicker when the NIMAS files are already available in NIMAC." (IA)*

💬 *"NIMAS is a great help for braille production." (MA)*

💬 *"When things are in the NIMAC, there is no need to scan, zone, OCR, etc., and the time savings from that alone is huge!" (MI)*

💬 *"When available, the NIMAS files speed up my process since it's usually more accurate than OCR." (MI)*

💬 *"When materials are already in the NIMAS file format, they are immediately available for download to an AMP account." (NC)*

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is added to the NIMAC Watchlist, and 21 times when accessible formats are not within scope for NIMAS. These "Don't Know" responses are not included in the figure.

Impacts of Timely Delivery and Use of Accessible Educational Materials (AEM)

Survey respondents were asked, "How often do students with print disabilities or visual impairments use an accessible format that is less than ideal based on their Individualized Education Programs (IEPs)?"[30] Figure 8 shows that nearly all respondents reported that students needing AEM always (3%), often (56%), or sometimes (38%) use less than ideal formats. There were no statistically significant differences by location or role, indicating similar experiences with the use of accessible formats that are less than ideal across states and roles.

Figure 8. Frequency of Use of Accessible Formats that are Less than Ideal[31]
(*n* = 208)
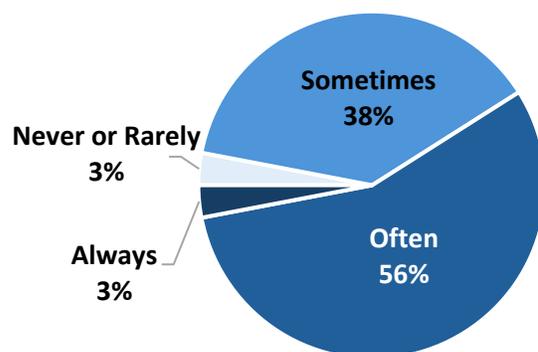
Respondents were also asked, "How often are students with print disabilities or visual impairments provided a different curriculum from their class due to a lack of available accessible materials?"[32] Again, the majority reported that students needing AEM always (2%), often (31%), or sometimes (46%) receive a curriculum different from their peers (see Figure 9). There were no statistically significant differences by location or role, suggesting similar experiences with the use of different curricula across states and roles.

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[30] This question was not presented to AMPs, publishers, or conversion vendors who were not NIMAC Users.
[31] 51 respondents selected "Don't Know" (these responses are not included in the figure).
[32] This question was not presented to AMPs, publishers, or conversion vendors who were not NIMAC Users.

Figure 9. Frequency of Use of Different Curriculum Due to Lack of Available Accessible Materials[33]

(*n* = 197)
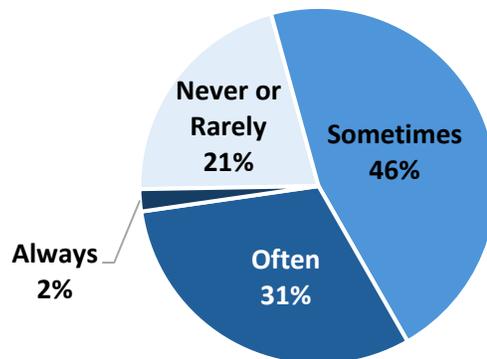
To supplement quantitative findings from surveys, we asked interview participants how often students with print disabilities or visual impairments 1) use an accessible format that is less than ideal based on their IEPs and 2) are provided a different curriculum from their class due to a lack of available accessible materials. Participants' responses were consistent with survey results. Specifically, a total of 25 excerpts illustrated how often students with print disabilities or visual impairments use accessible formats that are less than ideal, with 18 of these excerpts (72%) indicating occurrence on a regular basis (see Figure 10). In addition, a total of 18 excerpts discussed how often students receive a different curriculum than their peers due to a lack of accessible formats, and 11 of the excerpts (61%) indicated that this occurs with some regularity (see Figure 11). It is important to note that 6 of the 18 excerpts (33%) indicated that students never or rarely receive a different curriculum due to a lack of accessible formats (e.g., one interviewee from Ohio said, "I can't say that I've ever had that happen. I feel like either we're able to get the material or the teachers are able to figure it out and make it work"). These differing responses suggest variability in how well schools and districts provide accessible formats that allow students with print disabilities and visual impairments access to appropriate curricula. [34]

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[33] 62 respondents selected "Don't Know" (these responses are not included in the figure).

[34] The results presented in this case study do not distinguish between students with print disabilities and students with visual impairments. However, the experiences of these two groups of students can be quite different. For example, students with print disabilities are primarily served with digital formats that are inexpensive (or free) and quick to produce and access, whereas students with visual impairments are more likely to require materials that are very expensive and time-consuming to produce (e.g., braille). As a result, there are likely differences across disabilities regarding how often accessible formats are provided to students. In addition, the number of students with print disabilities far exceeds the number of students with visual impairments. These differences are not captured by the present case study, and this limitation should be considered when interpreting the results.

Figure 10. Representative Quotations: Frequency of Students Using Accessible Formats that are Less than Ideal

💬 *"It is probably true that a lot of kids are using either scaled down versions of the full text or if they're in a math or science class, they get the text, but they don't always get the tactile graphics that go along with it or the charts and graphs that go along with the material. I think that has gotten better in the last 10 to 15 years, but I still don't think it's probably where it needs to be." (OH)*

💬 *"Most of our teams don't have access to braille transcribers, and most TSVIs [teachers of students with visual impairments] aren't familiar with braille formatting or tactile graphics standards. I'm sure that a lot of the braille provided to our students is 'less than ideal.'" (OR)*

💬 *"I would say on a regular basis, a younger braille student is probably getting braille at the same time as their peers maybe 50% of the time. And that might be giving the benefit of the doubt." (OR)*

💬 *"I would have to say that if you look at Oregon as a whole, the majority of students are not getting what they need in a timely manner and lots of factors are involved in that." (OR)*

Figure 11. Representative Quotations: Frequency of Students Using Different Curriculum Due to a Lack of Accessible Materials

💬 *"With full transparency, I would say probably at least 70% of the time, students with print disabilities and visual impairments are using a different curriculum due to a lack of accessible materials. Specifically for my kiddos that were getting math instruction, they needed things that were tangible. So, we would try and stick as close to the curriculum as we could, but they certainly often were not using the textbook that their same age peers were. We were pulling examples and modifying and making examples that were not from the textbook to provide teachable moments for them."* (OH)

💬 *"I see students being provided a different curriculum more than I see them getting the curriculum they need."* (OR)

💬 *"It happens quite a bit. I think that it happens in small ways a lot of the time, and teachers make decisions about students' abilities. They may or may not be following the IEP for shortened assignments or some things because of how big braille is or their own thoughts about it. I see that it's not always the full curriculum, but definitely either paring down or taking away pieces, not giving the students full exposure to what sighted students in their class are accessing."* (OR)

💬 *"It happens a lot in learning resource centers because a lot of the time it's hard to adapt curriculum to every individual student in a special education classroom. And so, they'll be like, 'Well, we're learning this math concept,' and then the teacher comes to me and is like, 'Okay, so what books do you have that cover this math concept in this grade?' Then, we kind of go from there and obtain files and piecemeal something together, but it's not necessarily this real curriculum."* (OR)

In addition to exploring how often students with print disabilities and visual impairments use accessible formats that are less than ideal or are provided with a different curriculum than their peers, we asked interview participants to describe the impacts on students and teachers in these situations. As shown in Table 7, the impact described most often was decreased academic achievement (21 excerpts), followed by increased teacher stress and responsibility (5 excerpts), and mental health consequences for students (4 excerpts).

Table 7. Qualitative Descriptions of the Impacts of Using Less than Ideal Formats and Curricula That are Different from Peers
(30 excerpts)

Impacts of Using Less than Ideal Formats and Curricula	Representative Quotations
Decreased academic achievement (21)	I don't know that watered down is the right idea, but with less-than-ideal formats, the language has changed such that it might impact literacy scores because students don't have access to the same vocabulary. And if you are a new teacher thrown into the world of a student who's blind or visually impaired, and you're learning braille, it's easier to braille a short word than a long word, even if your student needs the long word. (OH)
	I would say it unfortunately forces students into a modified diploma track because they are just simply not able to access Gen Ed curriculum, which means we have no choice but to modify materials for them at a different level or use slightly different curriculum to support their learning. (OR)
	I had a student a few years back, and we finally came up with a program where we were doing yellow backgrounds, black, bold letters, in large print. I swear I had him in elementary. By the time he got to high school, he was using the exact same books, the exact same material, and getting the exact same lessons, with no differentiation, nothing anywhere near grade level. It's kind of depressing. (OR)
	Some TVIs are not qualified to be teaching any of these content areas. So, the students are not getting the instruction that they deserve in this area, and we're just making it work. (OR)
	If kids are not having access and able to read in class, and the teacher or whoever's working with them is saying, "Well, you can just read it to them, and they can give the answers verbally," they're missing out on all these literacy opportunities that just compound. They aren't getting what they need or what is outlined in their IEP, and it happens way too often. (OR)
	Well, with less-than-ideal materials, it's often the case that students are not able to keep up with their peers. If they have reading comprehension difficulties and are not getting what they need, many times they start to become disengaged. (OR)
	In the summer program where I worked, we were receiving students from all over the state. It was clear that the federal law to include students in the least restrictive environment did not come with the proper funding nor trained personnel to make the experience a successful one. Students who had age level cognitive skills were not literate. They were not taught braille at all. Things certainly have improved, but I am still not satisfied with the majority of student achievements in [visual impairment] programs. They still appear to be behind in their language and comprehension skills, and many are several grade levels behind. (NC) [35]

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[35] Feedback provided in written form from a focus group participant.

Impacts of Using Less than Ideal Formats and Curricula	Representative Quotations
Increased teacher stress and responsibility (5)	Sometimes it's a matter of what can we do in the meantime? Are we giving them some sort of handheld magnifier in order to accommodate themselves? It requires a lot on the student's part, and a lot of times plays out in the teacher having to do a lot of copying and stuff like that. (OH)
	We've had kids who don't have access to the textbook for almost an entire school year, and the vision specialists working with them are frantically sitting in class with them trying to convert materials on the fly so they can participate. (OR)
Mental health consequences (4)	A lot of times my students would get really, really frustrated. They would depend on auditory access to obtain all of the information. Their auditory access would eventually fatigue, and they would just check out. (OH)
	Students want to be doing the same thing that everyone else is doing. It causes anxiety and sad feelings of feeling left out. (OH)
	They are losing interest; they are getting frustrated. It often impacts self-esteem because they don't have what they need, and they take it as if they're doing something wrong. (OR)

Survey respondents were asked to rate their agreement with the following statement: "I am satisfied with the ability of students to access and use accessible formats that are best formatted to meet their needs, as specified in their IEPs."[36] Figure 12 shows that nearly two-thirds of respondents (62%) disagreed with this statement, providing additional evidence that students with print disabilities and visual impairments frequently receive less than ideal formats or curriculum (as described above). There were no statistically significant differences by location or role.

Figure 12. Satisfaction with Access to and Use of Accessible Formats[37]
(*n* = 221)

Strongly Disagree 14%

Disagree 48%

Strongly Agree 6%

Agree 32%

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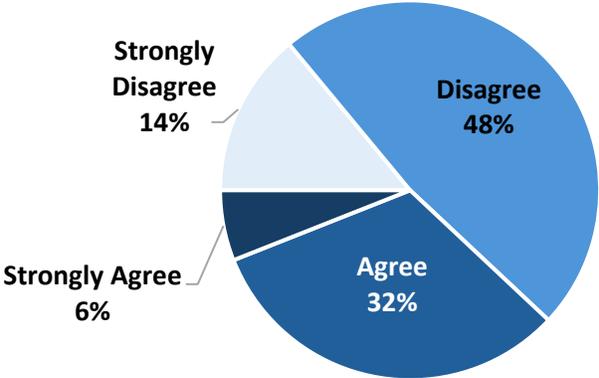
[36] This question was not presented to AMPs, publishers, or conversion vendors who were not NIMAC Users.
[37] 38 respondents selected "Don't Know" (these responses are not included in the figure).

Survey respondents were asked, "Which of the following negatively impact the use of accessible formats that are best formatted to meet students' needs, as specified in their IEPs?" [38] They were able to select multiple factors that negatively impact the use of accessible formats (all of which are presented in Figure 13). Over half of all respondents (n=222) identified four factors that negatively impact the use of accessible formats: "Lack of instructional support for students to effectively use the accessible formats" (62%), "Pressure on teachers to use most readily-available/least expensive format" (55%), "Lack of availability of assistive technology (AT), such as a refreshable braille device" (54%), and "Some accessible formats can be cumbersome when using and transporting" (52%). Just under half of respondents (49%) endorsed "Use of 'backup' materials as students wait for appropriate accessible formats" and "Students do not know how to use some accessible formats." The two items endorsed the least were "Accessible formats that are available but of poor quality" and "Stigma associated with using accessible formats" (endorsed by 44% and 38% of respondents, respectively).

Figure 13. Factors Negatively Impacting Use of Accessible Formats [39]
(*n* = 222)

Lack of instructional support for students to effectively use the accessible formats — 62%

Pressure on teachers to use most readily-available/least expensive format — 55%

Lack of availability of assistive technology (AT), such as a refreshable braille device — 54%

Some accessible formats can be cumbersome when using and transporting — 52%

Use of "backup" materials as students wait for appropriate accessible formats — 49%

Students do not know how to use some accessible formats — 49%

Accessible formats that are available but of poor quality — 44%

Stigma associated with using accessible formats — 38%

Other — 16%

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[38] This question was not presented to AMPs, publishers, or conversion vendors who were not NIMAC Users.
[39] 37 respondents selected "Don't Know" (these responses are not included in the figure). 35 respondents selected "Other" and described additional factors that negatively impact the use of accessible formats that are best

When comparing the pattern of responses displayed in Figure 13 across the three case study states as well as the national survey, there were *two statistically significant findings.* Specifically, respondents in Ohio were more likely than other respondents to endorse "Lack of availability of assistive technology (AT), such as a refreshable braille device" as one factor that negatively impacts use of accessible formats, (χ^2(3) = 15.56, *p* < .05, standardized residual = 2.0; see Figure 14). Additionally, respondents in Utah were less likely than other respondents to endorse "Lack of instructional support for students to effectively use the accessible formats" (χ^2(3) = 9.03, *p* < .05, standardized residual = 2.0; see Figure 14). These findings suggest there may be different systems or structures that facilitate AT access and instructional support for accessible formats in Ohio and Utah as compared to other states.

Figure 14. Factors Negatively Impacting Use of Accessible Formats: Differences by Location[40]
(*n* = 222)
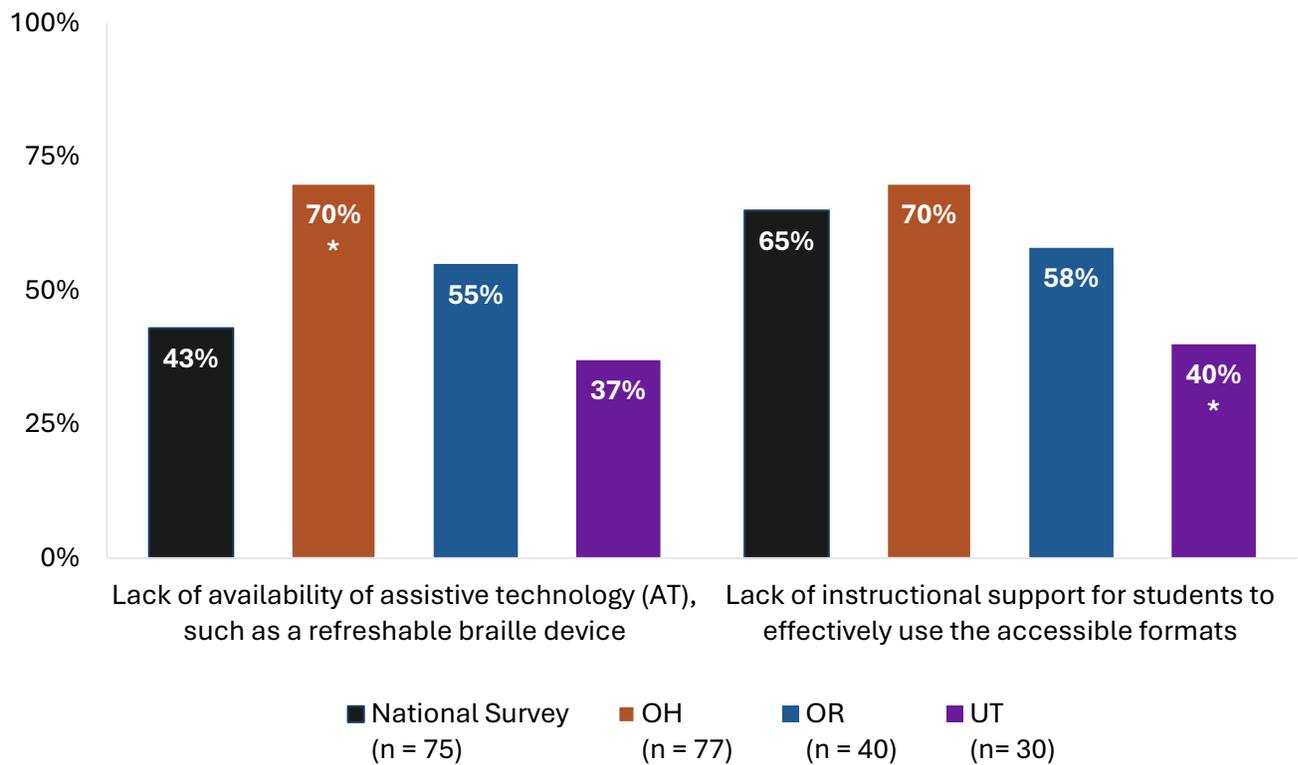
When examining factors negatively impacting use of accessible formats across roles, there were no statistically significant differences.

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formatted to meets students' needs. These "Other" responses are included in the qualitative analysis described below.

[40] 37 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

To supplement quantitative survey findings, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that hinder the use of accessible formats that are best formatted to meet students' needs, as specified in their IEPs. Survey respondents were given the opportunity to suggest other factors that hinder the use of accessible formats and to explain their selections.

As shown in Table 8, participants' descriptions of factors negatively impacting the use of accessible formats were consistent with items presented in the survey (see Figure 13). More specifically, the factor hindering the use of accessible formats described most often was lack of knowledgeable instructional support (51 excerpts). In addition to factors presented in the survey, three additional themes emerged from the qualitative data: challenges associated with AT (13 excerpts), materials that claim to be accessible are not accessible (5 excerpts), and student preferences are not respected (3 excerpts).

Table 8. Qualitative Descriptions of Factors that Hinder the Use of Accessible Formats
(158 excerpts)

Factors that Hinder Use of Accessible Formats	Representative Quotations
Lack of knowledgeable instructional support (51)	I do not think many educators outside of TVIs know how to access or use materials, so they don't. (OH)
	Due to a shortage of teachers of the visually impaired, districts do not always have the support needed to select appropriate materials, access funding options, or instruct students adequately on device/material application. (OH)
	I truly believe that teachers simply do not have the training or support to become comfortable navigating these resources. Because of the "low incidence" nature of this disability, serving these students with comfort and instructional excellence takes time and coaching. (OH)
	Lack of teacher training to plan for and support student use of accessible formats. (OH)
	As with any new learning, students and educators need ongoing support to utilize accessible materials effectively. I always think, "knowledge, accessibility, coaching" for our school personnel. (OH)
	I think we have so much confusion about what inclusion is supposed to really look like. We think that if we just put the kids in there, we have inclusion. If we don't have the materials ready, and if our teachers don't know that they're there and how to use them, we cannot in any way support really meaningful inclusion for our kids with special needs. (OH)
	Many teachers are not trained and comfortable with alternative formats and technologies. They often revert back to what they know and feel comfortable with. (OR)

Factors that Hinder Use of Accessible Formats	Representative Quotations
	We've noticed the teachers or the TVI ordering accessible materials, but they don't know what to do with it or how to use it. (UT)
	My biggest issue in this area is that teachers, paras, and other staff in the classroom do not know how to use the technology and therefore cannot assist the student who is required to use it. Training is important and should be increased to guarantee students have access. (DE)
Lack of knowledge/familiarity among students (24)	I confirm the importance of making sure students know how to use their technology to access the material. Sometimes they might have it but not know what to do with it. (OH)
	It's getting the student really comfortable in that environment because sometimes we can get them the files right away, but the problem happens because the student is not comfortable with the equipment or whatever they're using. (OH)
	If the accessible format is digital, then the ability of the student or their staff supports may be an issue. (IN)
	There isn't enough time spent on students being taught the use of their AT (more so students with dyslexia than visually impaired students). (MN)
	We have discovered that students in our state do not necessarily know how to use their accessible technology equipment to the fullest extent possible. (SC)
Stigma associated with using accessible formats (23)	There's also a factor of not wanting to look different. When you have a disability, you look different than your classmates and get made fun of. And internalized ableism is taught, so a student may not want to use an iPad to look at a textbook when everybody else has a textbook. (OH)
	Sometimes it's embarrassment of the students not using the materials because they don't want their friends or peers to see that they have something different. (UT)
	Many students do not want to appear different than their peers and they will resist using accessible formats or gravitate to a technology option. (UT)
	For a student doing something completely different from everyone else in class, it can be pretty uncomfortable. So even if students have the right technology that they need, they may be reluctant to use it. (OR)
	A lot of students dislike utilizing materials that make them look different from their peers such as 11x14 paper (of large print materials). (VA)
Poor quality accessible formats (18)	Sometimes I see teachers try to get by with just making an enormous paper copy, and it's well intended, but often loses the resolution and the contrast that's needed. (OH)
	We are also finding that "large print" materials for kindergarten and first grade have larger instructions (which the students can't even read because of their learning level) but the same size or smaller areas to actually work in. The math problems are at times smaller than their regular print peers. (NC)
	The time spent waiting for either an accessible format and/or hard copy braille can be up to 6 months. This lag time could lead to locally and poorly produced braille and/or large print formats. (TX)

Factors that Hinder Use of Accessible Formats	Representative Quotations
	Students often don't get truly accessible formats. They get blurry screenshots or google slides or PDFs that don't work well with screen readers. Or they get blown up, blurry photocopies instead of clear digital copies. (VA)
	Large print materials are only photocopy enlarged, and do not meet accessibility criteria. Braille production has not been accurate or to the current code. (VA)
Formats are cumbersome (14)	Utilizing braille, text-to-speech, and accessible tools (apps, calculators, etc.) is cumbersome. (OR)
	I think there's a couple of logistic things like space. Braille books take up a lot of space in the classroom. It's always like, where can we store braille books? How are they going to move 'em from place to place to place? (OR)
	I also have noticed that size of the material can be a little cumbersome for storing in the classroom and moving from place to place. (UT)
	For the student I was working with, his books were heavy and large. So, if you're carrying that from one place to another, I think intentionally he'd leave them sometimes. Yeah, I do think it was intentional. I mean, it's not that he didn't want to learn. That's a lot to carry. (UT)
	One of my students does not like that the book is so big and doesn't necessarily fit in her locker. So, she tries to keep it in the classroom as much as possible. But then, if she has homework, she's got to take it home, and she's in middle school. She doesn't want to look different than her peers. (IA)
Challenges associated with AT (13)	Sometimes, the networks at the school districts are so heavily filtered that it is hard to connect with online resources. If they're using an app like the Bookshare reader, that app may not work because it's being blocked by their Wi-Fi network, their internet filters. (OH)
	I've consulted with some other AT folks where the districts, the IT, immediately blocks things. We had dictation blocked in one district for most of the year because of student data privacy concerns. (OR)
	The more we're doing stuff online, the more it's difficult to access things in a district IT environment. For example, we had a district block our students' iPads to the internet so they couldn't get to Bookshare. (OR)
	In order to get technology, we often have to go through a month's long approval process. Just getting JAWS is a nightmare. (VA)
Lack of AT (5)	Funds to provide AT like talking calculators are no longer available. We must be able to provide tools that help our students access the curriculum. (OR)
	We don't have enough technology. (AR)
	Some of the technology that is supposedly available via quota funds is not available to us. (VA)
Backup materials used as students wait for accessible formats (5)	Bookshare.org is the best back up we have but still, some students need the braille and large print which takes the longest to be delivered. (AL)

Factors that Hinder Use of Accessible Formats	Representative Quotations
	"Backup" materials produced quickly, or use of more readily available audio file accessible formats, are not always a good match for the student. (CO)
Materials that claim to be accessible are not accessible (5)	The curriculum that we got is not at all accessible, even though it says it has accessible features and is accessible for all learners. And it's like, wow. But nobody thought about the vision kid: This curriculum has an online component. Students are able to access their book online, and supposedly it has a read aloud feature and students with a visual impairment are able to use the magnification tools built into their device. Well, then when you go and look at that, in order for me to read it, I now have to move my screen all over the place and scroll to the bottom to be able to locate the turn-in button. And sometimes I have a few students that also have fine motor issues. Just being able to get over to the bottom of the screen has been extremely frustrating. (OH)
	School districts are thinking that these online programs are great. And they are great if your vision is normal. They've put on their screen a little microphone or speakers, and students can click on that and it'll read to them. But that doesn't mean the student can navigate around the screen and get to that, or that the student gets to really read. It means they can hear it. That is not the same as reading. It's just so frustrating to have all these schools doing all these cool things with all their kids, and then our kids are left out, or somebody has to read it to them, or somebody has to do it for them. It's fun for all the other kids, and they don't get to enjoy it. (IA)
	Materials may be identified as accessible, when they are not. (VA)
Pressure to use formats that are readily accessible or least expensive (4)	I think schools pick and choose the assistive technology that these kids are forced to learn how to use in order to read their accessible materials. So, if I had a preference, I would never touch a Google Chromebook or a MacBook or an iPad. I want a Windows with Joss. But students aren't always given that kind of choice. And if you ask, schools might say, "Well, this is where our funding is at. Our funding is supplying this kind of assistive technology." (OH)
	District staff, including Technology Coordinator, Classroom Teachers, Intervention Specialists, and support staff, sometimes look for the easiest and cheapest solution. Sometimes I feel like I am the only person in the district who is willing to go the extra mile to ensure that my student has accessible materials or assessments. (OH)
	It puts everyone at a disadvantage when accessible materials are not quickly and readily available. And unfortunately, within many schools, there is pressure to use the most readily available/least expensive format by the people making financial decisions in the district. This is often due to a lack of understanding regarding the most accessible option versus the easiest to acquire/least expensive option. (OH)

Factors that Hinder Use of Accessible Formats	Representative Quotations
Student preferences are not respected (3)	Students have preferences for their formats, those they're most comfortable with, and they don't always get a preference. They don't always get to choose what kind of format they are given. (OH)
	Some students have preferences on formats they prefer, especially audio, once in high school. (NY)

Practices that Facilitate Timely Delivery

We asked survey respondents about three types of practices that facilitate timely delivery of accessible formats: 1) production practices, 2) state, regional, district, and school-level practices, and 3) NIMAC practices.

Regarding production practices, survey respondents were able to select multiple practices that facilitate timely delivery of accessible formats (all of which are presented in Figure 15).[41] Nearly three-quarters (71%) of survey respondents indicated timely delivery is facilitated when "Accessible formats are already available at a central location in the state or district for immediate distribution." Three other facilitators of timely delivery were selected by over half of respondents: "Use of the national Louis Database of Accessible Materials to quickly locate accessible formats" (60%), "Practices/processes that provide students with portions of accessible formats while waiting for the full textbook to be completed" (60%), and "Practices/processes that provide students with portions of accessible formats when only portions of the material are being used in the classroom" (52%).

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[41] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

Figure 15. Production-Related Factors that Facilitate Timely Delivery[42]
(*n* = 154)

Factor	Percentage
Accessible formats are already available at a central location in the state or district for immediate distribution	71%
Use of the national Louis Database of Accessible Materials to quickly locate accessible formats	62%
Practices/processes that provide students with portions of accessible formats while waiting for the full textbook to be completed	60%
Practices/processes that provide students with portions of accessible formats when only portions of the material are being used in the classroom	52%
Accessible Media Producers (AMPs) submit data to Louis Database of Accessible Materials, so it is searchable nationwide	49%
Other	6%

When comparing the pattern of responses displayed in Figure 15 across the three case study states as well as the national survey, there was *one statistically significant finding.* Specifically, respondents on the national survey were more likely to endorse "Accessible Media Producers (AMPs) submit data to Louis Database of Accessible Materials, so it is searchable nationwide" ($\chi^2(1) = 6.66$, $p < .05$; see Figure 16). There are several potential explanations for this finding. For example, the case study states may have systems that rely less on providers outside their state, or they may primarily rely on national providers like APH and Bookshare rather than seeking formats from a range of agencies. In addition, this finding may reflect differences among survey respondents. Specifically, given the outreach to a wide range of stakeholders in the case study states, it is possible that more respondents in these states did not serve directly BVI students and therefore did not need to use the Louis Database.

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[42] 77 respondents selected "Don't Know" (these responses are not included in the figure). 9 respondents selected "Other" and described additional production-related practices that facilitate timely delivery. These "Other" responses are included in the qualitative analysis described below.

Figure 16. Production-Related Factors that Facilitate Timely Delivery: Differences by Location[43]
(*n* = 154)
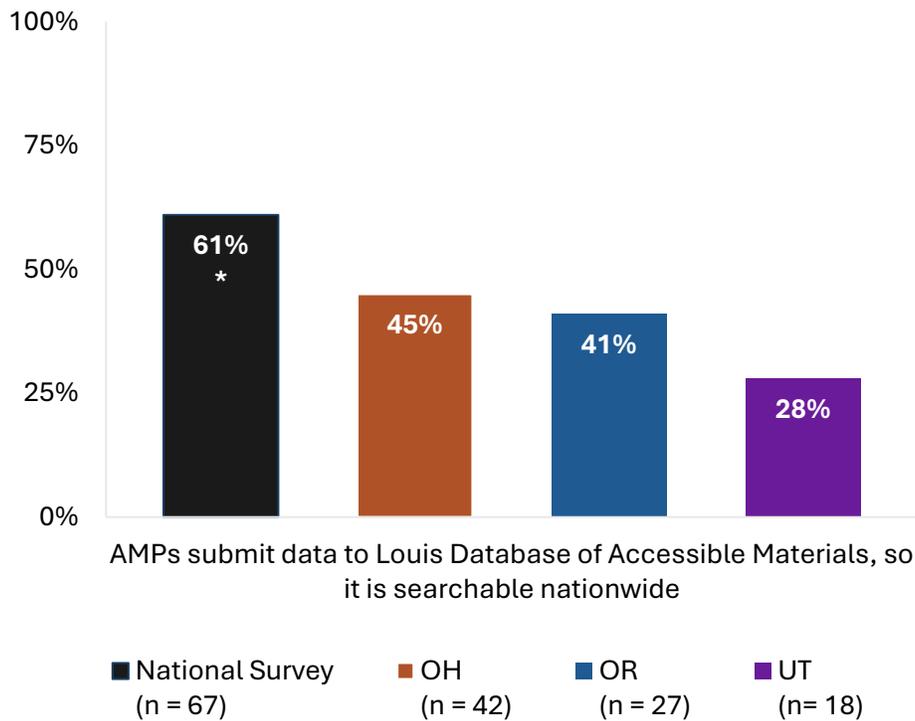
When examining production-related factors that facilitate timely delivery across roles, there were *six statistically significant findings.* The practice of using the "Louis Database of Accessible Materials to quickly locate accessible formats" was endorsed more often by IMC/IRC staff compared to other respondents ($\chi^2(1)$ = 6.29, *p* < .05; see Figure 17) and was endorsed more often by NIMAC Users (84%; *n* = 44) compared to respondents who were not NIMAC Users (53%; *n* = 110; $\chi^2(1)$ = 13.08, *p* < .05). In addition, the practice of AMPs submitting "data to Louis Database of Accessible Materials, so it is searchable nationwide" was endorsed less often by school staff ($\chi^2(1)$ = 5.17, *p* < .05) compared to other respondents. This practice was also endorsed more often by IMC/IRC staff ($\chi^2(1)$ = 4.15, *p* < .05) and AMPs, publishers, and conversion vendors compared to other respondents ($\chi^2(1)$ = 7.07, *p* < .05; see Figure 17). The practice of AMPs submitting "data to Louis Database of Accessible Materials, so it is searchable nationwide" was also endorsed more often by NIMAC Users (71%; *n* = 44) compared to respondents who were not NIMAC Users (41%; *n* = 110; $\chi^2(1)$ = 10.98, *p* < .05). Overall, these findings suggest that IMC/IRC staff, AMPs, publishers, conversion vendors, and NIMAC Users are most likely to recognize the benefits of the national Louis Database of Accessible Materials.

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[43] 77 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

Figure 17. Production-Related Factors that Facilitate Timely Delivery: Differences by Role[44]
(*n* = 154)
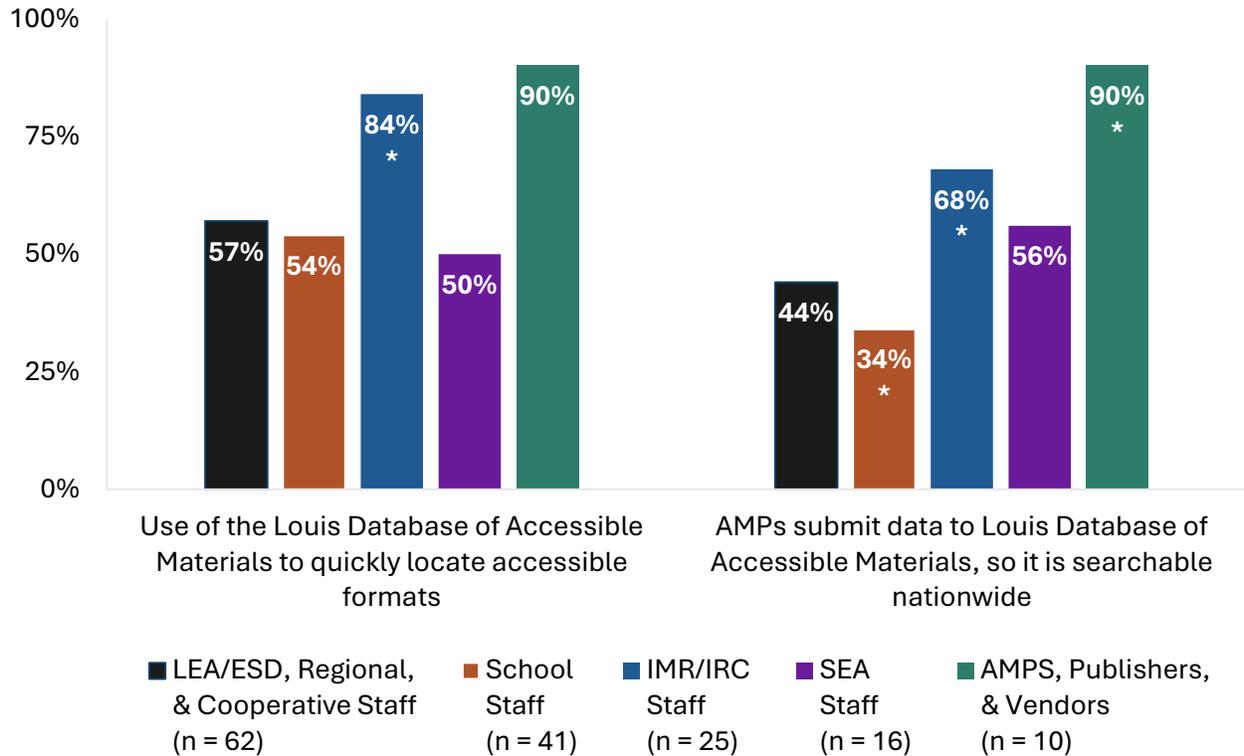
LEGEND:
- ■ LEA/ESD, Regional, & Cooperative Staff (n = 62)
- ■ School Staff (n = 41)
- ■ IMR/IRC Staff (n = 25)
- ■ SEA Staff (n = 16)
- ■ AMPS, Publishers, & Vendors (n = 10)

To further explore production-related factors that facilitate timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that facilitate timely delivery of accessible materials. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

Participants' descriptions of the production-related factors that facilitate timely delivery are presented by theme in Table 9. Interestingly, the two most commonly described themes were factors not listed in the survey: Local resources for accessible media production (e.g., local braille transcribers; 17 excerpts) and a streamlined production system (9 excerpts). Other themes were consistent with some of the factors presented in the survey: Production of smaller portions of accessible formats (6 excerpts), accessible formats available at a central location (5 excerpts), and use of the Louis Database of Accessible Materials (2 excerpts).

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[44] 77 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

Table 9. Qualitative Descriptions of Production-Related Factors that Facilitate Timely Delivery
(37 excerpts)

Production-Related Factors that Facilitate Timely Delivery	Representative Quotations
Local resources for accessible media production (17)	I've had access to a local braille transcriber who can produce materials on demand so only the relevant portions of a book can be brailled. It's inefficient and expensive to request a whole book to be transcribed. Most classroom teachers use diverse sources, not just textbooks. (OH)
	We had a student last year who was taking all high level classes, and it was incredibly challenging to get things done for them correctly. We just happened to get lucky and have someone on staff who was good at that, but otherwise their needs wouldn't have been met. (OR)
	Our state has a centralized state agency to help with production. We rarely use them because we find it more effective and timely to produce our own materials. (UT)
	It's difficult to get teacher-made materials or supporting materials at the local level. We have helped schools get embossers and software so they can produce some materials locally. (IA)
Streamlined production system (9)	We have specific forms that we have teachers fill out, with all of this information about the books they need with ISBN and the copyrights, and if they want very specific ones. So, we lay it all out. (OH)
	We came up with an awesome system that we made ourselves. We went for two years with our delivery of materials at 66%. That makes me sick to say. But then… last year we had 90%. So, this workflow that we've put into process has now increased our flow for braille, which is usually the hardest thing. (UT)
	We have a really good system in one of our public school units. They have a really oiled system there where we've created the planning tool and they tweaked it to say, this student has braille, this student has large print, what do we need? What can we get in advance? (NC)
	Teachers drop their assignments into Google Drive, and from there, they put the date that they're going to be doing it in the class. With that information, I can at least go into the drive and determine what's due today or tomorrow. If we can't make it tomorrow, we get as close as we can. (TX)
Production of smaller portions of accessible formats (6)	The other thing that's helpful is just being aware of the fact that when you start a textbook and you're going chapters one through 12 to produce that media, it might be really helpful if they could go through and produce chapter one for this textbook, then produce chapter one for this textbook. I know it's probably more of a challenge, but I have kids who have gotten their entire curriculum for math quarter one, along with kids who still don't have any of their accessible media because it hasn't been produced. (OH)
	Typically, the in-house braille transcriber does a lot of the stuff that isn't readily available anywhere else. So, give that to her and then she can produce things in chunks by deadlines on timelines. She just produces it little by little throughout the year. (OR)

Production-Related Factors that Facilitate Timely Delivery	Representative Quotations
	We ask for a pacing guide. Teachers many times go out of order in a textbook, and if the TVI doesn't know, he just gets the book from the school and submits it, and there is no pacing guide. We'll start with the first page and keep going, but lo and behold, we hear in August that, "Hey, we're starting with chapter eight, and we won't hit chapter one until December." And so here we are working the whole summer, starting with chapter one, two, and three, and they need eight, seven or whatever. That pacing guide is very, very, very important, especially for braille. Otherwise we don't know how the teacher's going to use that textbook, and we won't have the full book ready if it's a big book. (UT)
Accessible formats available at a central location (5)	We have a couple of lending libraries, and one is specific to our school-age population. It is funded through the state, and anybody can get an account there, and you can borrow things, and it varies in terms of how long you can keep things, but there are just a whole bunch of different materials that are large printed, braille materials, lots of technology that districts can try, and families can try. We also have other lending libraries throughout the state where you can do more regional borrowing; those are run through one of our universities. (OH)
	If a LEA or charter school orders from the book depository, then the book depository tracks what materials are being used, what types of schools are needing certain materials, and they help a curriculum director know what those materials are and what they've ordered in the past. They help them with shipping and getting materials on a timely basis. So, having that book depository is a key piece in the timing of those materials. Utah only has one book depository, but in the contract with publishers, we make sure that they are listed or have materials with a book depository. The book depository keeps a certain amount of materials on hand for that very reason. I think the book depository is a key piece in purchasing and supplying materials. (UT)
	Once an accessible instructional material has been created, another thing that's super useful to the whole cycle is to have included in the system some kind of library so if the material is used again, it is easy to find, access, and share with the next student or next educator so that it doesn't have to be reproduced every single time. (UT)
Use of Louis Database of Accessible Materials (2)	When I am accessing these files, the first place I look is the Louis Database, which is on APH. And so, I don't directly search on the NIMAC website unless the Louis Database says something exists in the NIMAC system. (OR)
	We always research on the Louis Database to see if we can find an accessible format available. If somebody's already produced it, then it's a quicker turnaround time. (IA)

Survey respondents were also asked to identify state, regional, district, and school-level practices that facilitate timely delivery of accessible formats. They were able to select from a

list of multiple practices, all of which are included in Figure 18.[45] Over three-quarters (76%) of respondents (n=151) indicated timely delivery was facilitated when "Requests for first-time production of accessible formats are made well in advance before they are needed by students." Approximately two-thirds of respondents endorsed "A centralized workflow within a State Education Agency (SEA), Local Education Agency (LEA[46]), or Regional District system to process requests for accessible formats" (65%) and "Inclusion of NIMAS requirement in procurement contracts for educational materials" (64%). The two practices endorsed least, although still selected by over 50% of respondents, were "State processes that support and train AMPs who are producing accessible formats" and "A streamlined system for working with AMPs" (endorsed by 53% and 52% of respondents, respectively).

Figure 18. State, Regional, District, or School-Level Practices that Facilitate Timely Delivery[47]
(*n* = 151)

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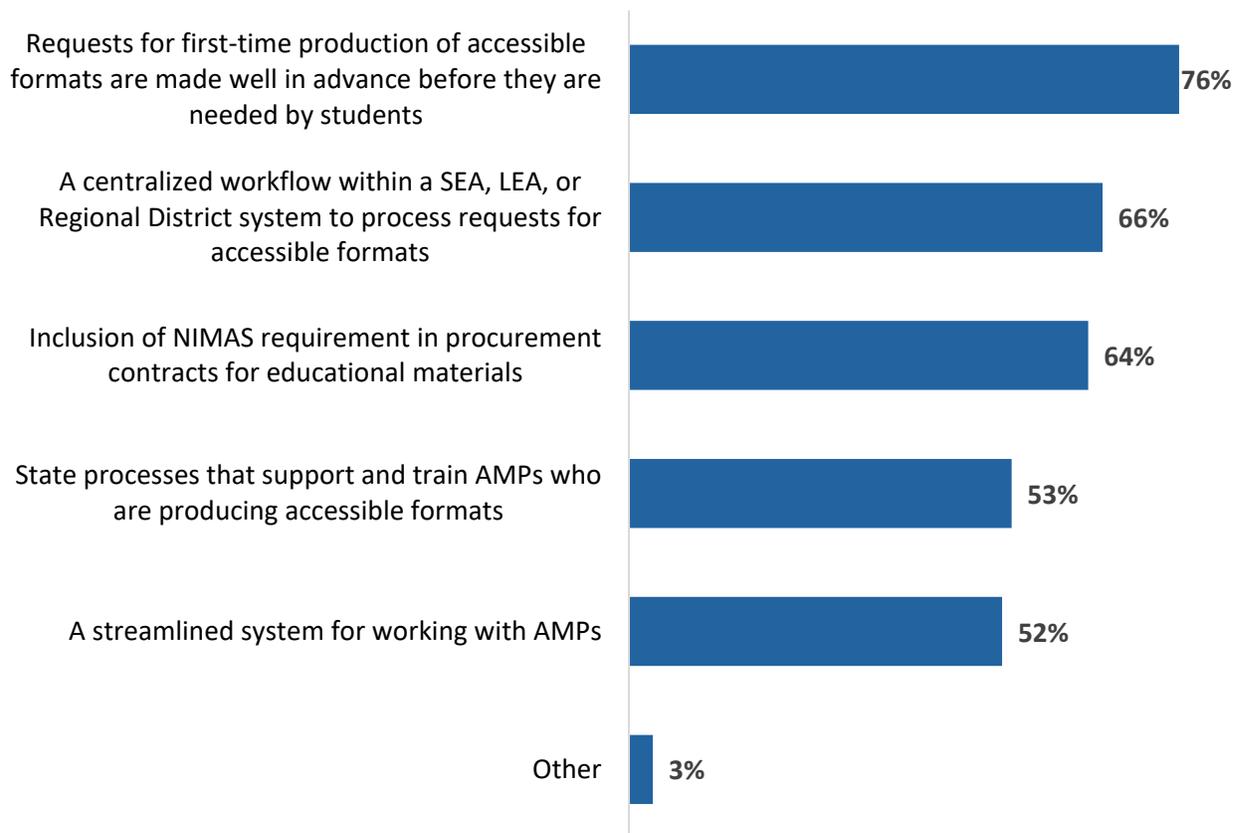
[45] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

[46] Throughout the survey and interviews, we asked participants from Oregon about "Education Service Districts" (ESDs) in addition to LEAs because ESDs are an important organizing structure within Oregon's education system.

[47] 80 respondents selected "Don't Know" (these responses are not included in the figure). 5 respondents selected "Other" and described additional state, regional, district, or school-level practices that facilitate timely delivery. These "Other" responses are included in the qualitative analysis described below.

When comparing the pattern of responses displayed in Figure 18 across the three case study states as well as the national survey, there was *one statistically significant finding.* Specifically, respondents in Utah were less likely to endorse "A streamlined system for working with AMPs" compared to the other respondents ($\chi^2(1) = 7.57$, *p* < .05; see Figure 19). Although this finding may suggest that Utah's structures and processes for working with AMPs are different than other states, the finding may also reflect differences in the sample of survey respondents. Given the outreach to a wide range of stakeholders in the case study states, including Utah, it is possible that more respondents from Utah have professional roles that do not involve working with AMPs or familiarity with accessible textbook workflows.

Figure 19. State, Regional, District, and School-Level Practices that Facilitate Timely Delivery: Difference by Location[48]
(*n* = 151)
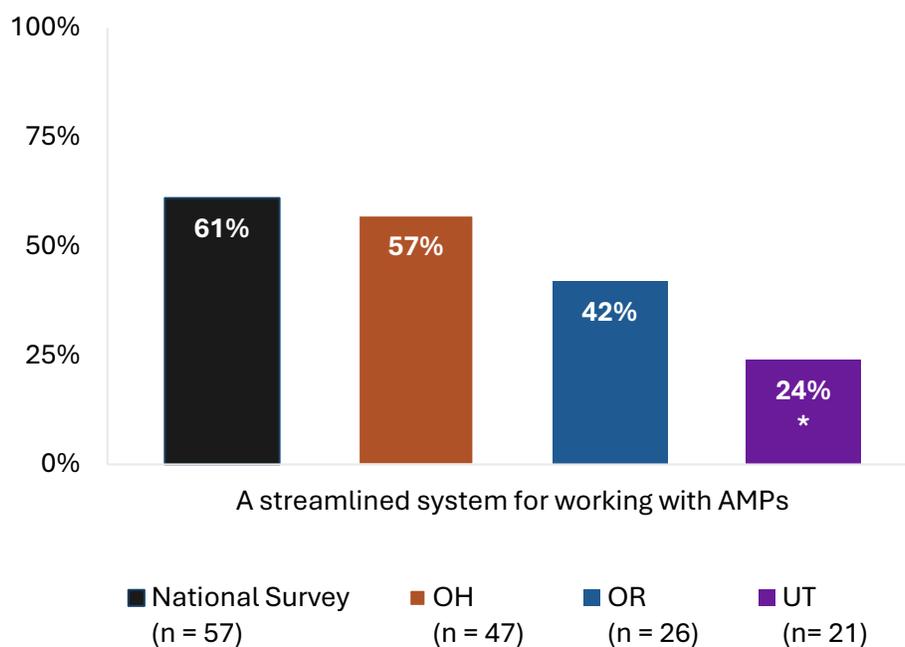
When examining differences in state, regional, district, and school-level practices that facilitate timely delivery across roles, there were *two statistically significant findings.* NIMAC Users were more likely to endorse "A streamlined system for working with AMPs" (74%; *n* = 42; $\chi^2(1) = 11.44$, *p* < .05) and "State processes that support and train AMPs who are producing accessible formats" (69%; *n* = 42; $\chi^2(1) = 6.03$, *p* < .05) compared to respondents who were not NIMAC Users (43% and 47%, respectively; *n* = 109). These findings indicate that NIMAC Users may have

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[48] 80 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

more insight into the utility of a streamlined system for working with AMPs and state processes that support and train them.

To further explore state, regional, district and school-level practices that facilitate timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that facilitate timely delivery of accessible materials. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

Participants' descriptions of the state, regional, district, and school-level practices that facilitate timely delivery are presented by theme in Table 10. Similar to production-related factors, the most commonly described theme was not listed in the survey: Effective communication among relevant stakeholders (56 excerpts). This was followed by two themes that were consistent with the most commonly endorsed practices presented in the survey: Requests for production made well in advance (41 excerpts) and a centralized workflow to process requests (22 excerpts). Six additional themes emerged from the qualitative data that were not presented in the survey: Relying on teachers and support staff who have relevant experience (15 excerpts), educating stakeholders (8 excerpts), including special education professionals in curriculum purchasing decisions (3 excerpts), including assessment of accessibility in curriculum review (3 excerpts), and promoting accountability through parental involvement (3 excerpts).

One additional practice for facilitating timely delivery was described by two participants who noted that sharing success stories helps spread awareness of the importance of timely delivery: "I think shouting out successes and having students talk about the difference that it made for them when they had what they needed is an effective strategy."

Table 10. Qualitative Descriptions of State, Regional, District, and School-Level Practices that Facilitate Timely Delivery
(145 excerpts)

Multi-level Practices that Facilitate Timely Delivery	Representative Quotations
Effective communication among relevant stakeholders (56)	When teachers co-plan together, like if there's a TVI co-planning a lesson with a science teacher, then what they need is known ahead of time, which gives them enough time to request and then have that material available ahead of time. (OH)
	I know the Instructional Resource Center does a good job pushing out requests: "If you are planning for a student next year, please send us your requests." (OH)

Multi-level Practices that Facilitate Timely Delivery	Representative Quotations
	Let's just say a new student moves into a district. I don't expect teachers to know about accessibility needs, and I don't expect administrators to know. But that's my role. I need to be working with that administrator. I need to be working with that teacher. And that's why I always tell teachers, number one, the consultative support piece of my IEP is so important. That's where I get to have that collaboration with those people. (OH)
	I think collaboration is huge. Being able to know what's needed so you can request it and get it made into an accessible format on time. If there's really good collaboration, whether at a district level sharing out textbook series or books they're going to use, or at teacher-to- teacher level. (OH)
	We at Instructional Resource Center have good support from the state. They send out our information about accessible formats through their e-blast. So, we do try different avenues to get the word out that we are around to support. So, I do think our information's being spread through different areas, but we're always on the hunt to reach more. (OH)
	Having time built in your schedule to communicate with the teachers and actually have the time to plan together and talk about students. (OH)
	It takes a massive coordination effort and lots of communication between the teachers and the staff and the school. (OR)
	If publishers are open and understand the urgency we're working with and how long the process takes, the open dialogue can be a huge help. (UT)
	Putting out information about accessible formats in the special education newsletter or in trainings for curriculum directors is helpful. A lot of times they have a lot of other stuff on their plate. But if we keep bringing it to the top of the pile, I think that would help. (UT)
	I think it's just communication, collaboration, cooperation. It's all hands on deck. As soon as you have a new student, you share as much information as possible with the school district in Massachusetts. And we're an open territory state, meaning that a district picks and chooses whatever they want as long as it backs into the curriculum framework set forth by the Department of Ed. We just share the information and hope that they're coordinating on their end. We can't overstep. It's their choice. We're an optional resource. (MA)
	In Oklahoma, I send an email to all of our TVIs in March reminding them that we need orders for the following school year. That has helped to remind them and jog their memories that this request needs to be in now. We do set deadlines. If it's a braille book and if it's after June, you're not going to have it in time. You're just not. (OK)
	[From a local AMP] Two of my teachers have given me access to their Google Classroom from last year. If I have access to last year's class, I match up the dates to this year. It's almost the same and gives me a great idea of what the curriculum will cover. (NC)

Multi-level Practices that Facilitate Timely Delivery	Representative Quotations
Requests for production made well in advance (41)	If the teacher plans in advance, then we could braille it or produce large print. That's been helpful. (OH)
	Another strategy would be for the TVI to be proactive. You really have to be thinking about it almost in March and April because the curriculum changes. I did have a teacher reach out saying, "Oh my gosh, we have this new curriculum coming next year. I can't find it anywhere. There's so many books." She is being proactive and looking and trying to prepare for the next school year. Collaboration, communication, and being proactive are big strategies and approaches that you need to take. (OH)
	We start that conversation in February or March with our teachers by saying, "Hey, I know it's only February or March, but we really need to get an idea of what textbooks and materials are needed for the following year." We've always told them it could take time to get things, especially during that busy time of the year when everybody's always asking for books at the same time. So, we try to start the process in early spring/late winter to get teachers going. (OH)
	I think using a platform like Google to have those weekly assignments in a place that we can then send to the local braille transcriber, look ahead to what they need—not just the braille, but other materials they need for science or any adaptations we can provide, like tactile maps and things like that. It really is about having the time for us and the teacher to make things work. (OR)
	We have a deadline of April 1st to receive orders for the fall. So, before April 1st, we can guarantee that the student will have something in hand, maybe not the whole book, but something in hand to start the school year off at the same time as their peers. After that deadline, it's not guaranteed. However, we do everything possible to make it happen. (UT)
	I'm actually one of the transcribers, so I get the NIMAS files and use them. For me, it's so important to have that April 1st deadline so I have time to prepare the materials for the fall. (UT)
	Educators need to have a detailed enough scope and sequence of their instruction to be able to plan for what materials are needed, when they're needed, and give enough of a runway for the materials to be developed, created, or transcribed, so they can be available for instruction. (UT)
	I work in a state that has adequate understanding of the processing of accessible materials and is adept at getting those materials to me, in appropriate form, when they are given the time to do so. Our materials center is amazing at getting just about everything I need ahead of time. (DE)
	One of the most important things is the understanding of the timeline it takes to produce these materials and ordering in a timely manner for them to be done in the best quality possible. (KY)

Multi-level Practices that Facilitate Timely Delivery	Representative Quotations
	The number one thing that helps us the most is knowing what needs to be transcribed well in advance. (LA)
Centralize workflow to process requests (22)	As a teacher, I did not know exactly how all the materials were procured, but I knew how to contact the support people who could help. We often used the state's Instructional Resource Center services to help us navigate the system. (OH)
	We have a whole AEM request portal and a whole process in which people sign up and register. And quite honestly, practicing in other states, it is not as clear about how to access accessible educational materials. (OH)
	Literally seven minutes before this meeting, I got a phone call from a teacher of the visually impaired saying, "Oh my God, I need access. How do I do it?" I was like, "You just need to contact the Instructional Resource Center." Then, he was good, and I think that was beautiful. (OR)
	At the high school level, I've been able to get the textbook librarians to be knowledgeable about Bookshare and kind of responsible for it. So, when kids come to check out textbooks, they know the Bookshare users and automatically assign it there. So, finding a more centralized way of disseminating materials has been helpful. (OR)
	Having a submission system, a collection system, and then a delivery system makes sense for the educators who are submitting requests and for those who are doing the work. (UT)
	Using an Instructional Materials Center as a centralized workflow rather than splitting up between several different workflows prevents duplication of effort and additional costs to schools. (IA)
	We have a state Instructional Materials Center, a loan library, a full production system, and NIMAC Authorized Users. I feel having all of the tools under one roof makes it extremely well organized and efficient. (MI)
	I think what very much helps us deliver a good experience for ultimately our students and their school districts is a well-developed system that facilitates the ordering process so that we can quickly research a book and determine if it is readily available for purchase or needs to be newly commissioned for production. I think part of that process is having a staff member dedicated to it. (TN)
	We use a centralized system, and it works well. All know where to go. (VA)
Relying on teachers and support staff who have relevant experience (15)	When you have a classroom or a school district where they have a history of having visually impaired students, it seems like things go a little better. They have visually impaired teachers and specialists, and they already kind of know the terrain. (OH)
	As a teacher, I did not know exactly how all the materials were procured, but I knew how to contact the support people who could help. We often used the OCALI services to help us navigate the system. The low-vision practitioners (braille instructors, mobility specialists, etc.) also provided information and support. (OH)

Multi-level Practices that Facilitate Timely Delivery	Representative Quotations
	To the best of my knowledge, the Teacher of the Visually Impaired who works with our district has been able to assist us in providing accessible materials relatively quickly. (OH)
	If I can get the good teachers for our students, then that's helpful. (OR)
	We work with specialists to support timely delivery through the LEA and ESD. (OR)
	They had some really seasoned TVIs in place. The TVI and AMP kind of grew together and actually got buy-in from leadership. (NC)
Educating stakeholders (8)	It had been helpful to do presentations to curriculum committees when possible, or even to individual members, to show them how the different technology or learning management systems interact with curriculum, and to provide checklists for basic accessibility. (OR)
	Focus on accessible formats in state professional development efforts. (OR)
	We copy every Special Ed Director on email communications with these TVIs, whether they want to hear it or not. That's been a best practice that we've been doing for about four years, and I think that's helped. (UT)
	We offer a new Special Ed Administrator cohort training every year. So if you're a new Special Ed administrator in Utah, in the first three years of your job, or if you transfer LEAs and you just want a refresher, we provide information to new Special Ed Directors every year about their responsibilities, how to access Utah's IRC, and what's available at APH. (UT)
	Wisconsin has a very high number of provisionally licensed teachers of the blind. We have a mentoring program to help them learn, and we teach them about the NIMAC and the responsibilities that lie on the TVI. [WI]
Including assessment of accessibility in curriculum reviews (4)	We were trying to help teachers as they walked through the curriculum adoption process for their school or for their district, including giving them three or four questions that they could take into a curriculum review: Is this accessible? How easy is it to get to the accessibility features? Is it something you feel like you could use in your classroom? We give teachers some awareness from the beginning that there are accessibility features and they will be asked to use them. (OR)
	There are state curriculum adoption rules in Oregon, where in order for any curricula to be put on the recommended list, they have to go through a whole accessibility check from a third party. So, at the very highest level, I think that kind of policy has to be in place. (OR)
NIMAS requirement included in procurement contracts (3)	Publishers don't refuse to add NIMAS files to the NIMAC system if it's in the procurement contract agreement with the school district. (OH)
	I think planning ahead is crucial but not always possible. However, NIMAS requirements being included in procurement contracts will ensure access when needed. (MN)

Multi-level Practices that Facilitate Timely Delivery	Representative Quotations
Including Special Education professionals in curriculum decisions (3)	Some of the folks who pick curricula at the district level have checklists that they're looking at. They think that if it says it's accessible, it must be whether it actually is or not. It is always good to have somebody with that broader knowledge base take a peek to see what they mean by that terminology. (OH)
	It is helpful when procurement staff bring the student services staff, either student services administrators or one of us [Special Education staff], early on in the conversation when they're looking at and starting the ordering process. (OR)
Accountability through parental involvement (3)	I do a lot of parent training that involves helping parents know what they need to be asking for. And so, the SEAs and the LEAs aren't off the hook. (OR)
	I was a parent in my school district. I've been able to weasel my way into things and talk about accessibility, but they do seem mind-blown when I bring it up. (OR)

To explore the third set of practices related to the timely delivery of accessible formats, select survey respondents (i.e., publishers and NIMAC Users) were presented with a list of NIMAC practices (all of which are included in Figure 20) and asked to indicate which ones they endorsed. Nearly all (83%) of survey respondents indicated timely delivery is facilitated when "Publishers submit NIMAS files to the NIMAC system before they are needed by students." At least two-thirds of survey respondents selected two other facilitators: "When accessible formats need to be produced for the first time, the NIMAS file is already available in the NIMAC system" (74%) and "NIMAC staff providing effective and timely technical assistance" (68%). Nearly half of respondents identified a fourth facilitator, "Publishers hold vendors to a timeline for NIMAS conversion."

Figure 20. NIMAC-Related Practices that Facilitate the Timely Delivery[49]
(*n* = 53)
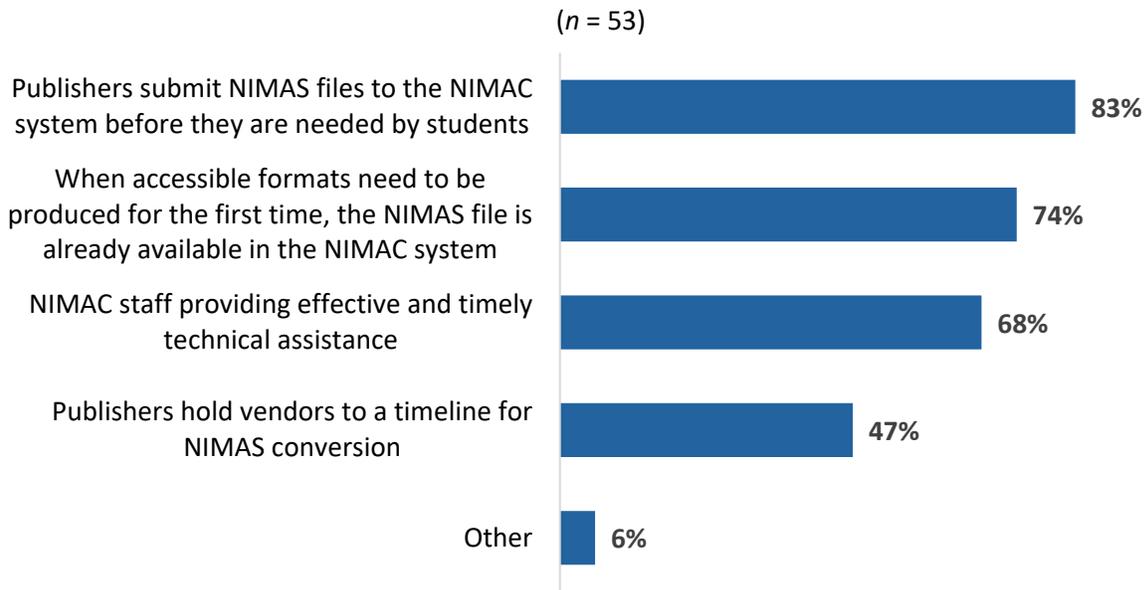
Publishers submit NIMAS files to the NIMAC system before they are needed by students	83%
When accessible formats need to be produced for the first time, the NIMAS file is already available in the NIMAC system	74%
NIMAC staff providing effective and timely technical assistance	68%
Publishers hold vendors to a timeline for NIMAS conversion	47%
Other	6%

Due to small sample sizes, statistical testing was not conducted to compare the pattern of responses displayed in Figure 20 by location or role.

Survey respondents who were NIMAC Users indicated their level of agreement with the following statement: "NIMAS files help facilitate the timely delivery of accessible formats." Figure 21 shows that nearly all respondents (94%) agreed with this statement, providing additional evidence illuminating the critical role of NIMAS file formats for timely delivery of AEM.

Figure 21. Agreement with NIMAS Files Helping Facilitate Timely Delivery[50]
(*n* = 50)

Agree 32%
Strongly Agree 62%
Disagree 2%
Strongly Disagree 4%

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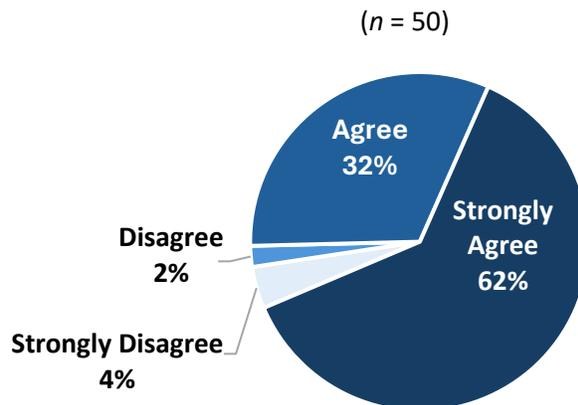
[49] 10 respondents selected "Don't Know" (these responses are not included in the figure). 3 respondents selected "Other" and described additional NIMAC-related practices that facilitate timely delivery. These "Other" responses are included in the qualitative analysis described below.
[50] 4 respondents selected "Don't Know" (these responses are not included in the figure).

TRUE NORTH EVALUATION

NIMAC Users completing the survey were also asked to indicate their agreement with a second statement: "The NIMAC Watchlist request system is a valuable service for serving students when NIMAS files have not been received by the publisher." Again, as displayed in Figure 22, the vast majority (91%) agreed, providing additional evidence in support of the NIMAC Watchlist.

Figure 22. Agreement with the NIMAC Watchlist Being a Valuable Service[51]
(*n* = 32)
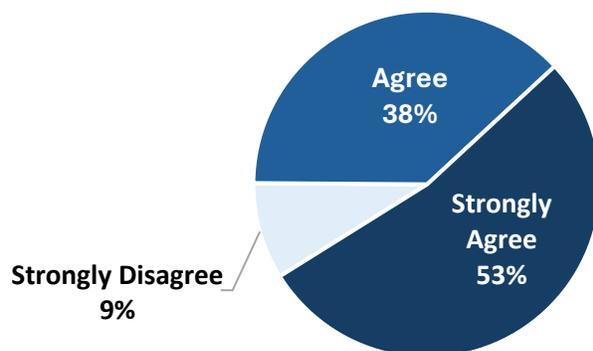
To further explore how NIMAS files, the NIMAC Watchlist, and other NIMAC-related practices facilitate timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that facilitate timely delivery of accessible materials, and additional questions were asked of NIMAC Users and AMPs (see Appendix B). Survey respondents were given the opportunity to suggest other factors and to explain their selections.

Participants' descriptions of NIMAC-related practices that facilitate timely delivery are presented by theme in Table 11. The most commonly described NIMAC-related practice was having the NIMAS file in the NIMAC system when accessible formats need to be produced for the first time (45 excerpts). Participants also described the utility of using the NIMAC Watchlist when needed (13 excerpts) and effective and timely TA from NIMAC staff (11 excerpts). Several participants specified useful NIMAC services, including the recent addition of a "feedback button" in the NIMAC system, NIMAC training videos online, and a list with publisher contact information.

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[51] 22 respondents selected "Don't Know" (these responses are not included in the figure). No respondents selected "Disagree."

Table 11. Qualitative Descriptions of NIMAC-Related Practices that Facilitate Timely Delivery
(68 excerpts)

NIMAC-Related Practices that Facilitate Timely Delivery	Representative Quotations
NIMAS file in the NIMAC system when accessible formats need to be produced for the first time (45)	I can say from a production standpoint, as the person taking the NIMAS file and converting it to a file that's intended for the end user, the process is easiest and quickest for me when a file is already readily available in the NIMAC. That's my favorite thing. That's the best-case scenario. (OH)
	Having NIMAS files available makes it easier for our braille transcriptionist to complete original products that are not available for purchase otherwise. (OR)
	NIMAS files are very helpful in the timely delivery of materials. Using NIMAS files to produce braille is significantly faster than working from a PDF or from a scan. (OR)
	I think having materials readily available in the NIMAC goes a long way. (OR)
	Having access to NIMAS files helps speed up the braille production process. When NIMAS files have not been added to NIMAS or are not available, it really impacts the delivery of these materials to our students. (CO)
	It makes delivery so much quicker if materials are in the NIMAC. I can assign the materials to a vendor, and they can start transcription. If not, all materials must be scanned, which is time consuming. (CT)
	When things are in the NIMAC there is no need to scan, zone, OCR, etc. and the time savings from that alone is huge! (MI)
Use of NIMAC Watchlist when needed (13)	If you add a file to the Watchlist, NIMAC staff will get back to you right away and say, "We're working with the publisher to get it deposited into the NIMAC." (OH)
	I've used the Watchlist a few times, and it was a really quick turnover in getting back with me on the files that were needed. I didn't have to do any follow up at all. So, as far as effectiveness, anytime I ever had to request it, it was in there in no time. (OR)
	I have to say that the NIMAC is so great with having that Watchlist available. I can add the ISBN and then they go and contact the publishers and usually, within a few days or a week, we can get that NIMAS file. (IA)
NIMAC staff provide effective and timely TA (11)	Whenever I have had a question, the folks at NIMAC are quick to respond with helpful information or action. (OH)
	I recently downloaded a NIMAS file, but it was poor file quality in terms of images that I'm using for large print production. So, it's important that I have high resolution images. The NIMAC standard is 300 DPI, but these images were not adherent to that. So, I was in contact with the NIMAC about the file quality feedback issue, and they were just as responsive as when I'm trying to get a file deposited. They worked with the publisher, and

NIMAC-Related Practices that Facilitate Timely Delivery	Representative Quotations
	it took a couple of tries, but they were persistent. I had a new quality file within a couple of days. (OH)
	I know that vendors often come to staff at NIMAC and say something like, "I don't know anything about this, and I have to have these formats ready by February 1ˢ." I think it takes something off of districts and our agency because it is a huge learning curve. It's very technical on the backend. (OR)
	Over the past 12 years in my position as an Instructional Material Coordinator working with primarily braille materials, I've noticed that the NIMAS files themselves are continually improving with each year. I've also noticed that feedback or improvement ideas that have been suggested to NIMAC staff have been implemented, which in turns motivates me to provide more feedback. My favorite improvement idea that I noticed this year is in the Publisher Notes section where the publisher lists out the ISBN's that are compatible with each other. Wow, what a time saver this is, plus it really helps us meet the goal of timely delivery. Thank you! (UT)
	Sometimes NIMAC staff take the initiative and reach out to the publisher and things happen. So, there was a situation a few years ago with a small publisher. NIMAC staff jumped in and helped facilitate. (MA)

Practices that Hinder Timely Delivery

We asked survey respondents about factors that hinder timely delivery of accessible formats within five separate domains: 1) factors related to procurement of educational materials, 2) factors related to the NIMAC, 3) factors related to production of accessible formats, 4) state, regional, district, or school-level practices, and 5) factors related to charter schools.

For the first domain, survey respondents were able to select multiple factors related to the procurement of educational materials that hinder timely delivery (all of which are presented in Figure 23).[52] Three-quarters (75%) of survey respondents indicated that timely delivery is hindered when "Materials are purchased at the school level and do not include the NIMAS requirement in procurement contracts." Four factors were endorsed by over 50% of respondents: "Turnover of SEA/LEA staff who are responsible for procurement contracts for educational materials (without knowledge transfer to new staff," "The SEA/LEA staff who coordinate procurement contracts for educational materials are not aware that the NIMAS language should be included in procurement contracts," "NIMAS requirement is not consistently included in procurement contracts for educational materials," and "Deadlines for NIMAS file production are not included in procurement contracts."

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[52] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

Figure 23. Procurement-Related Factors that Hinder Timely Delivery of Accessible Formats[53]
(*n* = 105)

Materials are purchased at the school level and do not include the NIMAS requirement in procurement contracts	75%
Turnover of SEA/LEA staff who are responsible for procurement contracts for educational materials (without knowledge transfer to new staff)	58%
The SEA/LEA staff who coordinate procurement contracts for educational materials are not aware that the NIMAS language should be included in procurement contracts	58%
NIMAS requirement is not consistently included in procurement contracts for educational materials	57%
Deadlines for NIMAS file production are not included in procurement contracts	50%
Other	10%

When comparing the pattern of responses displayed in Figure 23 across the three case study states as well as the national survey, there were no statistically significant findings. When examining the pattern of responses by respondent role, there were *five statistically significant findings.* The NIMAS requirement not "consistently included in procurement contracts for educational materials" was endorsed less often by LEA/ESD, regional, and cooperative agency staff ($\chi^2(1) = 4.41$, $p < .05$) and more often by IMC/IRC staff ($\chi^2(1) = 5.27$, $p < .05$; see Figure 24) compared to other respondents; it was also endorsed more often by NIMAC Users (80%; $n = 30$) compared to respondents who were not NIMAC Users (48%; $n = 75$; $\chi^2(1) = 9.00$, $p < .05$). These findings suggest that IMC/IRC staff and NIMAC Users may be more aware of the negative impact of the NIMAC requirement not consistently included in procurement contracts, and this awareness may be lowest among LEA/ESD, regional, and cooperative agency staff. In addition, "Deadlines for NIMAS file production are not included in procurement contracts" was endorsed

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[53] 103 respondents selected "Don't Know" (these responses are not included in the figure). 11 respondents selected "Other" and described additional procurement-related factors that hinder timely delivery. These "Other" responses are included in the qualitative analysis described below.

less often by LEA/ESD, regional, and cooperative agency staff compared to other respondents ($\chi^2(1) = 4.22$, $p < .05$; see Figure 24); it was also endorsed more often by NIMAC Users (73%; $n = 30$) compared to respondents who were not NIMAC Users (41%; $n = 75$; $\chi^2(1) = 8.78$, $p < .05$). These findings indicate that NIMAC Users may be particularly aware of the importance of deadlines for NIMAS file production, and that this awareness may be lower among LEA/ESD, regional, and cooperative agency staff.

Figure 24. Procurement-Related Factors that Hinder Timely Delivery of Accessible Formats: Differences by Role[54]

(n = 105)
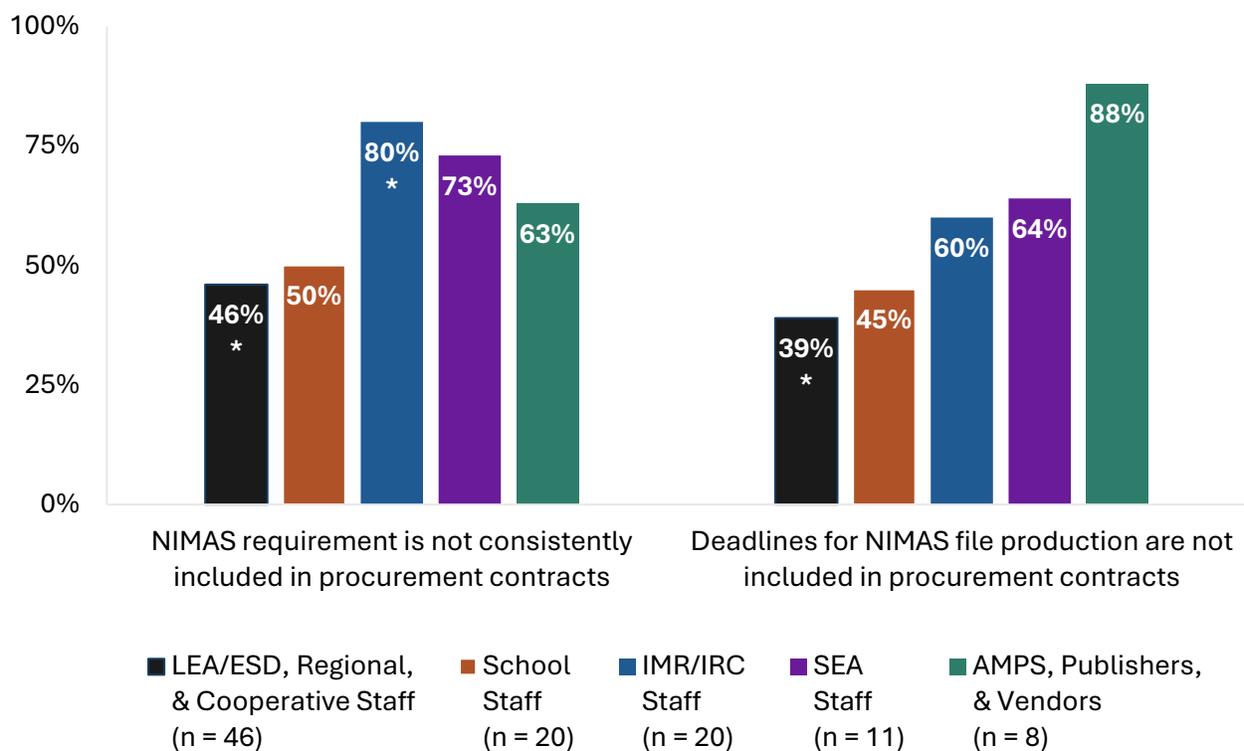
To further explore procurement-related factors that hinder timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that hinder timely delivery of accessible materials. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

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[54] 103 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

Participants' descriptions of procurement-related factors that hinder timely delivery are presented by theme in Table 12. The most commonly described factor was curriculum decisions that are made without input from Special Education professionals (21 excerpts), a finding that aligns with a practice noted to facilitate timely delivery (see Table 9). Three other themes were consistent with factors listed in the survey: Procurement staff are not aware that the NIMAS requirement should be included in procurement contracts (16 excerpts), the NIMAS requirement is not consistently included in procurement contracts (6 excerpts), and turnover of procurement staff without knowledge transfer to new staff (5 excerpts).

Table 12. Qualitative Descriptions of Procurement-Related Factors that Hinder Timely Delivery
(47 excerpts)

Procurement-Related Factors that Hinder Timely Delivery	Representative Quotations
Curriculum decisions made without input from Special Education professionals (21)	I really wish somebody would've asked the teacher of students with visual impairments, "Would you like to be a part of these conversations before we switch curriculum?" (OH)
	LEA staff aren't even aware that they need to consider the needs of the B/VI (blind/visually impaired) student in the district. (OH)
	Providers are rarely included in discussions leading to curriculum change/selection. These decisions are made without consideration for the impact on students with learning differences. (OH)
	District curriculum and technology staff do not fully understand accessibility for students who are B/VI. Many curriculum decisions are made over the summer and not communicated to the TVI. As an itinerant TVI, I'm not included in district communication regarding curriculum changes, even though I sometimes feel like I'm begging for information. (OH)
	Usually, it's one of our administrators at the district level that does the final ordering. So, do they know what to order? Do they really understand what students need, or what needs to be ordered? I don't know that they always quite understand everything. (OR)
	I just had a meeting with a state department of education the other day and said, "Hey, I need in on these district curriculum conversations. You need to start putting me somewhere in these conversations just so I can say we need six to eight weeks processing time to produce accessible formats." And if they have several curricula they're trying to decipher and decide which to use, I can say, "We already have this one produced, and this would be good to go. Or, this one would take all the time, or we already have this, or this would be easily produced versus this would be $30,000 for a book." Just having the ability to have that conversation with curriculum staff is one of those things that, if I can wheedle my way into those meetings a little bit, would be phenomenal. (OR)

Procurement-Related Factors that Hinder Timely Delivery	Representative Quotations
	I think people making curriculum decisions have insufficient training on accessibility. (MN)
Procurement staff not aware that NIMAS requirement should be included in procurement contracts (16)	As a TVI, I have had the privilege of sitting on committees that are looking at ordering textbooks, so the NIMAS requirement was something I knew we needed to ask for. I don't know that a normal teacher sitting on a committee to pick textbooks is going to think about that. (OH)
	If we, who are working with kids who are blind and low vision don't know if NIMAS language in procurement contracts is a requirement in the state, I bet lots of school districts that are adopting their curriculum don't know if it's a requirement. They don't even think about it. (OR)
	What I've found is most of the curriculum committee folks don't know what the NIMAC is. (OR)
	School districts don't understand that when purchasing new materials, it is their responsibility to make sure there is an accessible file in the NIMAC. (CT)
	We have all kinds of people who order educational materials. It could be like the school secretary, and they don't have any idea about including the NIMAS requirement in procurement contracts. That's hard for us as the Instructional Materials Center. We have no input into any of those contracts. (IA)
	I've had a couple meetings with curriculum, and they don't understand that the NIMAS requirement in procurement contracts is needed. (TX)
NIMAS requirement is not consistently included in procurement contracts (6)	For our actual HQIM program, the NIMAS requirement language is already included in procurement contracts. But that doesn't exist in other contracts. So, we're now starting to embed contracts around open educational resources and copyright in our standard contracts where materials are being developed. Right now, it's only happening in our department instead of our entire agency. (OR)
	We've run into some educational materials where the NIMAS requirement is not in the contract. (TN)
Turnover of procurement staff (without knowledge transfer to new staff) (5)	There's so much turnover in Special Ed Directors and Curriculum Directors, and even Superintendents and Directors of Charter Schools. I mean, turnover is constant. So, I sometimes think when a new superintendent comes on, accessibility is going to be on the back burner because there's probably a thousand other fires going on, including hiring principals, discipline and some lawsuits. (UT)
	I think people making curriculum decisions have insufficient training on accessibility, and turnover is high. (MN)
	In my state, the SEA understands that the language regarding the NIMAS files must be in the contracts with publishers. However, we have experienced significant turnover at the SEA level, and this information needs to be tracked carefully. (SC)

A potential strategy to address some procurement-related challenges was described across three excerpts. Participants highlighted the utility of having publishers create, and education agencies purchase, digital curricula that are born-accessible (i.e., "make curricula accessible first rather than build curricula and then layer the accessibility on top of it").

To explore the second domain of factors that hinder timely delivery, survey respondents who were NIMAC Users were asked to select from a list of factors related to the NIMAC (all of which are presented in Figure 25). Approximately two-thirds of survey respondents indicated timely delivery is hindered when there are "Misunderstandings about the NIMAC and NIMAS files" (72%) and a "Lack of understanding or awareness of the NIMAC" (64%). At least half endorsed "Differences between printings of the textbook in the NIMAC and the textbook being used in the classroom (same ISBN)" (59%) and "Teacher- or district-created curricula are not provided to the NIMAC" (56%). Slightly fewer (44%) identified "Difficulties in working with NIMAS files (e.g., lack of conversion software)" as a hindrance to timely delivery.

Figure 25. NIMAC-Related Factors that Hinder Timely Delivery[55]
(*n* = 39)

Misunderstandings about the NIMAC and NIMAS files — 72%
Lack of understanding or awareness of the NIMAC — 64%
Differences between printings of the textbook in the NIMAC and the textbook being used in the classroom (same ISBN) — 59%
Teacher- or district-created curricula are not provided to the NIMAC — 56%
Difficulties in working with NIMAS files (e.g., lack of conversion software) — 44%
Delays in getting files assigned by Authorized User — 28%
The NIMAC does not generally receive files for Open Educational Resources (OER) — 28%
Other — 8%

Due to small sample sizes, statistical testing was not conducted to compare the pattern of responses displayed in Figure 25 across location and role.

To further explore NIMAC-related factors that hinder timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that hinder timely delivery of accessible materials, and additional questions were asked of NIMAC Users and AMPs. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

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[55] 9 respondents selected "Don't Know" (these responses are not included in the figure). 3 respondents selected "Other" and described additional NIMAC-related factors that hinder timely delivery. These "Other" responses are included in the qualitative analysis described below.

Participants' descriptions of NIMAC-related factors that hinder timely delivery are presented by theme in Table 13. Most factors described by participants were consistent with those presented in the survey, including difficulties working with NIMAS files (22 excerpts), the NIMAC not generally receiving files for open educational resources (OER) (18 excerpts), teacher and district-created curricula are not provided to the NIMAC (16 excerpts), lack of understanding/awareness of NIMAC and NIMAS files (12 excerpts), NIMAS files that are not in the NIMAC system (10 excerpts), and differences between the printing of the textbook submitted to the NIMAC and the printing being used in the classroom (5 excerpts). One theme emerged from the qualitative data that was not presented in the survey: Waiting for publishers to submit files to the NIMAC Watchlist (5 excerpts).

Table 13. Qualitative Descriptions of NIMAC-Related Factors that Hinder Timely Delivery
(81 excerpts)

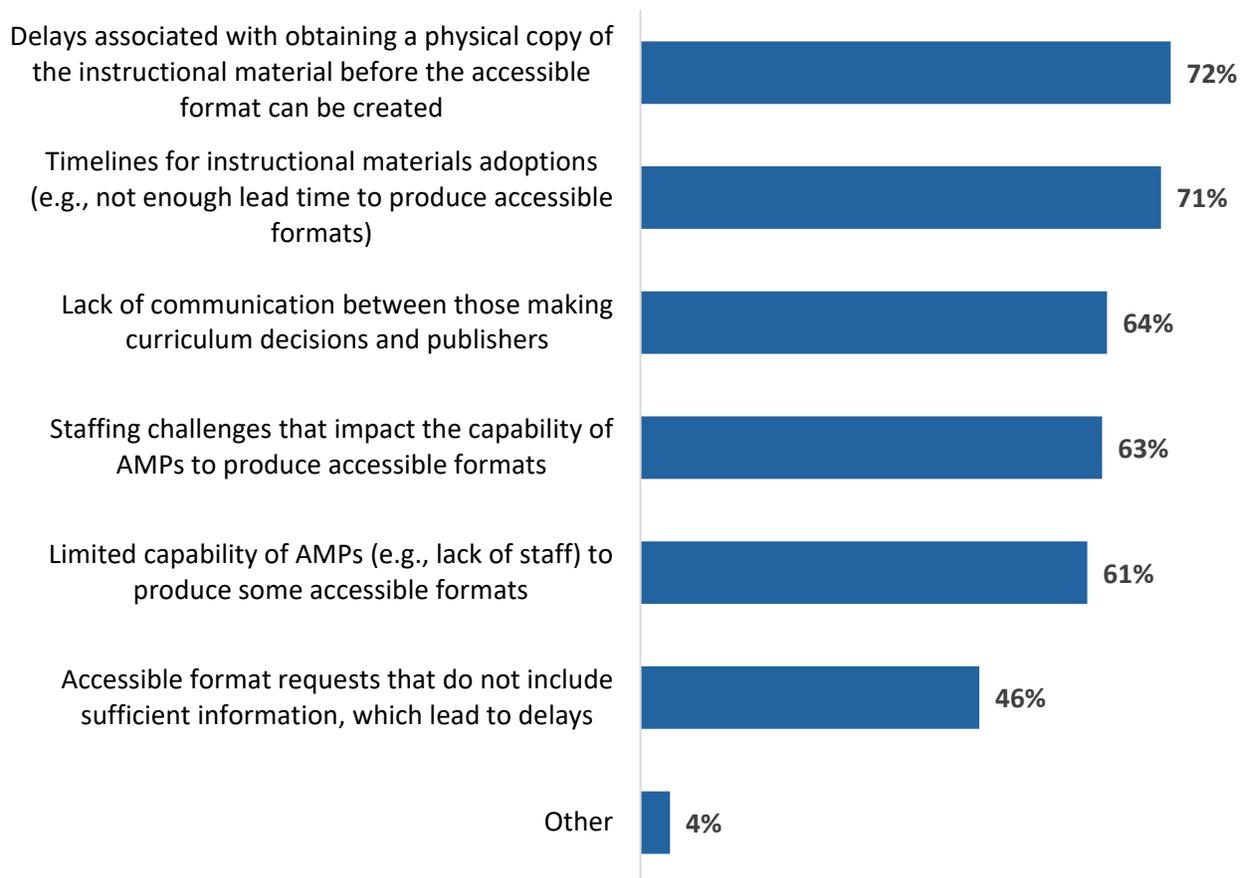| NIMAC-Related Factors that Hinder Timely Delivery	Representative Quotations
Difficulties working with NIMAS files (22)	When some math content is plain text and some math content is MathML, it slows down the production process. (OR)
	Inconsistent use of MathML can be a big challenge that can really slow down production. (OR)
	To my knowledge, there was a time not too long ago when NIMAS files weren't being used here because staff did not know how to work with them. (OR)
	We don't use the NIMAS file for large print books because basically our process is to scan it, clean it, enlarge it, print it, and bind it. The NIMAS file format is kind of a hindrance to large print, unless we're going to reflow it, which we hardly do. (UT)
	I work with the NIMAC for all large print orders we receive, and it generally is ok. There are some issues from time to time. Mainly, some of the files, at times, can make formatting more difficult. (KY)
	I will tell you, for some of the more novice AMPs, NIMAS files are almost intimidating. Those files are so big. And it's difficult to understand the tactile graphics, the text, and that when you open this, it's not going to look like a PDF of the book. (NC)
	Although NIMAS files are quite useful, they are incomplete and need work. (NC)
	I've recently been added as an authorized user for our state account and have been working to adapt files into EPUB for students. While the process is a bit cumbersome, it is very helpful to have the ability to produce materials in this format. (PA)
	That was kind of the most difficult part—working with NIMAS files initially, not knowing where to start, how to get it downloaded, where does it go. I've watched a few YouTubes to get it going. (TX)
NIMAC does not generally receive files for OER (18)	Getting materials outside the scope of NIMAC is very challenging. Less than half of our regional programs have transcribers on staff,

NIMAC-Related Factors that Hinder Timely Delivery	Representative Quotations
	so TSVIs are left to transcribe materials themselves, which they have little time for. Online materials are particularly challenging because accessing the content often means logging in and trolling the platform to find the required content, pulling out the text, and then rebuilding everything in braille. This gets more complex when content is computer adaptive (random). For tactile graphics in this format, nearly everything needs to be produced on the fly, which is a huge burden for staff and students. (OR)
	Digital format has a big impact when it comes to day-to-day braille transcription. There's a lot of barriers. (OR)
	Production of online only materials is extremely difficult to provide in a timely manner in any format. (SC)
	Everyone's saying, go Open Education Resources. Our state won't even take partial textbooks, open education resources, or teacher-made materials. So now we've got a system that should be set to help with textbooks, and the system itself isn't prepared for that. It's being handled, at least where I'm at, at the local level. (WI)
Teacher/district-created curricula are not provided to NIMAC (16)	I know our state has funds and a production center for textbooks, but I worry that this doesn't include worksheets or handouts that a teacher may prepare at any time. (OH)
	District-based curriculum is not always made readily available to transcribe. (OH)
	I'm thinking of SEA-created materials, and we want to make them accessible but are not really sure of the process. I think districts go through this too. Sometimes districts create materials, and as part of our independent adoption requirement, they need to be accessible, but districts aren't really sure about how to do this. (OR)
	Teacher-made materials, worksheets, etc. that are not accessible and are not provided with enough time to transcribe. (OR)
	Teacher generated materials and/or a use of a wide variety of non-NIMAC materials make it hard for us to keep with production, particularly with the inadequate number of transcribers available around the state. (OR)
	For teacher-created material, you get nothing. There's no help. It's just a bunch of files that are put together poorly. There's no consistency with formatting, and there's practically nothing we can do to make them any faster. (UT)
	School curricula are getting away from using a textbook from start to finish, and this has become an issue. Teachers are grabbing materials from the web and asking for those to be transcribed instead of ordering a textbook from NIMAC. (NC)
Lack of understanding/awareness of NIMAC and NIMAS files (12)	I don't think our districts understand the importance of and the reason for the NIMAC. They all think, "I don't have a student who would use this." In reality, they could have a student tomorrow because students who need accessible formats can pop up. (OH)

NIMAC-Related Factors that Hinder Timely Delivery	Representative Quotations
	I think there's a real lack of awareness about NIMAC in the state. Our teachers are generally aware of resources like Bookshare, but I don't think the NIMAC is on their radar. (OR)
	There never seems to be any discussion with publishers and schools regarding 504 students, so when a school reaches out to request large print, it's news to them that their 504 student is not eligible for NIMAC-derived materials. (MA)
	Educators think a NIMAS file is an "emboss or print and go" file, so they wait till the last minute thinking it's all they need, as it is. (MI)
	I think it's of our mindset to expect that when we open a NIMAS file, it's going to look like a PDF of the book. (NC)
	The greatest barrier is knowledge and understanding of the NIMAC. (NC)
NIMAS files are not in the NIMAC system (10)	We have run into some publishers who are not willing to deposit textbooks into the NIMAC. So, now we're waiting. (OH)
	When we don't have a NIMAS file, it can add several months to our already long turnaround times. This also causes us to fall behind on timely delivery. (UT)
	It's going to take a little longer if I look for a NIMAS file and it's not available in the NIMAC repository. (IA)
Differences between NIMAS files and textbooks in classroom (same ISBN) (5)	Publishers put out the original NIMAS file that they never update; this leads to current editions of the textbook not matching the NIMAS file. (Prison Braille Forum)
	One of the biggest things is NIMAS files not matching books, because publishers do not add updated files to the NIMAC repository when there are new editions. (Prison Braille Forum)
Waiting for publishers to submit files to NIMAC Watchlist (5)	Putting items on the Watchlist can take up to 60 days for a publisher to get the file into the NIMAC. So, there's a lot of waiting time. (OH)
	Unfortunately for large print, because we move faster than braille, 9 times out of 10 we've got it done before it shows up in the NIMAC system after being added to the Watchlist. (Prison Braille Forum)
	Sometimes we cannot wait on materials to be added to the NIMAC from the Watchlist because they may never show up. (KY)

Participants offered potential strategies to address NIMAC-related challenges to timely delivery (across 6 excerpts). These included NIMAC-sponsored courses to learn how to "utilize the NIMAS file better for large print" and to teach the "ins and outs of everyday work with a NIMAS file." One participant noted that NIMAC-created online videos have been helpful, and they would benefit from trainings that were even "more comprehensive."

To explore the third domain of factors that hinder timely delivery of accessible formats, survey respondents were presented with a list of production-related practices (all of which are included in Figure 26) and asked to select the factors that hinder timely delivery.[56] Nearly three-quarters of survey respondents indicated timely delivery is hindered by "Delays associated with obtaining a physical copy of the instructional material before the accessible format can be created" (72%) and "Timelines for instructional materials adoptions (e.g., not enough lead time to produce accessible formats)" (71%). Approximately two-thirds of survey respondents selected the following hindrances: "Lack of communication between those making curriculum decisions and publishers" (64%), "Staffing challenges that impact the capability of AMPs to produce accessible formats" (63%), and "Limited capability of AMPs (e.g., lack of staff) to produce some accessible formats" (61%).

Figure 26. Production-Related Factors that Hinder Timely Delivery of Accessible Formats[57]
(*n* = 149)

Delays associated with obtaining a physical copy of the instructional material before the accessible format can be created	72%
Timelines for instructional materials adoptions (e.g., not enough lead time to produce accessible formats)	71%
Lack of communication between those making curriculum decisions and publishers	64%
Staffing challenges that impact the capability of AMPs to produce accessible formats	63%
Limited capability of AMPs (e.g., lack of staff) to produce some accessible formats	61%
Accessible format requests that do not include sufficient information, which lead to delays	46%
Other	4%

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[56] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

[57] 59 respondents selected "Don't Know" (these responses are not included in the figure). 6 respondents selected "Other" and described production-related factors that hinder timely delivery. These "Other" responses are included in the qualitative analysis described below.

When comparing the pattern of responses displayed in Figure 26 across the three case study states as well as the national survey, there was *one statistically significant finding.* Specifically, respondents to the national survey were less likely to endorse "Staffing challenges that impact the capability of AMPs to produce accessible formats" compared to other respondents ($\chi^2(1)$ = 6.99, *p* < .05; see Figure 27). This finding suggests that the degree to which staffing challenges impact AMP capability likely differs across states.

Figure 27. *Production-Related Factors that Hinder Timely Delivery: Difference by Location*[58]
(*n* = 149)
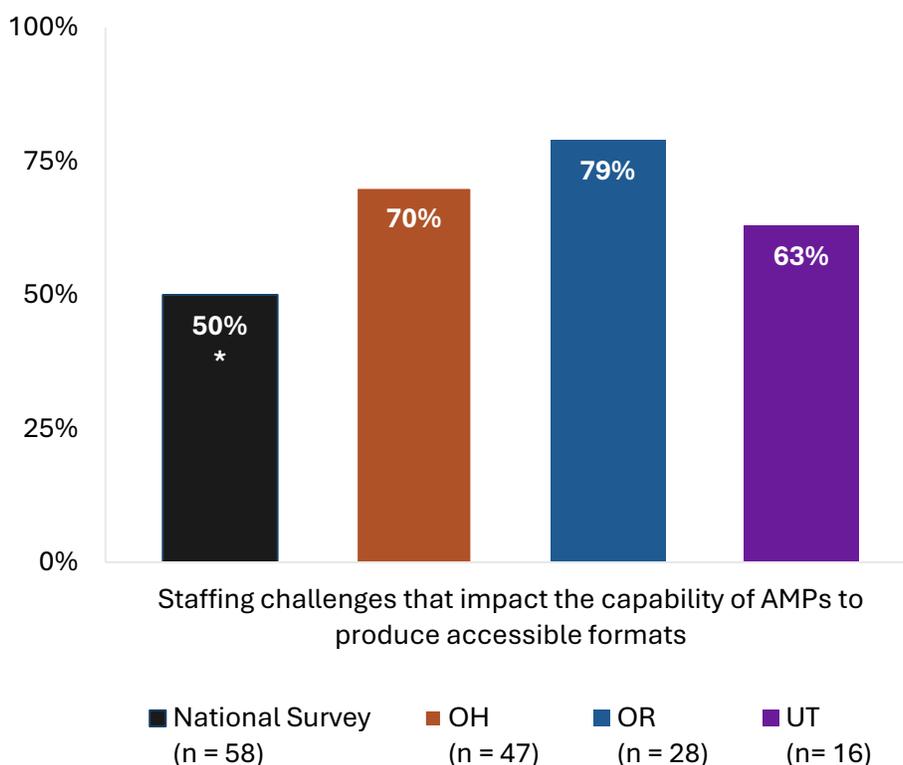
When examining production-related factors that hinder timely delivery across roles, there was *one statistically significant finding.* NIMAC Users were more likely to endorse "Timelines for instructional materials adoptions (e.g., not enough lead time to produce accessible formats)" (85%; *n* = 40) compared to respondents who were not NIMAC Users (66%; *n* = 109; $\chi^2(1)$ = 5.12, *p* < .05). This indicates that NIMAC Users are particularly aware of the negative impact of delayed timelines for instructional materials adoptions.

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[58] 59 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

Survey respondents who were NIMAC Users, AMPs, and IRC staff were asked to indicate their level of agreement with the following statement: "The capacity of AMPs is generally sufficient to produce all accessible format production requests in a timely manner." Figure 28 shows that approximately half of respondents (47%) disagreed and half (53%) agreed with the statement, indicating variability in the capacity of AMPs.

Figure 28. Agreement that the Capacity of AMPs is Generally Sufficient[59]
(*n* = 34)
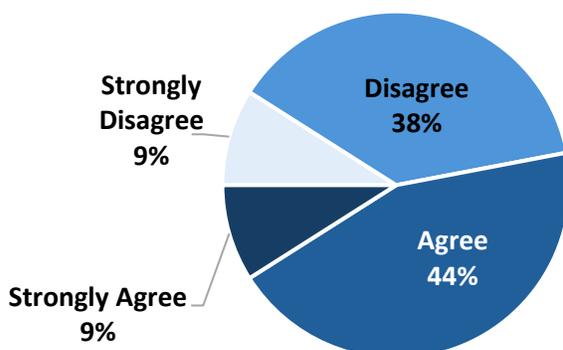
To further explore production-related factors that hinder timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that hinder timely delivery of accessible materials. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

Participants' descriptions of production-related factors that hinder timely delivery are presented by theme in Table 14. Many factors described by participants were consistent with those presented in the survey, including timelines for instructional materials adoption (61 excerpts), limited capability of AMPs (46 excerpts), delays associated with obtaining physical copies of materials (19 excerpts), and staffing challenges that impact capability of AMPs (4 excerpts). Two themes emerged from the qualitative data that were not presented in the survey: Shipping delays (5 excerpts) and lack of certification and training programs for AMPs (5 excerpts). In addition, interview participants at the APH Annual Meeting Prison Braille Forum described logistical challenges within Prison Braille Programs, including "lockdowns" that prevent prisoners from working, lack of internet access, and limited work hours.

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[59] 18 respondents selected "Don't Know" (these responses are not included in the figure).

Table 14. Qualitative Descriptions of Production-Related Factors that Hinder Timely Delivery
(136 excerpts)

Production-Related Factors that Hinder Timely Delivery	Representative Quotations
Timelines for instructional materials adoption (61)	Teachers often don't provide materials to be brailled in a timely fashion. Schools often wait until late summer before deciding on new math textbooks, making getting a braille textbook in time almost impossible. (OH)
	Many times, general educators do not communicate the need for materials, use online platforms they think are accessible but are not, or do not effectively plan lessons in a timely manner. These practices don't allow materials to be prepared for students with print disabilities ahead of time. (OH)
	I help facilitate getting everyone their materials at the start of the year. Usually, I'm asking for orders in February or April, which gives us all summer when the teachers are out to really bust through everything. But the problem with that is that a lot of teachers, when they are asked what their curriculum is, will say, "I don't know," or "I'm gonna know two weeks into the school year." Then we have that six to eight week turnaround time again. We need months of preparation. We need teachers to know what their curriculum is by the end of the school year versus the start of the school year. (OR)
	My understanding is that we're trying to collect STEM requests around February/March in order to have the materials ready for August. If we don't get requests early, then we end up with delays and students getting materials in piece meal. (OR)
	Although digital files for braille may be readily available, they are time-intensive to format for student use. It is difficult to get braille materials in a timely manner, as educational decisions about curriculum are not typically made months in advance, when braille production needs to begin. (UT)
	Some of my secondary students' class schedules are not finalized until the start of the new school year so I can't request material in advance. (UT)
	In our district, adoption of new curriculum causes a delay of sometimes months to get the correct material. (AL)
	The curriculum adoption cycle finishes too close to when the book is needed. (FL)
	Sometimes schools don't even decide what textbooks they're going to use until summer, which is very, very late. I had a situation just recently where the school district adopted a textbook. They hired a brand new teacher, and the new teacher didn't want to use it. So, they had ordered the textbook for the student, but then it wasn't going to be used for the student. The teacher was using her own designed materials, which still haven't been sent to the department for transcription. (IA)
	The biggest roadblock I have is getting classwork/test materials in time for the braillist to complete before the teacher gives the test/assignment. Teachers sometimes give materials the day they are needed. (NC)

Production-Related Factors that Hinder Timely Delivery	Representative Quotations
	The time it takes for a student to receive large print materials is very lengthy. APH makes each book by hand, causing the entire process to be slowed. (NC)
	The biggest issue in this whole process is that educators don't know what they need. (Prison Braille Forum)
	Teacher-prepared or teacher-sourced materials are not available in time to be properly produced into an accessible format. (VA)
Limited capability of AMPs (46)	Having appropriate staff or access to the appropriate staff is also needed for timely delivery. I'm the only TVI for my district. We currently do not have the staff, such as a braillist or even an embosser, available. (OH)
	The AMPs I know have quite a few requests they struggle to keep up with. (OH)
	I think nationwide, and in some areas of Oregon, there are regions that don't have a braillist. So, either the teacher's doing it or they're depending on already created materials which don't meet the daily needs of the students. (OR)
	We're down to only one transcriber working on textbooks for the whole state, and we're sending everything else out to vendors. It takes us quite a while to get braille out to students, especially for STEM. (OR)
	As a state, we only have one agency that does the braille translation, and textbooks can take a long time to translate. (OR)
	A state process to train AMPs would be great. We're really hurting for transcribers here. (OR)
	It seems like the AMPs we work with do an okay job, though some of our go-to AMPs (like the Ogden Resource Center in Washington) don't always have the capacity to accept all of our requests or adjust to our timelines. (OR)
	If we don't have enough braille transcribers, there is no way we can get timely materials to people because we just have such a backlog. (UT)
	I think our biggest hindrance besides having transcribers is teachers not planning ahead. It's like thousands of pages of teacher-created materials the week before the lesson. You just can't get it done. (UT)
	Quality vendors reach a capacity threshold at peak times, and accessible format production can be longer as their plate is full. (MA)
	Braille transcribers are asked to work a 10- or 11-month schedule when they should be year round in order to better prepare for the upcoming school year. (NC)
Delays associated with obtaining physical copy of material (19)	I cannot start the accessible format production work until I physically have a book in my hand. (OH)
	What's great is sometimes NIMAC has the files, but a lot of publishers believe their only requirement is to say, "Oh, we've already given NIMAC all the publisher files, so you guys are good to go." But we always need that PDF file or the hard copy print to look at the layout and the formatting. So, it's like we go round and round about that a lot. It sounds like teachers and curriculum directors have a hard time convincing publishers that they can't

Production-Related Factors that Hinder Timely Delivery	Representative Quotations
	move forward with accessible format production without these. After several weeks or months, eventually they come back with a PDF file. (IA)
	The large print AMPs we use still require a print copy, and obtaining the print copy takes time and adds to the process. (MA)
	We have problems getting physical materials in time. (SC)
Shipping delays (5)	The rural counties often struggle. The shipping for Free Matter is variable. Sometimes it comes really quickly, and other times it takes two or three months, which it should not. (OH)
	One minor thing is shipping delays because we're shipping stuff all across the state, and sometimes things will just get held up. We'll ship it out on time and then the teacher won't get it until a week or two later when ideally, they should get it in a few days. That's not really something we can control unfortunately, but that does occasionally happen and can cause delays in kids getting what they need. (OR)
Lack of certification and training programs for AMPs (5)	With many paraeducators transcribing braille without being certified, the quality of the braille is less than desired. (IA)
	Braille transcribers are rarely certified or experienced. I believe this is an area of serious concern. There is only one true certification program, that is through the Library of Congress in conjunction with The National Federation of the Blind. The course is tragically antagonistic towards the learner. Plus, even when one finishes the course and is deemed certified, the course has not covered all the various tools, software or file types that one runs into as a transcriber on the job. (NC)[60]
	There seems to be a lot of factors against proper training of transcribers, proper mentoring or apprenticeships, respect for the position, and the importance of braille by regular educators. I want to see changes in the way transcribers are trained, how braille is perceived by educators, and a livable wage for the work. It is highly technical and skilled. Having a background in visual impairment education is also a must because when inexperienced teachers ask for materials that are not a good match for a tactile learner, sometimes it is the transcriber who needs to step in and provide additional information to make sure the learner has an experience that allows for comprehension and application of what they learned. (NC)[61]
Staffing challenges that impact capability of AMPs (4)	In the past, we haven't had a full staff at the Instructional Materials Center. I think one of the bigger impacts, besides funding, is lack of trained teachers of the blind/low vision and lack of braille transcribers who are certified. (OR)
	Usually, it is a long process for an AMP, and it is difficult to find people to do it. (UT)

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[60] Feedback provided in written form from a focus group participant.
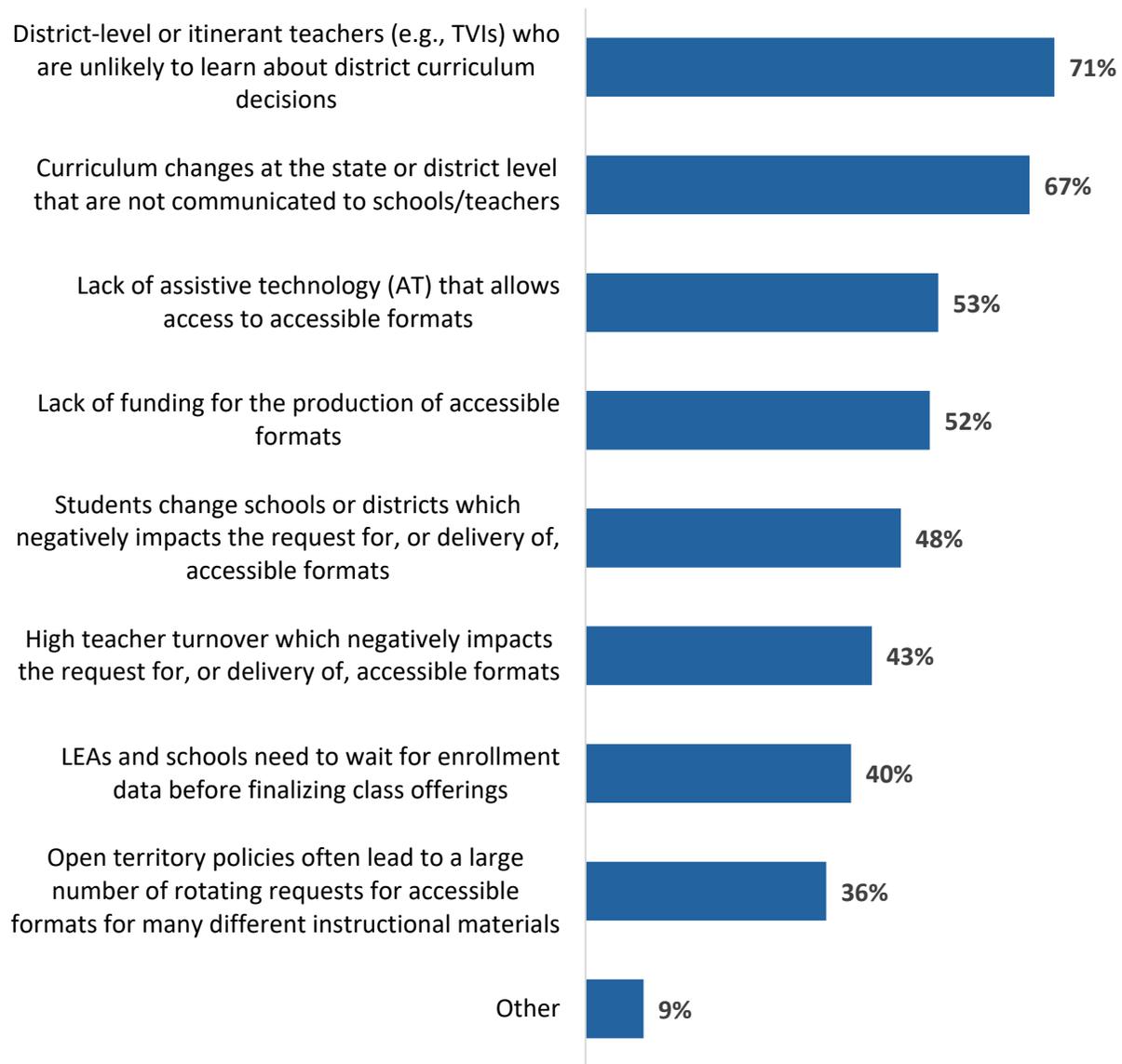[61] Feedback provided in written form from a focus group participant.

Participants offered potential strategies to address production-related challenges to timely delivery (across 7 excerpts). These included:

- Provide local "braille transcribers the option to work a 12-month calendar" to produce braille over the summer before school starts,
- AMPs buying physical copies of textbooks as soon as orders are received so they are not waiting for extended periods to obtain physical copies from schools,
- Require publishers to provide PDF files along with NIMAS files so physical copies are not needed,
- Create a consolidated database where publishers can explain the differences between versions of textbooks, including national and state editions, and
- Develop more advanced tools for converting NIMAS files to accessible formats.

To explore the fourth domain of factors that hinder timely delivery of accessible formats, survey respondents were presented with a list of state, regional, district, and school-level practices (all of which are included in Figure 29) and asked to select the practices that hinder timely delivery.[62] Over two-thirds of survey respondents indicated timely delivery is hindered by "District-level or itinerant teachers (e.g., TVIs) who are unlikely to learn about district curriculum decisions" (71%) and "Curriculum changes at the state or district level that are not communicated to schools/teachers" (67%). Three other hindrances were selected by about half of respondents: "Lack of assistive technology (AT) that allows access to accessible formats" (53%), "Lack of funding for the production of accessible formats" (52%), and "Students change schools or districts which negatively impacts the request for, or delivery of, accessible formats" (48%). Other factors, identified by at least one-third of survey respondents, included: "High teacher turnover which negatively impacts the request for, or delivery of, accessible formats," "LEAs and schools need to wait for enrollment data before finalizing class offerings," and "Open territory policies often lead to a large number of rotating requests for accessible formats for many different instructional materials" (43%, 40%, and 36%, respectively).

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[62] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

Figure 29. State, Regional, District, or School-Level Practices that Hinder Timely Delivery[63]
(*n* = 159)

District-level or itinerant teachers (e.g., TVIs) who are unlikely to learn about district curriculum decisions — **71%**

Curriculum changes at the state or district level that are not communicated to schools/teachers — **67%**

Lack of assistive technology (AT) that allows access to accessible formats — **53%**

Lack of funding for the production of accessible formats — **52%**

Students change schools or districts which negatively impacts the request for, or delivery of, accessible formats — **48%**

High teacher turnover which negatively impacts the request for, or delivery of, accessible formats — **43%**

LEAs and schools need to wait for enrollment data before finalizing class offerings — **40%**

Open territory policies often lead to a large number of rotating requests for accessible formats for many different instructional materials — **36%**

Other — **9%**

When comparing the pattern of responses displayed in Figure 29 across the three case study states as well as the national survey, there were *two statistically significant findings.* Specifically, respondents in Ohio were more likely to endorse "Lack of assistive technology (AT) that allows access to accessible formats" ($\chi^2(3) = 14.29$, *p* < .05, standardized residual = 2.0; see Figure 30), while respondents in Utah were less likely to endorse "Lack of funding for the

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[63] 49 respondents selected "Don't Know" (these responses are not included in the figure). 14 respondents selected "Other" and described additional state, regional, district, or school-level practices that hinder timely delivery. These "Other" responses are included in the qualitative analysis described below.

production of accessible formats" compared to the other respondents ($\chi^2(3) = 19.07$, $p < .05$; standardized residual = 2.1; see Figure 30). These findings indicate that there may be different structures and processes for the provision of AT and funding of accessible formats across states.

Figure 30. State, Regional, District, and School-Level Practices that Hinder Timely Delivery: Differences by Location[64]
(n = 159)
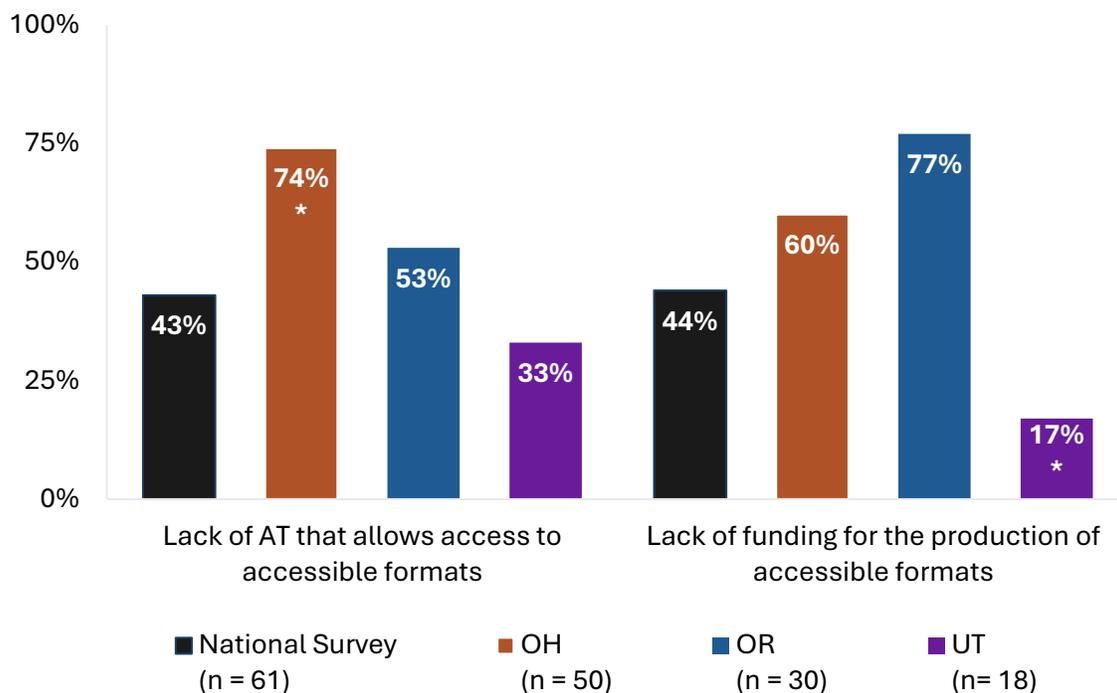
When examining state, regional, district, and school-related factors that hinder timely delivery across roles, there were no statistically significant findings.

To further explore state, regional, district and school-level practices that hinder timely delivery, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that hinder timely delivery of accessible materials. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

Participants' descriptions of state, regional, district, and school-level factors that hinder timely delivery are presented by theme in Table 15. Interestingly, the most commonly described factor

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[64] 49 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

was not listed in the survey: Lack of understanding of accessibility requirements and how to obtain accessible formats (69 excerpts). Additional themes emerged that were not listed in the survey, including lack of communication among relevant stakeholders (26 excerpts), TVIs and support staff have limited bandwidth (23 excerpts), lack of accountability mechanisms to promote timely delivery (20 excerpts), teachers decide to use different curricula without sufficient communication/lead for production (19 excerpts), anti-disability beliefs (7 excerpts), lack of planning time (7 excerpts), and students change classes or are placed in classes late (5 excerpts). Participants described several themes, however, that were listed in the survey, such as lack of funding for accessible format production (50 excerpts), high teacher turnover (20 excerpts), open territory policies that lead to many rotating requests (10 excerpts), curriculum changes at the state/district level that are not communicated to schools/teachers (9 excerpts), and students change schools/districts (7 excerpts).

Table 15. Qualitative Descriptions of State, Regional, District, and School-Level Practices that Hinder Timely Delivery
(254 excerpts)

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
Lack of understanding of accessibility requirements and how to obtain accessible formats (69)	There's a lot of just being aware of where the services are. So, if you have or you're trying to produce braille for a student and you have a braille production center right in your building, it may take less time than if you have to contact an accessible materials location to get that information. I think a lot of it relates to administrators who may not even know where those centers are located or how to access the material. (OH)
	The Outreach Center for Deafness and Blindness is unbelievable. It's just getting those resources. I didn't know about the resources until I became an SST when I was a classroom teacher in a rural district. (OH)
	Without prior knowledge of the needs of students with visual disabilities, a teacher can't proactively order materials. Many times, teachers and educational support staff are unaware of the resources available through APH. (OH)
	I think more often than not, many visual impairments get overlooked due to a lack of teacher knowledge and understanding of the continuum of visual impairments. (OH)
	In the context of classrooms and school districts, there is very little understanding that these resources exist, let alone who in your building or in your school district are authorized users for the NIMAC or have access to Bookshare. When those processes are being used, it's kind of this black box, knowing that maybe the learning center teacher I'm collaborating with is looking for audio books for students, but I don't really know the process or how to proactively filter through the resources. (OR)

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	A lot of teacher-made materials is another part of the problem. Educators aren't aware of how to make sure that materials are accessible. (OR)
	Sometimes it can happen with admin, where they don't understand how quickly things need to be processed. They might say, "Oh yes, you need the accessible format asap, so does everyone else." And things get delayed because they don't realize we actually need it now. (OR)
	I've been targeting the middle school population right now. I've seen teachers continuously handing papers to students who are not able to read and then chastising them for not completing their schoolwork. And it's like, well, they can't read. And that seems to be mind-blowing to them. So, there is this lack of understanding of what the student needs and their responsibility for it. (OR)
	I don't know what's happening in other places, but the onboarding of new staff often does not include anything about accessibility or assistive technology. (OR)
	The number one factor impacting timely delivery is educators knowing where they can go to access formats that might be needed by students. So, there's a lot of educators and LEAs that may not know about the resources, and this affects ordering or accessing materials that they might need. (UT)
	Classroom teachers often don't understand how critical it is to provide information to service providers (TVIs or IRC/IMC) in a timely manner. Last minute requests are hard to accommodate. (CO)
	Unfortunately, some districts do not understand the amount of time it takes to produce hard copy braille and that some online programs are not accessible. (CT)
	There is often a gap in understanding of the importance and requirements of AEM between General/Special Education Teachers and TVIs. While TVIs advocate and communicate with school teams to identify classroom materials so that ordering and production can begin, delays frequently occur because school teams do not share the same understanding of the timelines involved. (HI)
	I don't think people understand the process and how long it takes. I mean, it's not just the publishers that don't know that braille producers need those NIMAS files. It's the whole understanding that they get the file, have to open the file and go through every single page and read all of that computer data and sort through all that. I've been communicating to APH that people need to understand that the fastest APH can get a file ready is maybe five to six weeks. That's the very fastest for a textbook. (IA)
	The practice of finding and getting accessible formats feels like a bit of a mystery. I am able to search and find what I need, but figuring out the next steps is confusing. (MN)

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
Lack of funding for accessible format production (50)	Funding and lack of knowledge hinder the use of accessible formats to meet students' needs. (OH)
	Funding negatively impacts the willingness or ability of districts to provide optimal resources. (OH)
	Sometimes the price for specific books, maybe more in the STEM book arena, is very expensive, and people kind of push the responsibility for paying for it along, and then students don't get the book. (OR)
	Funding for programs is not sufficient to support teaching students access skills and advocacy for their needs. Also, equipment is evolving and is very expensive, which districts just cannot afford at this time. (OR)
	Funds to provide AT, like talking calculators, are no longer available. We must be able to provide tools that help our students access curriculum (OR)
	Funding for AT programs is a huge barrier! (OR)
	We have one braillist. We're supposed to have one and a half, two braille positions, but they haven't been filled because of funding issues. (OR)
	Cost is a barrier. Some accessible formats, like math and science textbooks, are very expensive. Sometimes funds run out for accessible format production. (OR)
	Having the right equipment to produce accessible formats, as well as assistive technology. Updated equipment is very expensive. (OR)
	Publishers change curriculum a little and publish new versions. It is expensive to obtain the new versions. (OR)
	Braille is quite costly, and this is a factor to students receiving all of their materials in an accessible format. (CO)
	Usually, students have the tools and are able to read the braille, but the school hasn't supplied the materials due to cost or time required to translate. (IA)
	Before I came back to North Carolina to be the transcriber, my school had been without one for two years. There were a couple of reasons for this: 1) they posted the position as "braillist" which braille transcribers don't even consider a proper word, and 2) the pay is horrid. (NC)[65]
Lack of communication among relevant stakeholders (26)	A lot of times, we send out an initial email to educators saying, "Hey, we need this information about accessible format requests for next year. Can you please put us in communication with whoever that person is?" I would say maybe 10% of the time we get something back. For the other 90%, we have to go digging and then we have to seek out the specific person. So, there's a ton of legwork involved there. That's a huge barrier. (OH)
	You're relying on the general education teachers to be on top of it enough to get you information about accessible format needs. And it's like this chain reaction of slow, sluggish things that just don't happen. (OR)

[65] Feedback provided in written form from a focus group participant.

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	I know that in many instances LEAs don't know if there is a resource in an accessible format. Educators don't realize this is available for students if needed. We need to do a better job of letting people know these resources are out there for students. (UT)
	I'd have to say that part of the challenge is communication. Our admin needs to be talking to us about what they're purchasing when they're purchasing it because they forget about those one or two students. Usually when we're talking about the things that need to be ordered, we're not talking about a lot of kiddos. It's a very small group, but I think that it falls through the cracks for them. It's the communication between whoever's ordering the materials and the Special Ed staff that has to happen ahead of time so we can get the materials there in time. (UT)
	Where my issues arise is the administration in our district not understanding the process and time needed to order curriculum. It gets even more difficult when you add the transition to a new building/staff into the mix. This year my student went from Jr. High to High School. Communications between the district and new teachers are where we ran into difficulties. I have been a one-on-one para with the current student since kindergarten. This has been the most difficult year. As the para who works and orders for her, I was not included in the planning and meeting teacher process, so it made it more difficult. (UT)[66]
	We sent a couple of times some mass emails about the process for obtaining accessible formats to principals and superintendents. We got maybe two responses. We were never were very successful in that way. (IA)
	I worry that if emails about the process for obtaining accessible formats are sent to superintendents, they don't always know the ins and outs of what every kid in every building needs, especially in a larger district. You would hope that they push that onto their principals so that everyone's aware, but I am not sure our superintendent even knows that I have two students that are visually impaired and that need this material. (IA)
TVIs and support staff have limited bandwidth (23)	I think the rural areas really struggle because the TVI is responsible for multiple counties. So, I think that's a challenge. (OH)
	Not all districts have TVIs and therefore may not know how to acquire AEM or about Federal Quota. Or, there may be a couple of TVIs with a large caseload, and they may find it challenging to keep up. (OH)
	I often feel like, as an itinerant TVI, I'm the only person working to secure accessible materials. (OH)
	I'm the only TVI for my district of 15,000 students. We had a new student come in at the beginning of this year, and the whole middle school staff in

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	the building she is in flipped out because they have never had a student with a visual impairment before. This student has 6 different teachers. (OH)
	If we had someone in the district who could help support these specific needs, we wouldn't be talking about a teacher who is traveling between 20 schools in a five-day work week. And they could teach us how to utilize the supports more effectively within the classroom. (OR)
	There is a process to request that books be brailled, but there is no process to request other curriculum like PowerPoints to be brailled, so TVIs have to do that themselves on top of teaching their caseload. (UT)
	District administration does not understand that 1 vision teacher for 3 full time braille students in Gen Ed secondary schools is a disservice to the students. There is not enough time in a school day to service 3 braille students appropriately, along with other low vision students on the caseload. (CA)
	50% of my job as a TVI is preparing materials for one totally blind student (often at the sacrifice of quality instructional time with my other students). (DE)
	In our districts, BVIs are hard to come by and have limited time. (MN)
High teacher turnover (20)	If a teacher of the visually impaired leaves a school district, they may not take the time to make sure that materials have been ordered for students needing access to print nor be available to consult with the replacement person hired for their position. (OH)
	Turnover of leaders in Special Ed is quite high, so you're constantly redoing that training on obtaining accessible formats. (OH)
	Turnover is huge. People are leaving their positions, and new people are coming in who are overwhelmed, with high caseloads and all of these things going on. How can we be sure that they are getting the proper training, particularly when the person with the expertise just exited stage left and there is so much to know? (OR)
	Sometimes the school doesn't even know who the teachers will be next year because they haven't hired that person. Somebody left or retired in the summer, and so they're looking for a new teacher. And the first day of school is when the new teacher hits and then she has her ideas about what curriculum is needed, and we have to change pace and pretty much scratch what we did all summer and start new. And that's painful. (UT)
	There's so much turnover in Special Ed directors and Curriculum Directors, and even Superintendents and Directors of Charter Schools. I mean, turnover is constant. (UT)
	TVIs also tend to fluctuate quite a bit, so, when they change a TVI, we don't know them. So, sometimes you could be sending an accessible format to the wrong place because the contact has changed. And that's a hindrance, obviously. But it sort of breaks my heart when that happens. We put a lot of

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	work into producing the accessible format, and then it comes back unused because it was left somewhere. (UT)
	We're still noticing a huge turnover and still don't have as many certified teachers with the visually impaired that we had before the pandemic. And I don't know where those people went. (MA)
	At our school we are experiencing high turnover and difficulty acquiring necessary equipment for producing materials. The school went two years between braille transcribers. It will happen again if hiring practices are not changed. (NC)
Lack of accountability mechanisms to promote timely delivery (20)	There's a system in Ohio where you cannot score well on evaluations if you don't do the work of providing accessible materials. It's a small accountability piece. But if the person who is administering that assessment for the teacher or the principal doesn't know the system, they may be okay checking that piece off. (OH)
	Once access is deferred to the state/local level, it leaves too much to chance. Do the locals have the tools, knowledge, and urgency needed to produce accessible formats? Who provides oversight/quality control? (OH)
	In standards and instructional support for our Instructional Materials program, the NIMAS requirement language is already included. So, the support that's really needed is on the enforcement side, and we only know if there's noncompliance if it's reported to us by a district. So that is hard. We don't have anybody checking the assurances. (OR)
	NIMAS requirements/timelines and adoption timelines are included but there's no follow-through to check if the publishers complied. (MD)
Teachers use different curricula without sufficient communication/lead time for production (19)	Unexpected classroom plans are a big challenge. Teachers rightly may change their lesson plans as they prep the weekend before. I believe if a General Ed teacher has a B/VI student, they should have basic awareness of how to make last minute materials accessible. (OH)
	When we ask for braille to be produced, we ask for an explicit timeline from teachers: When does this need to be physically in that kid's hand so that we know we can mail it out the week before? Sometimes there's a big disconnect between what's happening in the classroom and what the TSVI gave us because they start speeding up or they slow down because state testing happened and then, all of a sudden, they haven't touched the book in three weeks. And then we're way off schedule, and we don't know until that TSVI has time to pop back into the room a month later, asking why no one told them that their kid hasn't been keeping up with everyone. That's a big thing—the timeline and teachers going off the cuff or going way quicker than they anticipated and then not letting us know. (OR)

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	General Education teachers often decide last-minute to do worksheets or give presentations without giving adequate notice to the TVI, so there is no time to braille these activities for the student. (UT)
	My personal experience is getting materials late or not at all, changing curriculum at the last minute, not knowing over the summer what the curriculum in the fall will be, and teachers changing or altering instructional materials on the fly. (DE)
	Working in public schools with constantly changing plans and curriculums makes it hard to obtain materials in advance enough to produce materials in a timely manner. (VA)
Open territory policies that often lead to rotating requests (10)	Our state is a local control state, and sometimes because every district has a different process for how to get materials, it can mean a student in district A might get things on time and a student in District B may not. So, sometimes not having a consistent statewide process could interfere. (OH)
	In Oregon, we vet a list of state approved curricula, but there's no rule that any district has to accept it. They can go off-book and choose whatever curricula they want to choose. I just recently ran into an example of that where a parent was asking about accessibility of a health curriculum, which wasn't accessible and had some other problems. But when I talked to a curriculum representative about this, she said, "Well, that's not on our list. We don't have any control over whether or not the district adopts what's on our list." (OR)
	Curriculum adoption for sure is one challenge. We've had that experience this year where the whole district is supposed to be on a math curriculum, but the one teacher we're working with is not on that math curriculum. So again, we have to go back, get the new curriculum, and have all the information ready. (OR)
	Our challenge is all the differing curriculums and over 3000 BVI students. (MA)
Curriculum changes at state/district level that are not communicated to schools/teachers (9)	At the district level, I had intervention specialists and classroom teachers that didn't even know their curriculum was changing until pre-service days before school started. So, in spring I'm reaching out to Bookshare and to all those other sources and making sure my students are ready for the materials that the teachers have indicated, like the textbooks and curriculum materials. Then we come back for pre-service meetings. I'm talking with the teacher, and she's asks, "Did you hear?" Now it's starting over from scratch, and I have 48 hours to prepare before the student gets in the room. (OH)
	District curriculum and technology staff do not fully understand accessibility for students who are B/VI. Many curriculum decisions are made over the summer and not communicated to the TVI. As an itinerant TVI, I'm not included in district communication regarding curriculum changes (even though I sometimes feel like I'm begging for information). (OH)

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	Our district has changed curriculum, and we don't get the material in a timely manner. (UT)
	Even though I am sometimes given the ensuing semester's curriculum, it rarely is the same. Sometimes I think it is just to appease my requests, but this material is prepared and then not used. What a complete waste of time for not only me but our materials center that prepares large textbook materials and tactile graphics. (DE)
Students change schools/districts (7)	One challenge is accessible formats not arriving in time due to students moving during the school year. (UT)
	A big factor is the amount of time it takes to prepare braille material. When students move into a district partway through the year, it can be weeks or months before braille books can be prepared for them. (UT)
	Unfortunately, not all requests for accessible formats can be made well in advance, especially as we have students moving in and out of districts using different curriculums. Sometimes we don't have a need until a student enrolls at the beginning of a school year and or anytime throughout the school year. This then leaves a large gap in time between the request and the receipt of accessible materials. (TX)
Anti-disability beliefs (7)	Implicit bias and disposition regarding people who are blind. (OH)
	There's a mindset and a lot of people who think, "Pull 'em up by your bootstraps. I had to work hard. Yes, I have dyslexia, but I had to work hard, and it'll do my child good to do the same thing. We don't need no stinking accommodations." (OR)
	I also believe philosophy comes into play here and people's beliefs. There are people that don't care and think, "Whatever, students with disabilities should be somewhere else. They shouldn't even be in our school." So, I do think that that can cause a delay. I don't think it causes no access, but it can cause a delay in access. (OR)
Lack of planning time (7)	I think the challenges are teacher understanding and knowledge and having time to prepare materials and make sure they're accessible for all. (OH)
	Lack of planning time! General education teachers are not providing the materials to TVIs to then put into alternative format. (OR)
	I would say the number one barrier is time. Teachers want to provide for every student, but I always hear, "Well, when am I supposed to do this? How am I going to get this done?" (OR)
	Paraprofessionals or teachers are not given time to meet, discuss, and plan/order what is needed. (IA)
Students change classes or are placed in classes late (5)	Sometimes students don't find out who their teacher is or what class they're going to be in until a couple of weeks before school starts. And that can be problematic. (OH)
	Another hindrance for a lot of middle school kids is that they have a lot of classes and don't always know what class they're going to take. Sometimes,

State, Regional, District, and School-Level Practices that Hinder Timely Delivery	Representative Quotations
	it comes down the line too late, or they end up changing at the last minute. There's not a lot we can do when a book takes so long. (UT)

Participants offered potential strategies to address state, regional, district, and school-level challenges to timely delivery (across 30 excerpts). These included:

- More professional development to help educators learn about relevant resources (e.g., NIMAC, Bookshare) and the process for obtaining various accessible formats,
- "Digital training" to learn about accessibility features and challenges of digital materials,
- Involving librarians more in the process of obtaining accessible formats,
- A technology-based tool to help educators track students' needs for accessible formats,
- "More trained TVIs" who can collaborate with other educators,
- More planning time allotted to collaboration among teachers and TVIs, and
- Working with "state educational systems to find the most efficient way of making accessibility a high priority, including clear protocols for efficiency and effectiveness that will ultimately support student access and quality instruction and support."

To explore specific challenges related to timely delivery in charter schools, survey respondents were able to select multiple factors that hinder timely delivery of accessible formats for students in charter schools[67] (all of which are presented below in Figure 31). Approximately 70% of respondents endorsed all three options: "Lack of familiarity with special education and the process for obtaining accessible formats among charter school administrators," "Lack of resources needed to obtain accessible formats," and "Lack of accountability systems to promote timely delivery of accessible formats."

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[67] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

Figure 31. Factors that Hinder Timely Delivery in Charter Schools[68]
(*n* = 101)
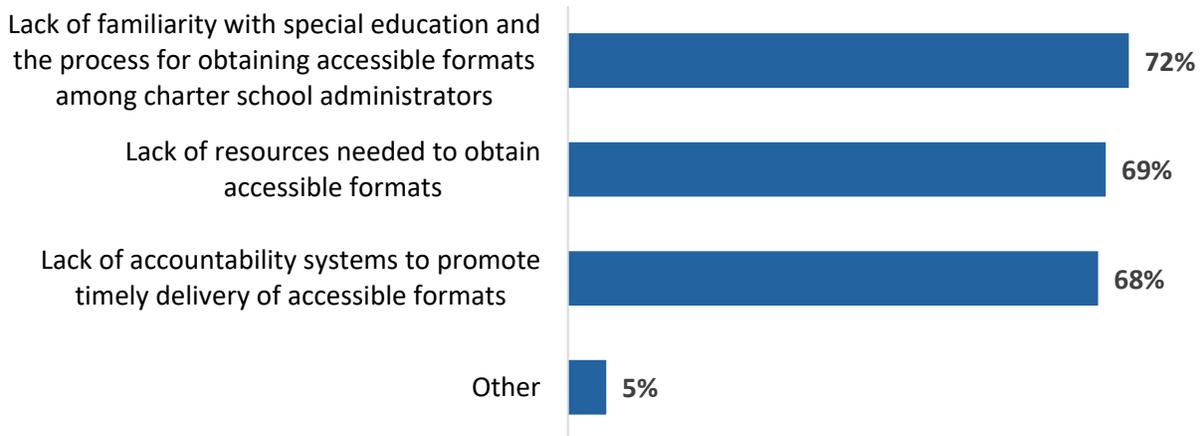
When comparing the pattern of responses displayed in Figure 31 across the three case study states as well as the national survey, there was *one statistically significant finding.* Specifically, respondents in Ohio were more likely to endorse "Lack of familiarity with special education and the process for obtaining accessible formats among charter school administrators" ($\chi^2(3)$ = 8.15, $p < .05$, standardized residual = 2.0; see Figure 32). This finding indicates that charter school administrators in Ohio may be less familiar with special education and processes for obtaining accessible formats compared to charter school administrators in other states.

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[68] 102 respondents selected "Don't Know" (these responses are not included in the figure). 5 respondents selected "Other" and described additional factors that hinder timely delivery in charter schools. These "Other" responses are included in the qualitative analysis described below.

Figure 32. Factors that Hinder Timely Delivery in Charter Schools: Difference by Location[69]
(*n* = 101)
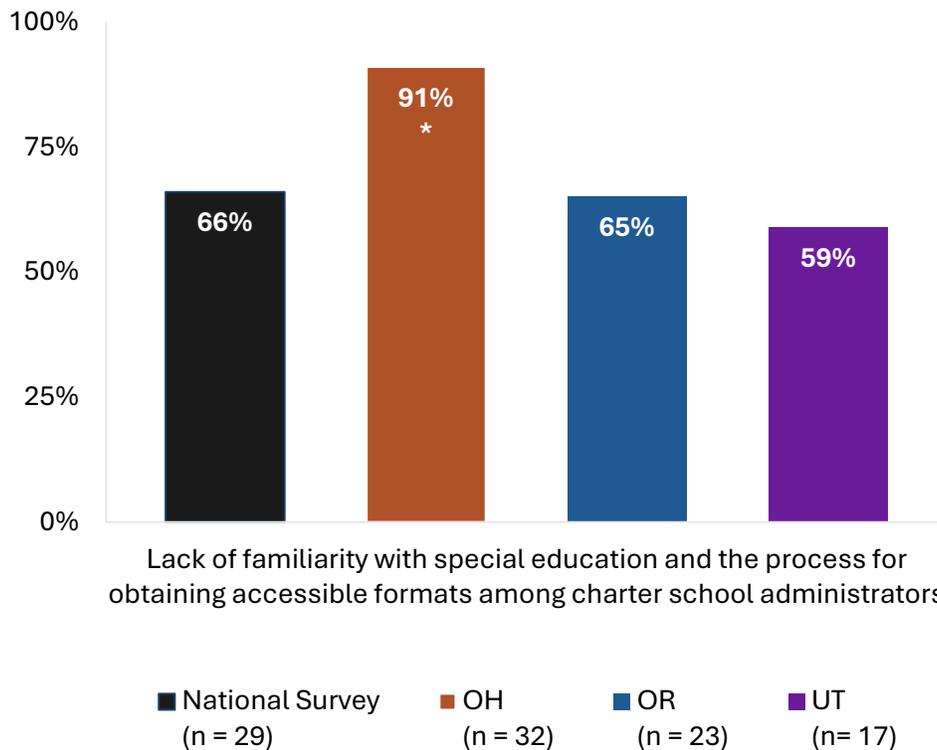
When examining factors that hinder timely delivery in charter schools across roles, there were no statistically significant findings.

To supplement quantitative findings, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe factors that hinder the timely delivery of accessible formats for students in charter schools, including online charter schools. Survey respondents were given the opportunity to suggest other factors and to explain their selections.

Participants' descriptions of factors that hinder timely delivery in charter schools are presented by theme in Table 16. The factors most commonly described by participants were consistent with those presented in the survey: Lack of familiarity with special education and the process for obtaining accessible formats (15 excerpts), lack of resources needed to obtain accessible formats (9 excerpts), and lack of accountability systems to promote timely delivery (8 excerpts). One theme emerged from the qualitative data that was not presented in the survey: Frequent

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[69] 102 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

use of teacher-created, non-traditional, and digital materials that are difficult to make accessible (6 excerpts).

Table 16. Qualitative Descriptions of Factors that Hinder Timely Delivery in Charter Schools
(34 excerpts)

| Factors That Hinder Timely Delivery in Charter Schools	Representative Quotations
Lack of familiarity with special education and process for obtaining accessible formats (15)	There's not a lot of staff that are knowledgeable about special education. (OH)
	Lack of teacher training around AT/AEM. (OH)
	Charter school teams often seem less aware of the broader educational perspective and resources available to support student unique learning needs. (OH)
	Management companies at charter schools are usually responsible for training, etc., and they may not be knowledgeable. (OH)
	At times, teachers in charter schools as well as support staff are inexperienced, as they have recently earned their diplomas and lack awareness of the special needs of students as well as where to go for resources. In addition, recent graduates do not have a repertoire of teaching materials that they have created and, thus, may not have the time to search for appropriate intervention materials. (OH)
	Although in our public schools we do all the guidance related to special education, our charter school people maybe don't get that as much. (OR)
	Our state does a good job of making sure resources are available, but a lot of our charter school staff are still learning how to navigate systems. (UT)
	Charters are public but frequently have no staff that specialize in print disabilities. (IN)
Lack of resources needed to obtain accessible formats (9)	I had one call with a charter school where they didn't realize how visually impaired the student was when they accepted the student. So, they were not aware of all the support. They did not have a TVI, and they basically called me reading the IEP saying, "What should we get?" So, I think they don't always have the appropriate professionals or educators needed to support the students, and therefore they don't know the processes or where to start. (OH)
	Even though the charter school is in our district, they can't use our Read and Write licenses. There's just some of those technical barriers too. (OR)
	I work in a charter school, and there's a significant lack of communication as well as lack of consistency, which leads to things falling through the cracks. We're very understaffed and can't afford the staff we need. (UT)
Lack of accountability systems to promote timely delivery (8)	Charter schools lack the accountability of a public school system. As such, they do not always adhere to special education law. (OH)

Factors That Hinder Timely Delivery in Charter Schools	Representative Quotations
	For online charter schools, all of their minutes had to be completed through virtual learning, which made it super challenging to get a quality functional vision of what they really needed and help them troubleshoot using accessible formats. I also felt like there was really not awesome follow-through because they were just at home kicking it. They would get on and do the bare minimum just to get in and get out. (OH)
	Accessibility seems to be an afterthought. Unless parents are advocates, it is often not a focus. (MN)
Frequent use of teacher-created, non-traditional, and digital materials that are difficult to make accessible (6)	Charters aren't beholden to the same requirements around adopting HQIM [High-Quality Instructional Materials] as public school districts. Some charters use HQIM, but others don't. Because a lot of the charters that haven't adopted HQIM are using teacher created materials, I think that creates a pretty big barrier. (OR)
	A lot of charter school staff will just throw slides together and be like, "You know, this is my curriculum." Then, we're trying to adapt that into tactiles, and it takes weeks and weeks and weeks to get that out to people. (OR)
	Charter schools use digital curriculum that is cheaper, and so we have some problems with getting the actual file that they're using. They're like, "It's online, we'll just give you our Canvas account." And we're like, "No, it doesn't work like that. We need to know exactly what you're using for that student. You need to provide it to us." So, it's the digital curriculum. Charter schools get a little bit more creative and use cheaper open-source material. (UT)
	Teacher created material is almost impossible to get to the student in a quality and timely manner. It's because of the inconsistencies in formats, the inconsistencies with how things are presented, and the errors. It really takes a lot of time. But this is the core curriculum at charter schools. (UT)
	I would say in Florida, we have a lot of charter schools. They are using all different kinds of materials and textbooks, and they're not similar to what the districts are using. So, there's no hope of us recirculating accessible formats and getting them there fast. (FL)

NIMAS and Procurement

Survey respondents were asked a series of questions related to procurement contract processes for educational materials. Figure 33 reveals the lack of familiarity with procurement contract processes, with only one-quarter of survey respondents (24%) indicating strong or moderate familiarity.[70]

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[70] This question was not presented to publishers or conversion vendors who were not NIMAC Users.

Figure 33. Familiarity with Procurement Contract Processes for Educational Materials
(*n* = 231)
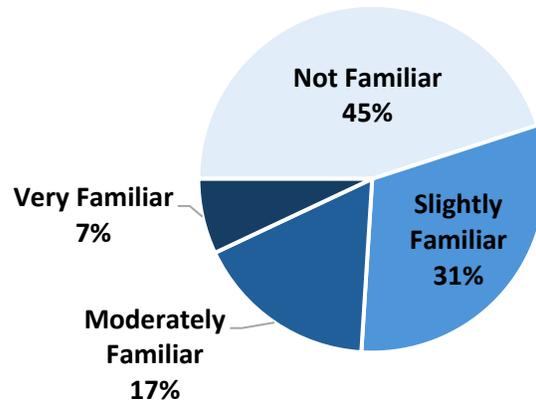
To examine differences in familiarity with procurement contract processes for educational materials by location and role, responses were assigned a numerical value where 1 = Not Familiar, 2 = Slightly Familiar, 3 = Moderately Familiar, and 4 = Very Familiar. There were no statistically significant differences by location, and there were *three statistically significant differences by role*. As displayed in Figure 34, familiarity with procurement contract processes was lower among school staff (*t*(229) = 2.7, *p* < .05) and higher among IMC/IRC staff (*t*(229) = 3.1, *p* < .05) compared to other respondents. In addition, NIMAC Users reported more familiarity with procurement contract processes (mean = 2.2; *n* = 54) compared to respondents who were not NIMAC Users (mean = 1.8; *n* = 177; *t*(229) = -2.7, *p* < .05). These findings suggest that involvement in procurement contract processes is likely less common among school staff and more common among IMC/IRC staff and NIMAC Users.

Figure 34. Familiarity with Procurement Contract Processes for Educational Materials: Differences by Role[71]

(n = 231)

LEA/ESD, Regional, & Cooperative Staff (n = 102)	School Staff (n = 63)	IMR/IRC Staff (n = 26)	SEA Staff (n = 26)	AMPS, Publishers, & Vendors (n = 14)
1.9	1.6 *	2.4 *	1.8	2.1
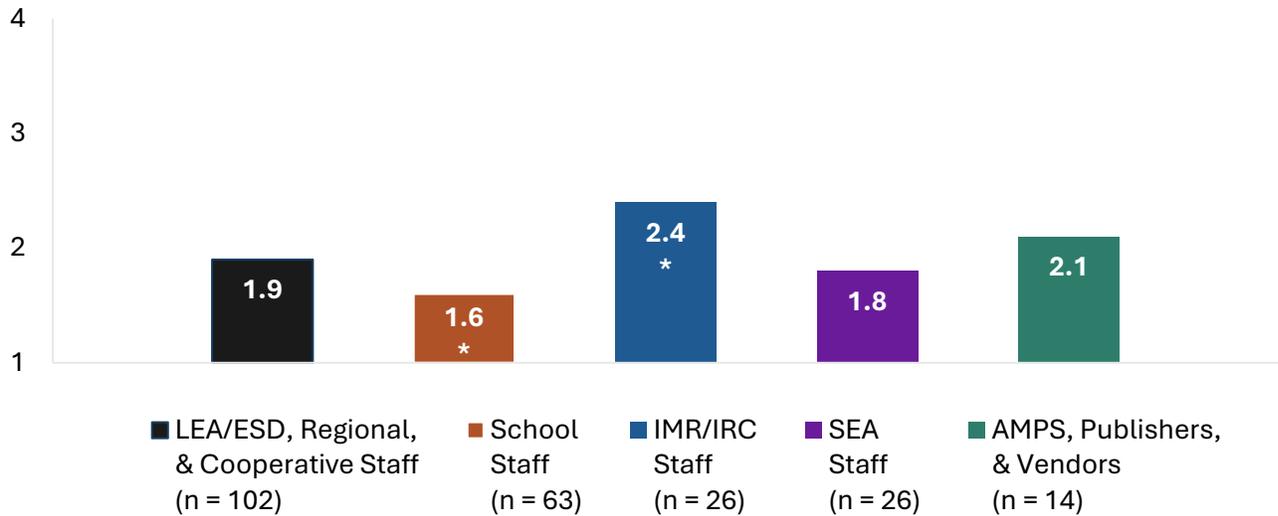
Survey respondents were also asked whether they have been directly involved in the procurement contract process for educational materials.[72] Similar to the previous finding, less than one-quarter of respondents (23%) reported involvement in the procurement contract process (see Figure 35).

Figure 35. Involvement in Procurement Contract Process

(n = 204)

No
77%

Yes
23%

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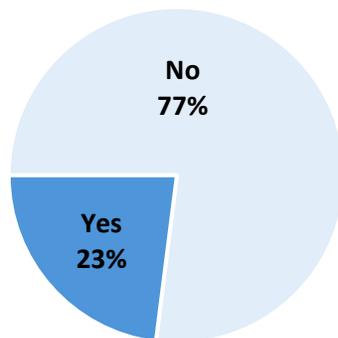
[71] The * indicates a statistically significant difference.
[72] This question was not presented to IRC/IMC staff or AMPs who were not NIMAC Users.

Survey respondents were then asked how often SEA and LEAs include the NIMAS requirement in procurement contracts.[73] As displayed in Figure 36, more than half of respondents (54%) indicated that the NIMAS requirement is never or rarely included in procurement contracts.

Figure 36. How Often NIMAS Requirement is Included in Procurement Contracts[74]
(*n* = 48)
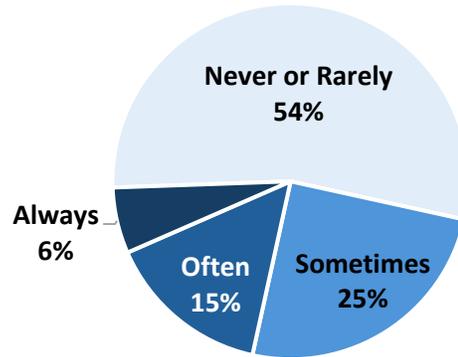
Survey respondents were also asked to rate their level of agreement with the following statement: "I understand which educational materials fall within the scope for NIMAS and which educational materials fall outside of the scope for NIMAS."[75] Figure 37 shows that approximately half of respondents (49%) agreed with the statement, indicating variability in understanding of NIMAS scope.[76]

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[73] This question was not presented to IRC/IMC staff or AMPs who were not NIMAC Users.

[74] 151 respondents selected "Don't Know," and 5 respondents selected "Other" (these responses are not included in the figure). The "Other" responses included "Does not apply to ESD," "For textbook adoptions – yes, but not for 'educational materials' as this can include much more," and "We address it annually through our IDEA application."

[75] This question was not presented to IRC/IMC staff or AMPs who were not NIMAC Users.

[76] A brief data report was prepared to summarize findings from a separate survey that was administered to publishers and conversion vendors after three NIMAC Webinar Trainings during the summer of 2025. That survey asked similar questions, and the data report is provided in Appendix C. Findings among publishers and conversion vendors who attended the NIMAC Webinar Trainings were similar to those of the Case Study survey respondents, except a larger percentage of publisher and vendor trainees 1) reported that the NIMAS file is often or always included in procurement contracts, and 2) agreed or strongly agreed that they understand which educational materials fall within scope for NIMAS.

Figure 37. Understanding of Educational Materials that Fall within Scope for NIMAS[77]
(*n* = 146)
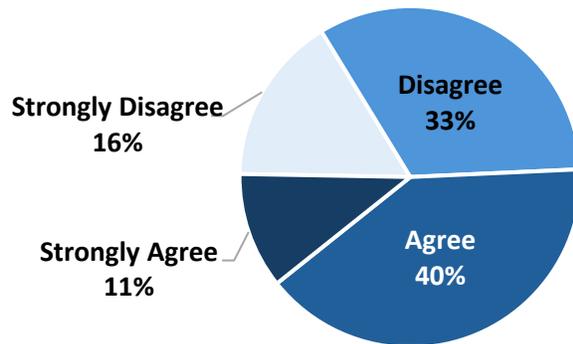
To examine differences in knowledge of educational materials that fall within scope for NIMAS by location and role, responses were provided a numerical value where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. There were no statistically significant differences by location, and there were *three statistically significant differences by role.* As displayed in Figure 38, understanding of educational materials that fall within scope for NIMAS was lower among school staff ($t(144) = 3.2$, $p < .05$) and higher among AMPs, publishers, and conversion vendors ($U = 1614.5$, $p < .05$) compared to other respondents. In addition, NIMAC Users reported greater understanding of educational materials that fall within scope for NIMAS (mean = 2.8; *n* = 38) compared to respondents who were not NIMAC Users (mean = 2.3; *n* = 108; $t(144) = -3.2$, $p < .05$). These findings indicate less familiarity with the scope for NIMAS among school staff and more familiarity among AMPs, publishers, conversion vendors, and NIMAC Users.

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[77] 58 respondents selected "Don't Know" (these responses are not included in the figure).

Figure 38. Understanding of Educational Materials that Fall within Scope for NIMAS: Differences by Role[78]

(*n* = 146)

■ LEA/ESD, Regional, & Cooperative Staff (n = 62)	■ School Staff (n = 38)
■ IMR/IRC Staff (n = 15)	■ SEA Staff (n =14)
■ AMPS, Publishers, & Vendors (n = 17)	
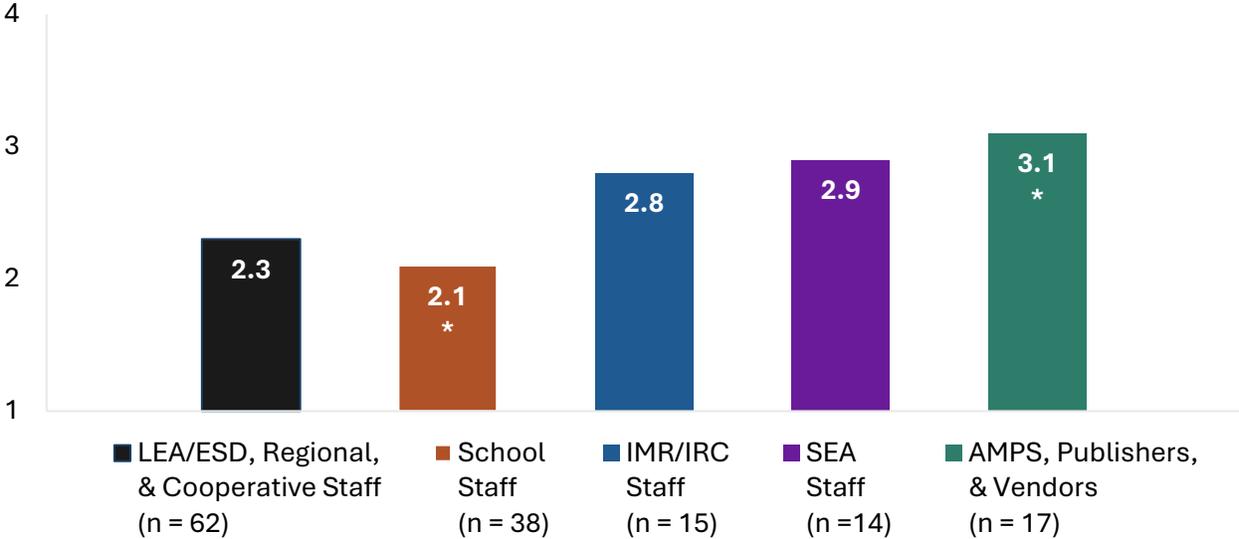
NIMAC Assistance

Given that the NIMAS requirement in procurement contracts is the only legal mechanism to hold publishers accountable for submitting NIMAS files into the NIMAC repository, the NIMAC was interested in strategies to facilitate the inclusion of the NIMAS requirement in procurement contracts. Survey respondents were presented with a list of multiple strategies (all of which are presented in Figure 39) and asked to select the strategies that would help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts for educational materials.[79]

Nearly three-quarters (72%) of respondents selected two strategies that would be helpful: Trainings with SEA/LEA procurement staff to "provide education about the types of educational materials that fall within the scope for NIMAS" and "increase awareness of the importance of including the NIMAS requirement in procurement contracts." Two-thirds of survey respondents selected two other strategies: "Trainings with General Education Departments and Special Education Departments to improve collaboration" (69%) and "Providing educational materials about the NIMAC and the NIMAS requirement that can be incorporated into onboarding materials for new SEA/LEA procurement staff" (62%). Other helpful strategies for promoting consistent inclusion of the NIMAS requirement in procurement contracts, selected by about

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[78] 58 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

[79] This question was not presented to IRC/IMC staff, AMPs, publishers, or conversion vendors who were not NIMAC Users.

half of survey respondents, were "Trainings with General Education and Special Education Departments to improve data collection efforts related to procurement and production of accessible formats" (54%), "Trainings with multiple stakeholder groups (e.g., instructional resource centers) about how to include the NIMAS requirement in procurement contracts" (52%), and "Creating a designated position that focuses on outreach to states and local educational agencies to provide guidance and technical assistance" (48%).

Figure 39. Strategies to Help SEAs and LEAs Consistently Include the NIMAS Requirement in Procurement Contracts [80]

(n = 141)
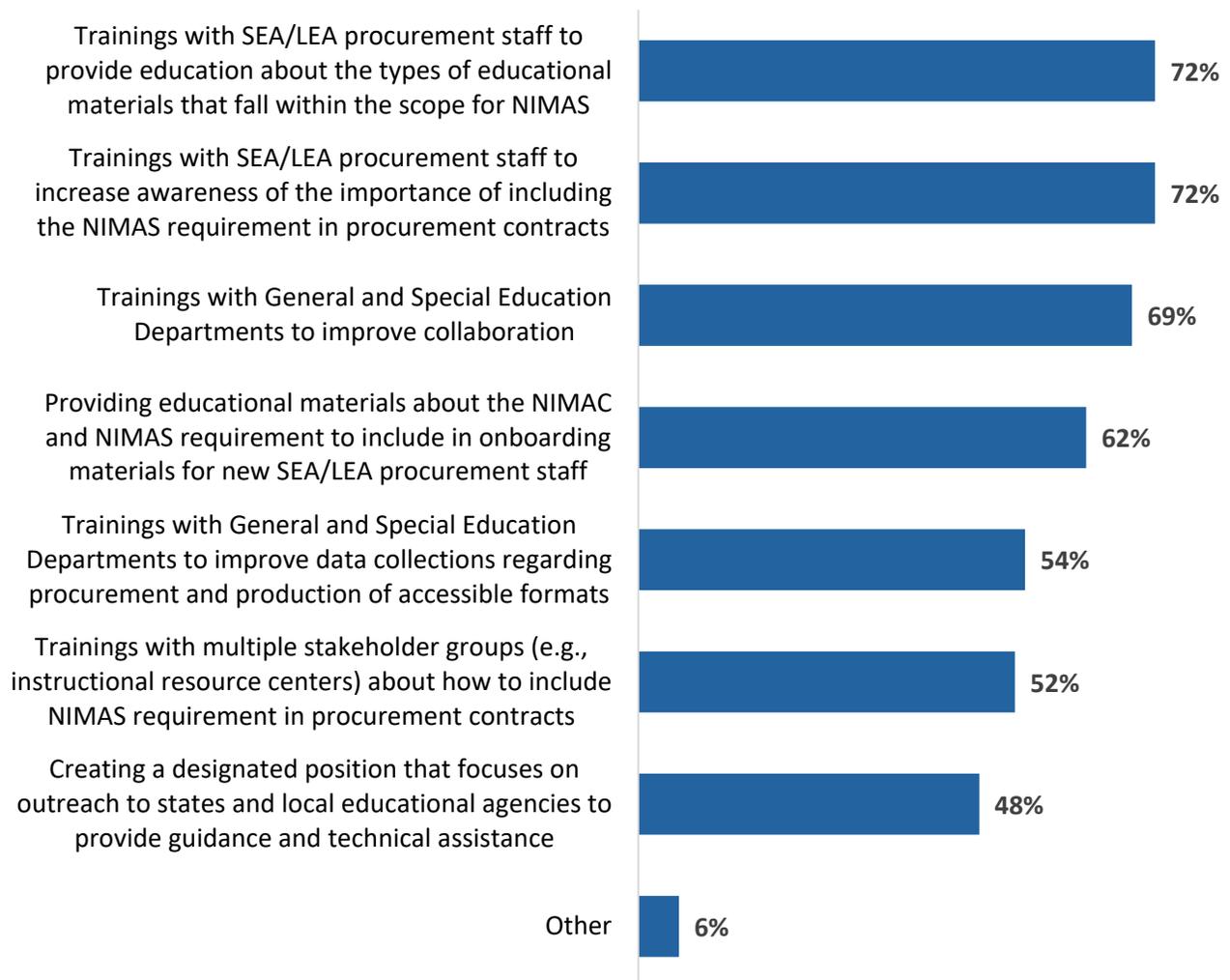
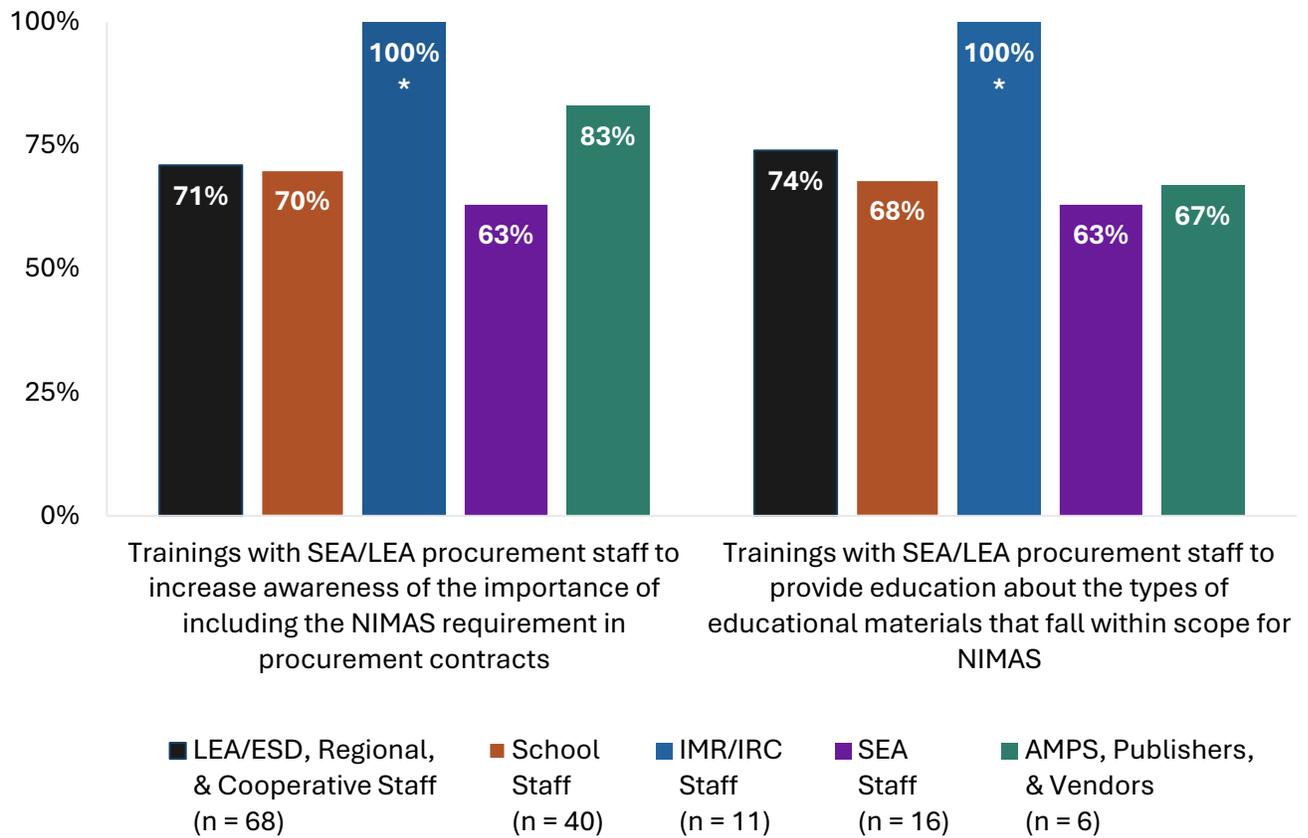[80] 54 respondents selected "Don't Know" (these responses are not included in the figure). 8 respondents selected "Other" and described additional strategies to help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts. These "Other" responses are included in the qualitative analysis described below.

When comparing the pattern of responses displayed in Figure 39 across the three case study states as well as the national survey, there were no statistically significant differences, indicating that strategies to help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts may be effective across states.

When examining strategies to help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts across respondent role, there were *six statistically significant findings*. Specifically, IMC/IRC staff were more likely to endorse trainings with SEA/LEA procurement staff to "increase awareness of the importance of including the NIMAS requirement in procurement contracts" (Fisher's exact test $p < .05$) and "provide education about the types of educational materials that fall within the scope for NIMAS" (Fisher's exact test $p < .05$; see Figure 40), as well as "Trainings with General Education Departments and Special Education Departments to improve collaboration" (Fisher's exact test $p < .05$; see Figure 41). In addition, NIMAC Users were more likely to endorse trainings with SEA/LEA procurement staff to "increase awareness of the importance of including the NIMAS requirement in procurement contracts" (90%; $n = 29$; $\chi^2(1) = 5.47$, $p < .05$), "Trainings with multiple stakeholder groups (e.g., instructional resource centers) about how to include the NIMAS requirement in procurement contracts" (69%; $n = 29$; $\chi^2(1) = 3.98$, $p < .05$), and "Providing educational materials about the NIMAC and the NIMAS requirement that can be incorporated into onboarding materials for new SEA/LEA procurement staff" (86%; $n = 29$; $\chi^2(1) = 8.81$, $p < .05$) compared to respondents who were not NIMAC Users (68%, 48%, and 56%, respectively; $n = 112$). These findings suggest that IMC/IRC staff and NIMAC Users are more likely to recognize the potential benefits of additional trainings and educational materials related to the NIMAC and NIMAS files.

Figure 40. Strategies to Help SEAs and LEAs Consistently Include the NIMAS Requirement in Procurement Contracts: Differences by Role (Part 1)[81]

(*n* = 141)

Legend:
- LEA/ESD, Regional, & Cooperative Staff (n = 68)
- School Staff (n = 40)
- IMR/IRC Staff (n = 11)
- SEA Staff (n = 16)
- AMPS, Publishers, & Vendors (n = 6)

Trainings with SEA/LEA procurement staff to increase awareness of the importance of including the NIMAS requirement in procurement contracts: 71%, 70%, 100%*, 63%, 83%

Trainings with SEA/LEA procurement staff to provide education about the types of educational materials that fall within scope for NIMAS: 74%, 68%, 100%*, 63%, 67%

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[81] 54 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

Figure 41. Strategies to Help SEAs and LEAs Consistently Include the NIMAS Requirement in Procurement Contracts: Differences by Role (Part 2)[82]

(*n* = 141)
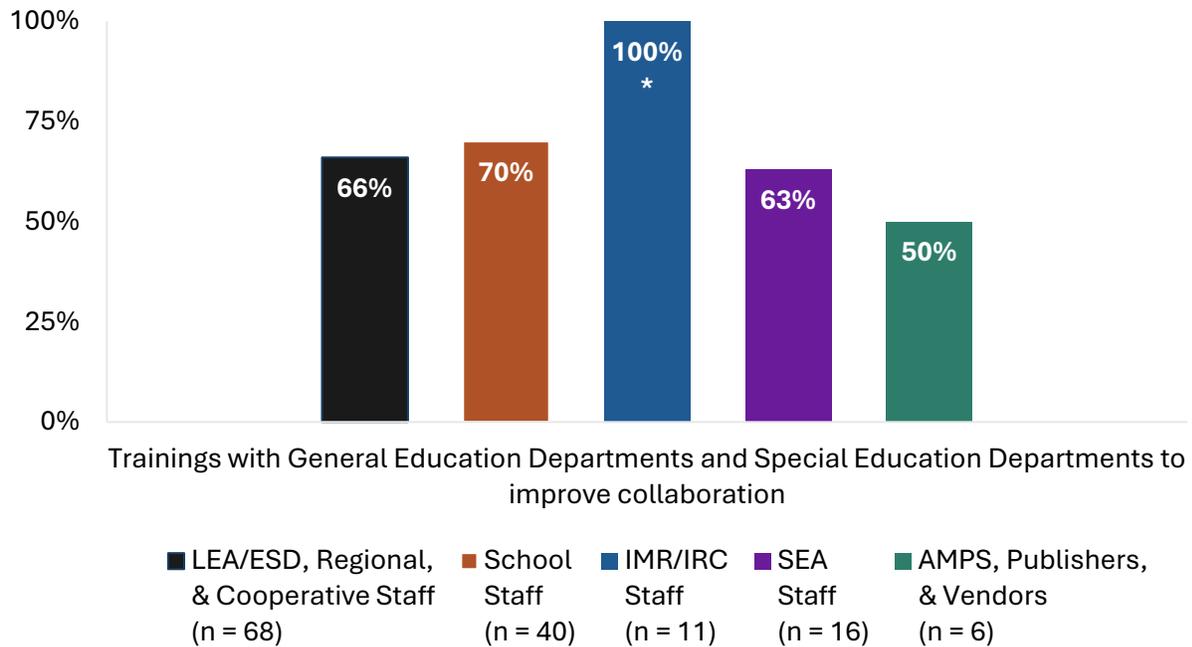
To supplement quantitative findings, we obtained qualitative responses from interview participants and survey respondents. Interview participants were asked to describe practices that could help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts for educational materials. Survey respondents were given the opportunity to suggest other practices and to explain their selections.

Participants' descriptions of strategies to help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts are presented by theme in Table 17. Three strategies are consistent with those presented in the survey, including trainings to increase awareness (11 excerpts), providing educational materials about NIMAS and the NIMAS requirement (5 excerpts), and creating a designated position to provide guidance and TA (5 excerpts). Two themes emerged from the qualitative data that were not presented in the survey: Creating a standardized workflow that includes the NIMAS requirement (9 excerpts) and altering or supplementing IDEA 2004 to require publishers to upload NIMAS files for all educational materials[83] (6 excerpts).

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[82] 54 respondents selected "Don't Know" (these responses are not included in the figure). The * indicates a statistically significant difference.

[83] IDEA 2004 currently requires all SEAs and LEAs that choose to work with the NIMAC include the NIMAS requirement in their procurement contracts.

In addition to the aforementioned themes, some participants noted that a statewide rule in Oregon requires the NIMAS requirement to be included in procurement contracts for instructional materials. Although they find this rule helpful, they explained that it is not always followed. Other, less commonly suggested strategies included coordinating ongoing "training for the people who oversee purchasing" (3 excerpts), teaching about the NIMAS requirement at "law conferences" to LEA/SEA legal representatives (1 excerpt), having "third party" reviews of educational materials during the procurement process to ensure accessibility standards are met (1 excerpt), further distributing "sample contract language" that includes the NIMAS requirement (1 excerpt), and encouraging AT specialists to discuss the NIMAS requirement with procurement staff in their regions (1 excerpt).

Table 17. Qualitative Descriptions of Strategies to Help SEAs and LEAs Consistently Include the NIMAS Requirement in Procurement Contracts

(34 excerpts)

Strategies to Help SEAs and LEAs Consistently Include NIMAS Requirement in Procurement Contracts	Representative Quotations
Trainings to increase awareness (11)	Something we can do is to let people know to add the NIMAS requirement, and that publishers have to give the NIMAS file to you if you request it, as long as it's in the contract. I think getting that information out there and letting SPED Directors or Curriculum Specialists at ESCs know it's an option. (OH)
	Even training for curriculum teams would be interesting. I'm not sure that any of them have any background in special education or understand any of the rationale as to what or who would use accessible materials. When people think about large print and braille, they often say, "Oh, I don't have any kids who use braille, so I don't need accessible formats." And I'm thinking that there's other accessible formats, not just braille. So, I think the idea of a print disability that is not necessarily a kiddo who is blind is very unknown to people. I think that they can't make that connection. Awareness and exposure could help. (OH)
	I think the key to much of it is training, training, training, training and helping people to understand. It's not the step-by-step on what to do. We're talking about big picture stuff. What does that mean in the classroom? (OR)
	It's got to be talked about. Procurement staff and other stakeholders need to be educated or educate themselves. (UT)
Standardized workflow that includes NIMAS requirement (9)	I'm thinking about state of Ohio, and I know we cannot dictate curriculum to any district. They choose that for themselves, but I assume the state could do a standardized form for curriculum that includes the NIMAS requirement. (OH)

Strategies to Help SEAs and LEAs Consistently Include NIMAS Requirement in Procurement Contracts	Representative Quotations
	My experience with contracts and purchase agreements is that districts tend to use a boiler plate approach. It may help if there's a boiler plate that includes the NIMAS requirement language in the contract. The people who are doing procurement don't have this high on their list. So just making sure that it gets into the contract is the most important thing: have examples or help districts put it into their agreements. (OR)
	The last year and a half, I got this great idea to combine the list in MIDAS [a list of vetted instructional materials] with our RFP process. And so, I worked through financing at the state office, and any materials we reviewed for the RFP process would have in the contract the NIMAS section. It's all one contract so anything that is actually listed in our MIDAS program, which houses everything that's been reviewed for purchasing, should have files in the NIMAC, and all of those materials should be good to go. (UT)
	It should almost be a part of the process when the Curriculum Directors or Directors of Instruction are going through a curriculum adoption process and are looking at different questions for adoption, it should be a part of that whole process. (IA)
	Just make it part of the workflow! Even if you provide training, if it's hard to do it, it won't get done reliably. (ID)
Altering or supplementing IDEA 2004 to require publishers to upload NIMAS files for all educational materials (6)	I would like it to be written in law that the publisher has to submit the NIMAS file regardless of who's purchasing the book and who's creating the contract. It should be part of law that as a publisher, if you're publishing a book, you have to submit this file. (OH)
	If we made the procurement process part of federal law, then it would be across all states, and it wouldn't matter which state a student was in. (OH)
	If any materials sold to district had to have the NIMAS requirement without having individual agreements, then that would go far to make it not an extra thing. (OR)
Providing educational materials about NIMAS and NIMAS requirement (5)	Having information that is universally available and can be shared is important along with targeted training. (OH)
	Until today, I had never heard of NIMAS so I am assuming more materials letting educators know what is available and how it can help. (OR)
	I think education is always a good thing as we cannot assume that administration or those accountable for NIMAS/NIMAC know their job. Educational materials are a good start but there needs to be follow-through on implementation and standard practice. (DE)

Strategies to Help SEAs and LEAs Consistently Include NIMAS Requirement in Procurement Contracts	Representative Quotations
Creating designated positions to provide guidance and TA (5)	Increased education of the role and importance of NIMAS, along with a liaison to provide assistance, would be beneficial. (OH)
	An outreach effort that includes a dedicated position to focus primarily on the development and marketing of these materials could be of great benefit. (OH)
	The inclusion of NIMAS requirements in procurement contracts for educational materials highlights the need for training and technical assistance across a wider, systemwide audience to support systemic change. (HI)
	Ongoing technical assistance and resources that increase understanding of the 'why' and of impact. (NC)
	We could definitely use a person to do training and field questions. (VA)

Conclusion

The objective of the case study was to address two key questions and associated sub-questions. These are listed below, along with the respective quantitative and qualitative findings that inform them. Overall, data from the survey and interviews suggest a complex set of factors that facilitate timely delivery of accessible formats for students with visual impairments and print disabilities.

Question 1: What are the positive benefits to timely delivery of newly created accessible instructional materials when NIMAS files for the materials are already in the NIMAC system?

For this case study, timely delivery was defined as students who need accessible formats receiving them at the same time as when their peers receive educational materials. Over two-thirds of survey respondents endorsed all benefits to timely delivery that were presented on the survey. Benefits of timely delivery, ranked from most to least frequently endorsed, include equitable access to instructional materials, independence, active learning, psychological well-being, academic achievement, ownership of learning, reduced stigma, and positive relationships among students with print disabilities and their peers. Through qualitative feedback, participants suggested two additional benefits: timely delivery meets legal requirements and supports teacher effectiveness. Although there were a few small differences across states and professional roles, the participants overwhelmingly recognized many positive benefits of timely delivery.

Sub-question 1a: What is the timeline for delivery of newly created accessible instructional materials when 1) NIMAS files for materials are already in the NIMAC system, 2) NIMAS files are not in the NIMAC system and materials are added to the Watchlist, and 3) materials are not within scope for NIMAS?

Participants reported that timelines for delivery of accessible formats are shortest when NIMAS files are in the NIMAC system. The median timelines for delivery when NIMAS files are in the NIMAC system ranged from two months (braille for STEM materials) to less than two weeks (accessible digital text materials). These timelines were shorter than the median timelines for delivery when materials are added to the NIMAC Watchlist, which ranged from nearly three-and-a-half months (braille for STEM materials) to approximately 3 weeks (accessible digital text materials). Respondents expressed difficulty specifying delivery timelines because of the breadth and complexity of materials and the variability in timelines based on the specific characteristics of each educational material.

The timelines reported by case study participants were consistent with NIMAC's internal tracking data from three recent calendar years (2021-2023), indicating that it takes a median of 34-38 days for NIMAS files to be acquired from publishers, certified, and accessible in the NIMAC system after they are submitted to the NIMAC Watchlist.

Overall satisfaction with timelines for delivery of accessible formats was relatively low, with respondents reporting their lowest satisfaction when accessible formats are not within scope for NIMAS and their highest satisfaction when NIMAS files are already in the NIMAC system. Indeed, nearly all NIMAC Users (94%) agreed that "NIMAS files help facilitate the timely delivery of accessible formats." Qualitative feedback enhanced the quantitative data, with multiple participants describing how timelines for delivery are improved when NIMAC files are available in the NIMAC system.

Sub-question 1b: What impacts the timely delivery and use of accessible instructional materials best formatted to meet students' needs, as specified in their IEP?

Participants consistently reported that students with visual impairments and print disabilities use accessible formats that are less than ideal based on their IEPs, as well as use different curricula from their peers, on a regular basis. For example, over half of survey respondents reported that students use accessible formats that are less than ideal "often" or "always." Participants noted associated negative impacts, including decreased academic achievement, increased teacher stress and responsibility, and mental health consequences for students. Given these findings, it is not surprising that nearly two-thirds of survey respondents were not satisfied with the ability of students to access and use accessible formats.

Nearly one-half to two-thirds of survey respondents endorsed a range of factors that negatively impact use of accessible formats, including lack of instructional support, pressure on teachers to use the most readily-available and least expensive format, lack of AT, the cumbersome nature of some accessible formats, the use of "backup" materials as students wait for appropriate accessible formats, and students' lack of familiarity with some formats. Qualitative feedback from participants also noted challenges associated with AT, materials that claim to be accessible are not actually accessible, and student preferences that are not respected. There were some statistically significant differences between states, indicating that the structures and systems that facilitate the use of accessible formats (e.g., systems that facilitate AT and instructional support) likely differ across states.

Question 2: What practices, including procurement contracts, facilitate the timely delivery of accessible instructional materials?

Participants indicated many factors that facilitate timely delivery, organized into three domains: production practices, practices at the state, regional, district, and school level, and NIMAC

practices. Regarding production practices, for example, nearly three-quarters of survey respondents indicated the facilitation of timely delivery when accessible formats are already available at a central location in a state or district. Qualitative feedback from participants illuminated two additional facilitators: local resources for accessible media production (e.g., local braille transcribers) and a streamlined production system.

With regard to practices at the state, regional, district, and school level, over three-quarters of survey respondents indicated the facilitation of timely delivery when requests for first-time production of accessible formats are made well in advance of when they are needed. Two-thirds of respondents endorsed a centralized workflow within a SEA, LEA, or Regional District system to process requests.

Participant feedback regarding the NIMAC was consistently positive. The vast majority of NIMAC Users (91%) agreed that "The NIMAC Watchlist request system is a valuable service for serving students when NIMAS files have not been received by the publisher." Over two-thirds of NIMAC Users and publishers also indicated that timely delivery is facilitated by NIMAC staff who provide effective and timely TA.

Participants frequently discussed the importance of effective communication among relevant stakeholders. In fact, this qualitative feedback surfaced in discussions about each of the three domains related to timely delivery (e.g., knowledge of accessible formats that are available at a central location for immediate distribution, NIMAC staff responding quickly to requests for assistance, communication between TVIs and AMPs about accessible formats that students will need in the future, a centralized workflow for processing requests for accessible formats).

Across the three domains, there were statistically significant differences by location and respondent role pertaining to the Louis Database of Accessible Materials and systems and processes that support AMPs. Differences by respondent role are expected given that only a subset of roles are directly involved in searching for accessible formats or working directly with AMPs. Differences by state suggest that state staff have varying degrees of experience utilizing the Louis Database of Accessible Materials or effectively working with and supporting AMPs.

Sub-question 2a: What practices, including those unrelated to compliance with the NIMAS requirement, hinder the timely delivery of instructional materials?

Participants identified a wide array of practices that hinder timely delivery, organized into five domains: factors related to procurement of education materials, NIMAC-related factors, production factors, practices at the state, regional, district, and school level, and challenges associated with charter schools.

Regarding procurement-related factors, three-quarters of survey respondents indicated that timely delivery is hindered when materials are purchased at the school level and do not include

the NIMAS requirement in procurement contracts. Additional factors endorsed by over half of respondents related to turnover among SEA/LEA staff responsible for procurement contracts, lack of awareness among SEA/LEA staff who coordinate procurement contracts, and neither the NIMAS requirement nor NIMAS file deadlines consistently included in procurement contracts. Qualitative feedback from participants illuminated an additional hindrance to timely delivery: Curriculum decisions that are made without input from Special Educational professionals.

The two most frequently endorsed NIMAC-related factors that hinder timely delivery were misunderstandings about the NIMAC and NIMAS files, and a lack of understanding or awareness of the NIMAC. Participants offered potential strategies to address these challenges, including comprehensive trainings on effectively using NIMAS files, especially for the production of large print.

With regard to production, the most frequently endorsed factor, by nearly three-quarters of survey respondents, was delays associated with obtaining a physical copy or PDF of the instructional material before the accessible format can be created. Additional factors selected by approximately two-thirds of survey respondents related to lack of communication between those making curriculum decisions and publishers, staffing challenges that impact the capability of AMPs to produce accessible formats, and limited capability of AMPs (e.g., lack of staff) to produce some accessible formats. Qualitative feedback aligned with survey response data and commonly described insufficient lead time for the production of accessible formats.

At the state, district, regional, and school level, the two most commonly endorsed challenges, by over two-thirds of survey respondents, pertained to lack of communication: district-level or itinerant teachers (e.g., TVIs) who are unlikely to learn about district curriculum decisions, and curriculum changes at the state or district level that are not communicated to schools and teachers. Qualitative feedback from participants illuminated an additional hindrance to timely delivery: lack of understanding of accessibility requirements and how to obtain accessible formats. Other qualitative feedback regarding state, district, regional, and school-level practices suggested communication to be a root cause for many challenges to timely delivery. Interestingly, communication was highlighted as a key facilitator of timely delivery as well, suggesting that it can facilitate or hinder timely delivery depending on its quality, clarity, and timeliness.

Challenges to timely delivery in charter schools mirrored those of practices across state, district, regional, and school levels. Over two-thirds of survey respondents indicated three hindrances: Lack of familiarity with special education and the process for obtaining accessible formats among charter school administrators, lack of resources needed to obtain accessible formats, and lack of accountability systems to promote timely delivery. Qualitative feedback from

participants illuminated an additional factor: Frequent use of teacher-created, non-traditional, and digital materials that are difficult to make accessible.

When examining statistically significant differences across roles in the endorsement of factors that hinder timely delivery, LEA, ESD, regional, and cooperative agency staff were less likely to endorse challenges associated with the NIMAS requirement not being included in procurement contracts and deadlines for NIMAS file production not included in procurement contracts. These findings are concerning since educational materials are often purchased at the LEA level by staff who may not be aware of the NIMAC-related factors involved in accessible format production.

There were also a number of statistically significant differences across states, highlighting how each state has unique strengths and challenges that impact their processes for accessible format production. In support of this finding about variability across states is agreement data regarding AMPs' capacity: only half of survey respondents agreed that the capacity of AMPs is generally sufficient to produce all accessible format production requests in a timely manner.

Sub-question 2b: How can the NIMAC help SEAs and LEAs understand and implement strategies for consistent inclusion of the NIMAS requirement in procurement contracts?

The majority of survey respondents (approximately 75%) were not familiar with and had not been involved in procurement contract processes for educational materials. Of those with some familiarity, more than half indicated that the NIMAS requirement is never or rarely included in procurement contracts. This is problematic given that the NIMAS requirement in procurement contracts is the only legal mechanism for requiring publishers to submit NIMAS files to the NIMAC repository.

Participants provided insight into strategies to help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts. Over two-thirds of survey respondents endorsed strategies that involve trainings with procurement staff, General Education Departments, and Special Education Departments, as well as the development of educational materials about the NIMAC and the NIMAS requirement. Approximately half of respondents endorsed the creation of a designated position that focuses on outreach to states and LEAs to provide guidance and TA. Although many of the strategies selected by survey respondents were highlighted in qualitative feedback as well, participants illuminated two additional factors: Creating a standardized workflow that includes the NIMAS requirement and creating a national requirement or law. Many of these strategies were endorsed most frequently by IMC/IRC staff and NIMAC Users, suggesting that these groups will likely be important partners for increasing awareness of the importance of including the NIMAS requirement in procurement contracts.

Recommendations

Our mixed methods approach to the NIMAC case study yielded several insights that may inform the NIMAC about next steps. By considering the following recommendations, derived from quantitative and qualitative data from survey respondents and interviewees, participant suggestions, statistically significant findings, and evaluator observations, the NIMAC may be able to facilitate more timely delivery of accessible educational materials so that students who need them can achieve academic success.

1) Given the documented benefits of timely delivery of accessible formats, continue to explore opportunities to build greater awareness of accessible formats and provide education about the benefits of timely delivery to relevant stakeholders, including general education professionals.

2) Participants provided qualitative feedback related to the challenges of using AT and not having access to AT to support the use of accessible formats. Explore, possibly in conjunction with the National Center on Accessible Digital Educational Materials & Instruction (NCADEMI), strategies to ensure that state AT centers and other AT agencies are aware of AEM and accessible formats and understand how AT and AEM work together.

3) This case study demonstrated the benefits of a centralized system for accessible format production in supporting timely delivery. Explore opportunities to provide extra support for states without an IRC and to promote the establishment of IRCs in states that do not have them (including the possibility of a regional IRC model for smaller states).

4) This evaluation documented consistently positive feedback regarding the NIMAC and its staff. Consider ways to publicly highlight the success of the NIMAC and NIMAC Users, to increase awareness of the NIMAC as well as utilization of NIMAS files.

5) Participants expressed appreciation for the NIMAC's responsiveness to feedback and ongoing refinement of the NIMAC repository. Continue to leverage input from NIMAC Users in the improvement of the NIMAC online system.

6) A frequently cited production challenge was the need for AMPs to wait for a physical copy or PDF of materials before initiating accessible format production. Explore ways to help AMPs acquire PDFs and physical copies of materials, possibly using contract language that requires either PDFs or hard copy books at the same time as the NIMAS deadline.

7) Some LEAs rely on in-house and local AMPs (including TVIs) to produce accessible formats. These AMPs may be less familiar with NIMAS files. Explore strategies for connecting with LEA-based and other local AMPs to help them learn about the use of NIMAS files.

8) Participants described a lack of training programs for the production of accessible formats, including braille. Consider partnering with organizations that currently provide AMP training (or may plan to do so) and integrate the use of NIMAS files in existing or new training programs.

9) Given the findings related to students not being served on time when requests for accessible formats are submitted late, explore the development of resources (e.g., customizable templates) for SEAs and LEAs that provide basic information about ordering timelines and options for obtaining accessible formats (e.g., searching the Louis Database of Accessible Materials).

10) This case study documented some challenges to timely delivery that are specific to charter schools. Consider exploring ways to support charter schools in their efforts to provide timely delivery of accessible formats.

11) Given the broad range of stakeholders and factors that impact the timely delivery of accessible formats, including high-quality production of NIMAS by vendors and effective practices for translating NIMAS into accessible formats, disseminate the findings of this report widely to facilitate shared understanding and cooperation.

12) This case study highlights the need for ongoing TA related to several components of the accessible format delivery system. Given that extensive TA initiatives are not within scope for the NIMAC, consider mechanisms (e.g., partnerships with other ED-funded projects that focus on systems change and implementation) to enhance this well-established and effective national program so the following may be addressed:

   a. AMPs with substantial experience working with NIMAS files described them as highly effective in streamlining the production of accessible formats. However, some AMPs noted challenges with understanding how to best use NIMAS files. Continue to explore options for supporting AMPs in the use of NIMAS files (e.g., more comprehensive online or in-person trainings, a NIMAS mentoring program).

   b. New regulations in Title II of the Americans with Disabilities Act require accessibility in digital instructional materials. Continue to collaborate with TA providers (e.g., NCADEMI) to support compliance with these new requirements.

   c. This case study highlights the importance of communication at state, regional, district, and school levels for the timely delivery of accessible formats (e.g., communication of district-level curriculum changes to TVIs). Future TA initiatives could develop tools to facilitate communication among relevant stakeholders (e.g., dashboards to document curriculum changes, track requests for accessible formats, and provide accessible format production status updates).

   d. Continue to provide TA about 1) the role of the NIMAC and NIMAS files in the production of accessible formats, and 2) the importance of including the NIMAS requirement in procurement contracts, especially among stakeholders who are responsible for ensuring that their SEA or LEA complies with the NIMAS requirement in IDEA 2004 (for all SEAs and LEAs that choose to coordinate with the NIMAC).

Appendix A: Survey

Survey for NIMAC Case Study

Introductory Screen

The National Instructional Materials Access Center (NIMAC) is excited to explore the timely delivery of accessible formats for instructional materials (e.g., braille, large print, EPUB). We invite you to complete this brief, anonymous survey. It will take less than 10 minutes.

Why participate?

- The NIMAC itself does not produce or distribute materials directly for use by students. Rather, its role is to work "behind the scenes" to support the production and delivery of accessible formats by other agencies. As such, the NIMAC is several steps removed from students in the classroom. **This survey will inform the NIMAC about the factors that influence timely delivery of accessible formats for K-12 students with visual impairments or print disabilities.**
- Additionally, the NIMAC is a project of the Department of Education, Office of Special Education Programs (OSEP), and the Department reviews the NIMAC annually. **Your insights regarding the benefits of timely delivery could lead to additional support for states and districts in providing timely delivery of accessible instructional materials to students with disabilities.**

There is no time limit for this survey. All starred items within this survey represent required fields. Additionally, if you begin the survey and wish to return to it later from the same device, you will be able to start where you left off.

If you prefer to provide feedback through another method or experience any issues accessing the survey, please reach out to True North Evaluation via phone (781-474-0462) or email (info@truenorthevaluation.com). We are happy to offer alternative, accessible formats for data collection, such as a phone interview, email correspondence, or a Word document.

Thank you!
True North Evaluation Inc. (External evaluator for the NIMAC)

Role

Please select your state or territory:

1) Please select the role that *best* describes your work:
   a. Local Educational Agency (LEA) Staff (e.g., district-level administrator or staff, including Special Education Directors and Coordinators, Curriculum Directors)
   b. State Educational Agency (SEA) Staff (e.g., State Special Education Director or staff; Department of Education administrator, specialist, or coordinator; State Board of Education administrator, specialist, or coordinator; Leadership Council; Curriculum Workgroup; other state-level administrator or staff)
   c. Instructional Materials or Resource Center Staff, Coordinator, Specialist, or Technician (e.g., AEM Center staff, Textbook & Media Center staff)
   d. School Staff (e.g., local school or building administrator, teacher) [*if selected, ask:*]
      i. Please select your school setting:
         1. Public school
         2. Private school
         3. Charter school (online or in-person)
         4. School for specific populations (e.g., visually impaired)
         5. Other (please specify):
      ii. Please select your role in the school:
         1. School Administrator (e.g., Principal, Assistant Principal, Special Education Director, General Education Director, Charter or Private School Director, Director or Coordinator of Curriculum or Assessment)
         2. Teacher of General Education students
         3. Teacher of Special Education students, including Teachers of Students with Visual Impairments (TVIs)
         4. Teacher of both General and Special Education students
         5. Braillist or paraprofessional
         6. Curriculum coordinator
         7. Related service provider or specialist (e.g., occupational therapist, school/educational psychologist, speech-language pathologist, IEP support or facilitator, instructional support specialist)
         8. Other (please specify):
   e. Regional agency or Cooperative Staff (e.g., Northwest Regional Educational Service District, State Support Team)
   f. Accessible Media Producer (e.g., Bookshare, APH)
   g. Publisher or Conversion Vendor
2) Are you a registered NIMAC User (Authorized User, Accessible Media Producer, or State Coordinator)?
   a. Yes
   b. No
   c. Not sure

Benefits of timely delivery
[Case Study Q1; *present to 1a, 1b, 1c, 1d, 1e, 1f, 2a yes*]

3) What are the positive benefits of timely delivery of accessible formats for students with print disabilities? Please select all that apply.
   a. Promotes active learning among students with print disabilities.
   b. Facilitates ownership of learning among students with print disabilities.
   c. Promotes independence among students with print disabilities.
   d. Reduces stigma associated with print disabilities.
   e. Supports positive relationships among students with print disabilities and their peers.
   f. Facilitates academic achievement among students with print disabilities.
   g. Promotes equitable access to instructional materials.
   h. Supports the psychological well-being of students with print disabilities (e.g., helps them feel valued; reduces students' anxiety associated with not having accessible formats).
   i. Don't Know.
   j. Other: _____

4) Please explain your selection(s) above and offer any additional comments about the positive benefits of timely delivery of accessible formats for students with print disabilities:

Timeline for delivery of Accessible Educational Materials (AEM)

5) (1f AMPs and 2a NIMAC users) How familiar are you with general timelines for delivery of newly created accessible formats?
   a. Not Familiar
   b. Slightly Familiar
   c. Moderately Familiar
   d. Very Familiar
      [*If Role 2a (NIMAC user) and 'not familiar' skip to Q10 and Q11; If Role 1f AMP, skip to next section*]

6) (1f, AMPs only) After your organization downloads a NIMAS file, how long does it take (on average) for the *first-time production* of the following accessible formats? (*Response options for each item below: ___ months and ___ weeks; Don't Know or Not Applicable; Other or additional comment: ___*)
   a. Braille for STEM materials
   b. Braille for non-STEM materials
   c. Large print
   d. Accessible digital text (e.g., DAISY, EPUB)
   e. Additional accessible format (please specify): _____

7) (2a, NIMAC users only): After an Accessible Media Producer (AMP) downloads a NIMAS file, how long does it take (on average) to deliver the following accessible formats to a student?

(*Response options for each item below: ___ months and ___ weeks; Don't Know or Not Applicable; Other or additional comment: ___*)

    a. Braille for STEM materials
    b. Braille for non-STEM materials
    c. Large print
    d. Accessible digital text (e.g., DAISY, EPUB)
    e. Additional accessible format (please specify): ____

8) (2a, NIMAC users only) What is the timeline for delivery (on average) of the following newly created accessible formats when NIMAS files are *already* in the NIMAC system? (*Response options for each item below: ___ months and ___ weeks; Don't Know or Not Applicable; Other or additional comment: ___*)

    a. Braille for STEM materials
    b. Braille for non-STEM materials
    c. Large print
    d. Accessible digital text (e.g., DAISY, EPUB)
    e. Additional accessible format (please specify): ____

9) (2a, NIMAC users only) What is the timeline for delivery (on average) of the following newly created accessible formats when NIMAS files are *not* in the NIMAC system and materials are added to the Watchlist? (*Response options for each item below: ___ months and ___ weeks; Don't Know or Not Applicable; Other or additional comment: ___*)

    a. Braille for STEM materials
    b. Braille for non-STEM materials
    c. Large print
    d. Accessible digital text (e.g., DAISY, EPUB)
    e. Additional accessible format (please specify): ____

10) (2a, NIMAC users only) To what extent do you agree with the following statements? (*Response options for each item below: Strongly Disagree; Disagree; Agree; Strongly Agree; Don't Know*)

    a. I am satisfied with the timeline for delivery of braille for STEM materials/braille for non-STEM materials/large print/accessible digital text (e.g., DAISY, EPUB) when the NIMAS file is *already* in the NIMAC system.
    b. I am satisfied with the timeline for delivery of braille for STEM materials/braille for non-STEM materials/large print/accessible digital text (e.g., DAISY, EPUB) when the NIMAS file is *not* in the NIMAC system and is added to the NIMAC Watchlist.
    c. I am satisfied with the timeline for delivery of accessible formats when they are not within the scope for NIMAS (e.g., online educational materials, trade materials, some digital files).

11) (1f AMPs and 2a NIMAC users) Please explain any of your ratings above, including suggestions for ways to facilitate more timely delivery of accessible formats:

Impacts of timely delivery and use of Accessible Educational Materials (AEM)
[Case Study Q1b; *present to 1a, 1b, 1c, 1d, 1e, 2a yes*]

12) How often do students with print disabilities or visual impairments use an accessible format that is less than ideal based on their Individualized Education Programs (IEPs)?
    a. Never or Rarely
    b. Sometimes
    c. Often
    d. Always
    e. Don't Know

13) How often are students with print disabilities or visual impairments provided a different curriculum from their class due to a lack of available accessible materials?
    a. Never or Rarely
    b. Sometimes
    c. Often
    d. Always
    e. Don't Know

14) To what extent do you agree with the following statement? I am satisfied with the ability of students to access and use accessible formats that are best formatted to meet their needs, as specified in their IEPs.
    a. Strongly Disagree
    b. Disagree
    c. Agree
    d. Strongly Agree
    e. Don't Know

15) Which of the following negatively impact the use of accessible formats that are best formatted to meet students' needs, as specified in their IEPs? Please select all that apply.
    a. Lack of availability of assistive technology (AT), such as a refreshable braille device.
    b. Pressure on teachers to use most readily-available/least expensive format.
    c. Accessible formats (e.g., braille products) that are available but of poor quality.
    d. Students do not know how to use some accessible formats.
    e. Lack of instructional support for students to effectively use the accessible formats.
    f. Stigma associated with using accessible formats.
    g. Some accessible formats can be cumbersome when using and transporting (e.g., hard copy braille).
    h. Use of "backup" materials as students wait for appropriate accessible formats (e.g., quick converted braille).
    i. Don't Know.
    j. Other: ____

16) Please explain your selection(s) above and offer any additional comments about factors that hinder the use of accessible formats best formatted to meet students' needs, as specified in their IEPs:

Practices that facilitate timely delivery
[Case Study Q2; *present to 1a, 1b, 1c, 1d, 1e, 1f, 2a yes*]

17) How familiar are you with procurement contract processes for educational materials?
   a. Not Familiar
   b. Slightly Familiar
   c. Moderately Familiar
   d. Very Familiar

18) (1g publishers and 2a NIMAC users) Which of the following *practices related to the NIMAC* facilitate the timely delivery of accessible formats? Please select all that apply, whether or not they are currently used in your area.
   a. When accessible formats need to be produced for the first time, the NIMAS file is already available in the NIMAC system.
   b. Publishers submit NIMAS files to the NIMAC system before they are needed by students.
   c. Publishers hold vendors to a timeline (e.g., 10 days) for NIMAS conversion.
   d. NIMAC staff providing effective and timely technical assistance.
   e. Don't Know.
   f. Other: _____

19) Which of the following *practices related to the production of accessible formats* facilitate the timely delivery of accessible formats? Please select all that apply, whether or not they are currently used in your area.
   a. Use of the national Louis Database of Accessible Materials to quickly locate accessible formats.
   b. Accessible Media Producers (AMPs) submit data to Louis Database of Accessible Materials, so it is searchable nationwide.
   c. Accessible formats are already available at a central location in the state or district (e.g., an Instructional Resource Center) for immediate distribution.
   d. Practices/processes that provide students with portions of accessible formats while waiting for the full textbook to be completed.
   e. Practices/processes that provide students with portions of accessible formats when only portions of the material are being used in the classroom.
   f. Accessible formats are already available at a central location in the state or district (e.g., an Instructional Resource Center) for immediate distribution.
   g. Don't Know.
   h. Other: _____

20) Which of the following *state, regional, district, or school-level practices* facilitate the timely delivery of accessible formats? Please select all that apply, whether or not they are currently used in your area.
   a. Inclusion of NIMAS requirement in procurement contracts for educational materials.
   b. Requests for first-time production of accessible formats are made well in advance before they are needed by students.

    c. A centralized workflow within a State Education Agency (SEA), Local Education Agency (LEA), or Regional/District system to process requests for accessible formats.

    d. A streamlined system for working with AMPs.

    e. State processes that support and train AMPs who are producing accessible formats.

    f. Don't Know.

    g. Other: _____

21) Please explain your selection(s) above and offer any additional comments about practices that facilitate the timely delivery of accessible formats:

22) (2a, NIMAC users only) To what extent do you agree with the following statement? The NIMAC Watchlist request system is a valuable service for serving students when NIMAS files have not been received by the publisher.

    a. Strongly Disagree

    b. Disagree

    c. Agree

    d. Strongly Agree

    e. Don't Know

23) (2a, NIMAC users only) To what extent do you agree with the following statement? NIMAS files help facilitate the timely delivery of accessible formats.

    a. Strongly Disagree

    b. Disagree

    c. Agree

    d. Strongly Agree

    e. Don't Know

24) (2a, NIMAC users only) Please explain your selection above regarding how well NIMAS files help facilitate the timely delivery of accessible formats:

Practices that hinder timely delivery
[Case Study Q2a; *present to 1a, 1b, 1c, 1d, 1e, 1f, 2a yes*]

25) Which of the following *factors related to procurement* hinder the timely delivery of accessible formats? Please select all that apply.

    a. NIMAS requirement is not consistently included in procurement contracts for educational materials.

    b. The SEA/LEA staff who coordinate procurement contracts for educational materials are not aware that the NIMAS language should be included in procurement contracts.

    c. Turnover of SEA/LEA staff who are responsible for procurement contracts for educational materials (without knowledge transfer to new staff).

    d. Materials are purchased at the school level and do not include the NIMAS requirement in procurement contracts.

    e. Deadlines for NIMAS file production are not included in procurement contracts.

    f. Don't Know.

    g. Other: _____

26) (2a, NIMAC users only) Which of the following *factors related to the NIMAC* hinder the timely delivery of accessible formats? Please select all that apply.
  a. The NIMAC does not generally receive files for Open Educational Resources (OER).
  b. Teacher- or district-created curricula are not provided to the NIMAC.
  c. Differences between printings of the textbook in the NIMAC and the textbook being used in the classroom (same ISBN).
  d. Lack of understanding or awareness of the NIMAC.
  e. Delays in getting files assigned by Authorized User.
  f. Misunderstandings about the NIMAC and NIMAS files (e.g., the misconceptions that the NIMAC system contains large print or braille that can be readily accessed or that NIMAS is a student-ready accessible format).
  g. Difficulties in working with NIMAS files (e.g., lack of conversion software).
  h. Don't Know.
  i. Other: _____

27) Which of the following *factors related to production* hinder the timely delivery of accessible formats? Please select all that apply.
  a. Limited capability of AMPs (e.g., lack of staff) to produce some accessible formats (e.g., braille for STEM materials).
  b. Staffing challenges (e.g., hiring and training new transcribers, parental leave) that impact the capability of AMPs to produce accessible formats.
  c. Delays associated with obtaining a physical copy of the instructional material before the accessible format can be created.
  d. Timelines for instructional materials adoptions (not enough lead time to produce accessible formats).
  e. Lack of communication between those making curriculum decisions (e.g., districts) and publishers.
  f. Accessible format requests that do not include sufficient information, which lead to delays as the required information is sought from teachers/schools.
  g. Don't Know.
  h. Other: _____

28) Which of the following *factors related to state, regional, district, or school-level practices* hinder the timely delivery of accessible formats? Please select all that apply.
  a. District-level or itinerant teachers (e.g., TVIs) who are unlikely to learn about district curriculum decisions by the time requests for accessible formats need to be submitted.
  b. Lack of assistive technology (AT) that allows access to accessible formats.
  c. Students change schools or districts which negatively impacts the request for, or delivery of, accessible formats.
  d. Curriculum changes at the state or district level that are not communicated to schools/teachers by the time that requests for accessible formats need to be submitted.

    e.   LEAs and schools need to wait for enrollment data before finalizing class offerings, which results in delayed requests for accessible formats.

    f.   High teacher turnover which negatively impacts the request for, or delivery of, accessible formats (including unexpected curriculum changes when a new teacher decides to use a different curriculum).

    g.   Lack of funding for the production of accessible formats.

    h.   "Open territory" policies (i.e., any curriculum may be used as long as it meets state standards) often lead to a large number of rotating requests for accessible formats for many different instructional materials.

    i.   Don't Know.

    j.   Other: _____

29) Please explain your selection(s) above and offer any additional comments about factors that hinder the timely delivery of accessible formats:

30) Which of the following factors hinder the timely delivery of accessible formats for students in charter schools?

    a.   Lack of familiarity with special education and the process for obtaining accessible formats among charter school administrators.

    b.   Lack of resources needed to obtain accessible formats.

    c.   Lack of accountability systems to promote timely delivery of accessible formats.

    d.   Don't Know.

    e.   Other: _____

31) Please explain your selection(s) above and offer any additional comments about factors that hinder the timely delivery of accessible formats for students in charter schools:

32) (1c, 1f, and 2a) To what extent do you agree with the following statement? The capacity of AMPs is generally sufficient to produce all accessible format production requests in a timely manner.

    a.   Strongly Disagree

    b.   Disagree

    c.   Agree

    d.   Strongly Agree

    e.   Don't Know

33) (1c, 1f, and 2a) Please describe your rating and the limitations of AMP production capabilities that you have noticed:

NIMAS and procurement

[Case Study Q2b; *present to 1g Publishers*]

34) Have you been directly involved in the procurement contract process for educational materials within at least one SEA or LEA?

    a.   Yes

    b.   No

    c.   Other: ___

35) How often do LEAs and SEAs include the NIMAS requirement in procurement contracts for educational materials?
    a. Never or Rarely
    b. Sometimes
    c. Often
    d. Always
    e. Don't Know
    f. Other: ___

36) To what extent do you agree with the following statement? I understand which educational materials fall within the scope for NIMAS and which educational materials fall outside of the scope for NIMAS.
    a. Strongly Disagree
    b. Disagree
    c. Agree
    d. Strongly Agree
    e. Don't Know

NIMAC assistance
[Case Study Q2b; *present to 1a & 1b, 1d, 1e, 2a yes*]

37) Have you been directly involved in the procurement contract process for educational materials for your SEA, LEA, or school?
    a. Yes
    b. No
    c. Other: ___

38) How often does your SEA or LEA include the NIMAS requirement in procurement contracts for educational materials?
    a. Never or Rarely
    b. Sometimes
    c. Often
    d. Always
    e. Don't Know
    f. Other: ___

39) To what extent do you agree with the following statement? I understand which educational materials fall within the scope for NIMAS and which educational materials fall outside of the scope for NIMAS.
    a. Strongly Disagree
    b. Disagree
    c. Agree
    d. Strongly Agree
    e. Don't Know

40) Which of the following strategies could help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts for educational materials?
   a. Trainings with SEA/LEA procurement staff to increase awareness of the importance of including the NIMAS requirement in procurement contracts.
   b. Trainings with SEA/LEA procurement staff to provide education about the types of educational materials that fall within the scope for NIMAS.
   c. Trainings with General Education Departments and Special Education Departments to improve collaboration.
   d. Trainings with General Education Departments and Special Education Departments to improve data collection efforts related to the procurement and production of accessible formats.
   e. Trainings with multiple stakeholder groups (e.g., instructional resource centers) about how to include the NIMAS requirement in procurement contracts.
   f. Creating a designated position that focuses on outreach to states and local educational agencies to provide guidance and technical assistance.
   g. Providing educational materials about the NIMAC and the NIMAS requirement that can be incorporated into onboarding materials for new SEA/LEA procurement staff.
   h. Don't Know.
   i. Other: _____
41) Please explain your selection(s) above and offer any additional comments about strategies that could help SEAs and LEAs consistently include the NIMAS requirement in procurement contracts:

Additional

42) Do you work with special education teachers who are not teachers of the visually impaired?
   a. Yes
   b. No
   c. *[If Yes]* Would you be willing to provide your name and email so we may follow up for the contact information of these teachers (*survey responses will remain confidential and separate from your personal information*)? [*Present box for name and box for email*]
43) Would you be willing to participate in a one-on-one interview or small focus group to help the NIMAC better understand factors that facilitate or hinder timely delivery of accessible formats?
   a. Yes
   b. No
   c. Maybe
   d. [*If yes or maybe*] Please provide your name, role, and email so we may follow up with you (*survey responses will remain confidential and separate from your personal information*):
44) We welcome additional comments! Please feel free to share your experience with the NIMAC; your experience requesting, producing, receiving, or providing accessible formats to students; or any questions you may have:

Appendix B: Interview Protocol

Thank you for your time and willingness to discuss your perspectives on timely delivery of accessible formats for students with print disabilities and visual impairments. I am Scot Seitz with True North Evaluation, which is partnering with the National Instructional Materials Access Center (the NIMAC) to learn about factors impacting timely delivery. Today, I will ask some questions to learn about your perspectives on this topic. Your insights could lead to additional support for states and districts in providing timely delivery of accessible instructional materials. You might be aware of a survey that is circulating in your state that explores the same topic. This interview is designed to supplement the survey with additional insights.

Please know that all your responses will remain anonymous. Your name will not be connected to your responses. Please answer the questions freely and honestly! The goal of this interview is to gather information and not to assess any individual's or organization's efforts.

To the extent you're comfortable, I would appreciate it if you could turn on your video, so we can maximize our time together as if we were having a face-to-face conversation. Before we begin, do you have any questions for me? Typically, I record the interviews to help me remember your answers. After I summarize the findings, I will delete the audio recordings. [Do you or does anyone] have any concerns with me recording this interview?

Question for All Audiences

1) I will be asking questions about "timely delivery" of accessible formats, including braille, large print, and EPUB. For the purposes of this interview, I will define "timely delivery" as students who need accessible formats receiving them at the same time as when their peers receive educational materials. [Do you or does anyone] have any questions or comments about this definition or terminology?

Questions for All Audiences Except Publishers

2) How often do students with print disabilities or visual impairments use an accessible format that is less than ideal based on their Individualized Education Programs (IEPs)? Can you provide any examples or describe what happens for students or teachers when less than ideal materials are provided? *Additional information if needed: Less than ideal formats could include alternative formats that are easier to obtain (such as audio files instead of braille) as well as incomplete accessible formats that are easier to obtain (such as Bookshare BRF which does not include the graphic content of the book instead of a complete braille book)*
   a. Note: *This question is geared to teachers and those who are close to the point-of-use, so it is not a high priority for individuals in administrative positions*
3) How often are students with print disabilities or visual impairments provided a different curriculum from their class due to a lack of available accessible materials? Can you provide any examples or describe what this looks like for students or teachers when they receive a different curriculum?

a. Note: *This question is geared to teachers and those who are close to the point-of-use, so it is not a high priority for individuals in administrative positions*

4) From your perspective, what are the positive benefits of timely delivery of accessible formats for students with print disabilities and visual impairments? *Prompt as needed: Impact on students' learning, well-being, or relationships; Impact on stigma; Impact on equity*

5) What practices facilitate the timely delivery of accessible formats? *If relevant practices in the domains below are not mentioned, prompt for responses in each domain:*
   a. *Practices related to the production of accessible formats*
   b. *Practices at the state, regional, district, or school level*
   c. *Practices related to the procurement process*

6) What factors hinder the timely delivery of accessible formats? *If relevant factors in the domains below are not mentioned, prompt for responses in each domain:*
   a. *Factors related to the production of accessible formats*
   b. *Factors related to state, regional, district, or school-level practices*
   c. *Factors related to the procurement process*

Additional Question for Charter School Staff, SEA Staff, and IMC/IRC Staff

7) In addition to what we have already discussed, what factors hinder the timely delivery of accessible formats for students in charter schools specifically? Do these vary based on whether the charter school is online or in-person? *Prompt as needed: Lack of resources; Lack of familiarity with special education among charter school administrators; Lack of accountability systems to promote timely delivery*

Questions for All Audiences Except AMPs and Publishers/Vendors

8) As you may know, publishers are only required to submit NIMAS files to the NIMAC repository if the NIMAS requirement is included in procurement contracts when educational materials are purchased by a State or district. What practices could help SEAs and LEAs [for Oregon: and ESDs] consistently include the NIMAS requirement in procurement contracts for educational materials? *Prompt as needed: Trainings with SEA/LEA [for Oregon: and ESD] procurement staff, general education and special education departments, and other stakeholder groups (e.g., IRCs); Additional TA; Additional educational materials about the NIMAS requirement*
   a. *Note: This question is not a high priority for teachers, although if time permits, try to gauge teacher awareness of how the overall system works.*

9) For students with print disabilities or visual impairments, what factors hinder the ***use*** of accessible formats that are best formatted to meet their needs, as specified in their IEPs? *Prompt as needed: Lack of AT, instructional support, or student familiarity; Use of readily available/less expensive/"backup" formats; Stigma; Cumbersome formats*

Additional Question for Publishers/Vendors

10) How do NIMAS production workflows and NIMAC technical assistance facilitate the timely certification of NIMAS files?

Additional Questions for NIMAC Users and AMPs

11) When you think specifically about NIMAC operations and availability of files in the repository, what factors are important in supporting timely delivery? *Prompt as needed: NIMAS files already in the NIMAC system when needed; TA provided by NIMAC; Publishers holding vendors to a timeline for NIMAS conversion*

12) When you think specifically about NIMAC operations and availability of files in the repository, what factors hinder the timely delivery of accessible formats? *Prompt as needed: NIMAS files are not included in the NIMAC system (e.g., OER, teacher- or district-created curricula); Difference between NIMAS-based textbook and textbook used in classroom; Lack of understanding/awareness of NIMAC and NIMAS files; Delays in getting files assigned by AU; Difficulties working with NIMAS files*

Additional Questions for NIMAC Users

13) If you have used the NIMAC Watchlist request service, how effective is it at supporting accessible format production when NIMAS files have not been received by the publisher?

Additional Question for All Audiences Except Publishers/Vendors

14) We are hoping to interview teachers of students with IEPs. Can you recommend any teachers who you think may be willing to share perspectives on the timely delivery of accessible formats? If so, please come off mute or enter information into the chat.

Final Question for All Audiences

15) Before we end, I'd like to provide you with an opportunity to offer any additional comments or suggestions related to the timely delivery of accessible formats for students with print disabilities or visual impairments.

Thank you so much for participating in this interview and providing your perspectives!

**Appendix C: NIMAC 2025 Publisher/Vendor Webinar Training (Parts 1, 2, and 3)
Exit Surveys: Data Report for the NIMAC Case Study**

NIMAC 2025 Publisher/Vendor Webinar Training (Parts 1, 2, and 3) Exit Surveys: Data Report for the NIMAC Case Study

This brief data report summarizes findings from exit surveys administered after NIMAC Publisher/Vendor Webinar Trainings in 2025:

- Part 1: June 24 and 25, 2025
- Part 2: July 8 and 9, 2025
- Part 3: July 22, 2025

Only findings relevant to the NIMAC Case Study are included in this data report.

Publisher/Vendor Part 1 Exit Survey

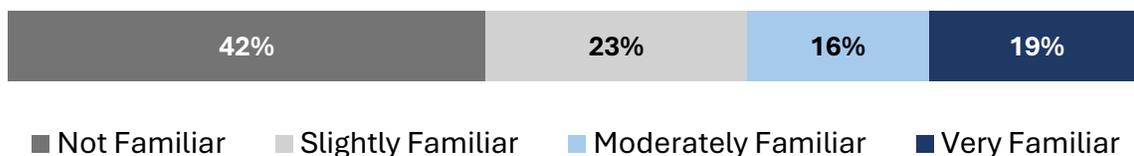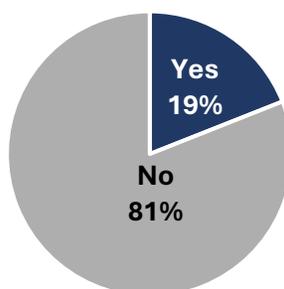### Figure 1. Familiarity with Procurement Processes/Contracts[84]
(*n* = 26)

Not Familiar	Slightly Familiar	Moderately Familiar	Very Familiar
42%	23%	16%	19%

- Not Familiar
- Slightly Familiar
- Moderately Familiar
- Very Familiar

Figure 2. Involvement in the Procurement Contract Process[85]
(*n* = 26)

Yes 19%
No 81%

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[84] Respondents were asked, "How familiar are you with procurement processes/contracts used by states and districts to adopt/acquire K-12 educational materials?" 3 respondents did not answer this question. Respondents were asked for additional comments after answering this question, and no additional comments were provided.
[85] Respondents were asked, "Have you been directly involved in the procurement contract process for educational materials with at least one state or district?" 3 respondents did not answer this question. No respondents selected "Other."

Figure 3. Frequency of NIMAS Inclusion in Procurement Contracts[86]
(*n* = 17)

18%	12%	12%	41%	18%

■ Never ■ Rarely ☐ Sometimes ☐ Often ■ Always

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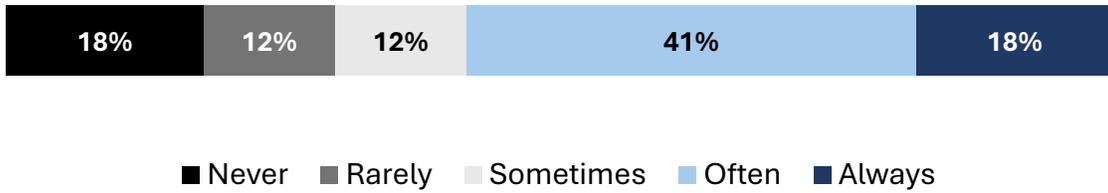
[86] Respondents were asked, "Based on your experience with states and districts, how often do they include the NIMAS requirement in procurement contracts for educational materials?" 3 respondents did not answer this question, and 8 respondents selected "Don't Know." 1 respondent selected "Other" and specified: "We are recommending NIMAS to our clients as an added base item (if they aren't familiar) to build on once NIMAS becomes more regulated/required. It's much easier to add to than to start at in a later stage."

Publisher/Vendor Part 2 Exit Survey

Figure 4. Contract-Related Factors That Hinder Timely Delivery[87]
(*n* = 5)

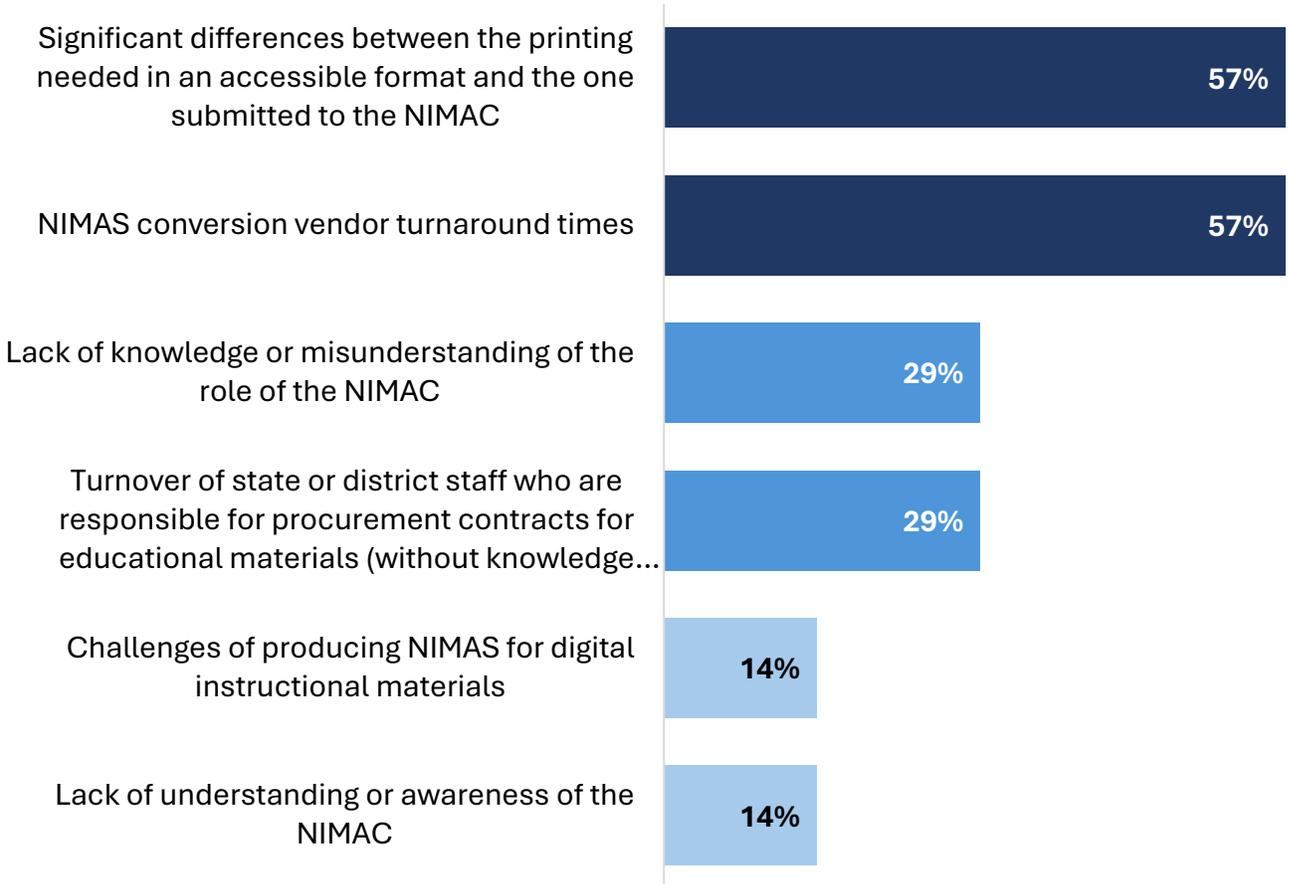| Factor	Percentage
Timelines for instructional materials adoptions (not enough lead time to produce accessible formats)	80%
The state or district staff who coordinate procurement contracts for educational materials are not aware that the NIMAS language should...	60%
Deadlines for NIMAS file production are not included in procurement contracts	40%
Materials are purchased at the school-level and do not include the NIMAS requirement in procurement contracts	40%
NIMAS requirement is not consistently included in procurement contracts for educational materials	40%

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[87] Respondents were asked, "Based on your experience, which of the following contract-related factors hinder the timely delivery of accessible formats?" and allowed to select multiple options. The data represents the percentage of respondents who selected each option out of the total number of respondents who selected at least 1 option. 9 respondents did not answer this question. 3 respondents selected "Other" and specified "Nothing" or "NA."

Figure 5. Challenges That Hinder Timely Delivery[88]
(*n* = 7)

Challenge	Percentage
Significant differences between the printing needed in an accessible format and the one submitted to the NIMAC	57%
NIMAS conversion vendor turnaround times	57%
Lack of knowledge or misunderstanding of the role of the NIMAC	29%
Turnover of state or district staff who are responsible for procurement contracts for educational materials (without knowledge...	29%
Challenges of producing NIMAS for digital instructional materials	14%
Lack of understanding or awareness of the NIMAC	14%

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[88] Respondents were asked, "Based on your experience, which of the following challenges hinder the timely delivery of accessible formats?" and allowed to select multiple options. The data represents the percentage of respondents who selected each option out of the total number of respondents who selected at least 1 option. 8 respondents did not answer this question. 2 respondents selected "Other" and specified "Nothing" or "NA."
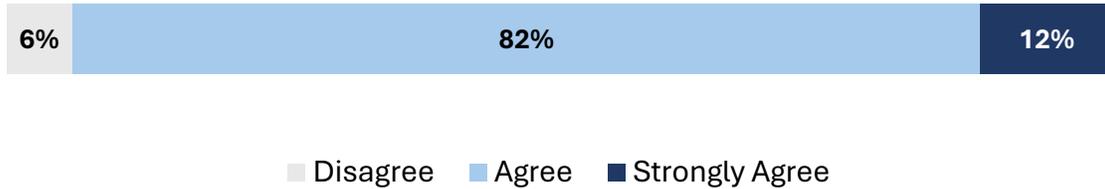
Publisher/Vendor Part 3 Exit Survey

Figure 6. Understanding of Educational Materials That Fall Within Scope for NIMAS[89]
(*n* = 17)

6%	82%	12%

■ Disagree   ■ Agree   ■ Strongly Agree

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[89] Respondents were asked, "To what extent do you agree with the following statement? I understand which educational materials fall within the scope for NIMAS and which educational materials fall outside of the scope for NIMAS." All respondents answered this question. None of the respondents selected "Strongly Disagree" or "Don't Know."