



Authoring

Questionmark Perception enables you to author questions using wizards in a Windows-based application called Authoring Manager and then store and edit them with local or shared (remote) repositories. You may also create questions using Perception's Browser-based authoring tool. The authoring wizards make it easy to create 20 different types of questions. You can add multimedia files including audio, video, Macromedia Flash animations and Macromedia Captivate simulations to Perception questions. It is easy to assemble and publish assessments from the questions you have created.

| Overview of Questionmark Perception Authoring | Perception | Competitive Product |
|---|--|---------------------|
| Authors using Windows need | PC Running Windows 2000, XP or 2003 | |
| Authors using a browser need | IE 5.5 or higher | |
| Try out questions while authoring | Yes | |
| How you edit questions? | Authoring Manager's Wizards, Question Editor or Browser-based Authoring | |
| Author and publish questions and assessments directly to shared repository on remote server | Yes | |
| Author and manage question assessments to local repository | Yes | |
| Multiple authors can work collaboratively using the same shared repository | Yes | |
| Author questions and feedback with easy-to-use WYSIWYG HTML Editing tool | Yes | |
| Author questions using Microsoft Word Templates? | Yes | |
| Database supported for authoring | Microsoft SQL, Oracle, and MSDE | |
| Define topic-based feedback to provide learning prescription? | Yes | |
| Group questions by their objective? | Yes | |
| Languages available for spell-checker: | Uses Microsoft Word spell checker -- any language supported by Microsoft Word's dictionary | |
| Add own words to spell checker? | Yes | |
| Import questions/items from ASCII files? | Yes | |
| Define your own import delimiters in ASCII text to make it easy to import a wide range of existing formats of questions. | Yes | |
| Import/Export questions to Qpacks to allow you to buy and sell item banks? | Yes | |
| Import/Export questions to industry standard files such as IMS QTI? | Yes | |
| Export questions to other files? | Export to QML | |
| Print questions? | Yes | |
| Record author name and date of last modification by each question so you can see when question was last modified. | Yes | |
| Insert server variables such as participant name, date or time directly into questions and feedback? | Yes | |
| Play audio, video, multimedia, Flash from within questions and feedback? | Yes | |
| Call third party programs from within assessments? | Yes | |
| Support for multinational character sets enabling use of Chinese, Japanese, Cyrillic and other double-byte characters | Yes | |
| Encrypt assessments for delivery with a Windows run-time program | Yes | |
| Customizable templates to control the look and feel of your questions and assessments | Yes | |
| Ability to use Cascading Style Sheets to control the look and feel or enhance accessibility of assessments | Yes | |
| Security | | |
| Define roles and multiple levels permissions for authors and administrators | Yes | |
| Define security permissions for specific folders to control access to specific topic or assessment folders? | Yes | |
| Can limit administrator log-ins to range of IP addresses | Yes | |
| Workflow Management | | |
| Define, control and document how questions move from creation to release? | Yes | |
| Can define states that questions can be in? | Yes | |
| Can define actions that move from state to state? | Yes | |
| Can define roles that administrators can be in? | Yes | |
| Can define which roles can take which actions and which roles can create questions and which roles can view, edit and delete questions in each state? | Yes | |
| Can allocate a workflow to a topic, different workflows can apply to different topics? | Yes | |
| Can link question states to delivery status so that questions are only released and available for use in assessments when they've got to a certain state in workflow? | Yes | |
| All changes from state to state are recorded in a workflow history, which can be viewed by users? | Yes | |
| Can be used to establish audit trail essential for legally definisble high-stakes assessments? | Yes | |
| Content Repositories | | |
| Simple drag, drop, cut and paste controls to manage and publish questions and assessments and supporting resource files (graphics, sound files, multimedia, etc.) | Yes | |
| Lock files from being edited simultaneously by more than one author | Yes | |
| Multiple authors can simultaneously author and publish to repository? | Yes | |
| Topic-based management of questions and supporting content | Yes | |
| Put simple learning content within the repository and link to it from question, topic or assessment feedback. | Yes | |
| Question Types | | |
| Windows Based Authoring | | |
| All question types | | |
| Categorize questions by topic? | Yes | |
| Allow different scores by choice or combination of choices? | Yes | |
| Provide different feedback based on choice, or choices, selected? | Yes | |

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| Easily enhance text with underline, bold, italics, superscripts, subscript, etc? | Yes | |
| Present mathematic equations using MathML? | Yes | |
| MathML expressions automatically converted to universal browser-friendly graphical format (JPEG) | Yes | |
| Auto-run sound and video? | Yes | |
| Loop sound and video? | Yes | |
| Include multimedia or embed? | Yes | |
| Set size of graphic independently of its size? | Yes | |
| Insert audio, video, multimedia, Flash, Captivate Simulations, graphics, fonts and equations in questions? | Yes | |
| Multiple options for shuffling choices in multiple choice questions | Yes | |
| Allow scores from -99 to +99 per choice? | Yes | |
| Set upper and lower limits on scoring for complex question types? | Yes | |
| Tag questions so they can be selected by topic and question tags | Yes | |
| Define states that questions can be in (e.g. Normal, Experimental, Beta, Retired) | Yes | |
| Allow participant to comment on a question they have answered (used to understand why someone chose a particular choice.) | Yes | |
| Include text notes and metadata for each question. | Yes | |
| Easy to enter hyperlinks within feedback (without knowledge of HTML). | Yes | |
| Essay | Yes | |
| Participant is prompted to type an essay on a particular topic. | | |
| Wizard to assist authoring | Yes | |
| Allow variable height and width of text answer area, including long scrolling areas for entry? | Yes | |
| Assign different scores to different answers? | Yes | |
| Author can choose to ignore or use letter case in scoring? | Yes | |
| Assign different feedback to different possible answers? | Yes | |
| Look for keywords and absence of keywords? | Yes | |
| Allow for a misspelling check | Yes | |
| Report for manual grading of essay questions | Yes | |
| Grade essay questions using a browser | Yes | |
| Set rubrics for when grading using a browser | Yes | |
| Integrated with ETS automated essay grading system | Yes | |
| Explanation | Yes | |
| Participant is provided information that they will need to answer the assessment. | | |
| Wizard to assist authoring | Yes | |
| How much text can be presented? | Total size of question limited to 32K, but can make links outside | |
| Likert Scale | Yes | |
| Participant is prompted to agree or disagree with a statement and each choice is given a weight to aid analysis. | | |
| Wizard to assist authoring | Yes | |
| Include standard text for Likert scale? | Yes | |
| You can define your own range of choices? | Yes | |
| Allow for not applicable? | Yes | |
| Not applicable choice allowed? | Yes | |
| Define your own "weights"? | Yes | |
| Insert graphics, fonts and equations in text of choices? | Yes | |
| Macromedia Flash | Yes | |
| Participant is prompted using material generated with Macromedia Flash. | | |
| Wizard to assist authoring | Yes | |
| Partnership with Macromedia? | Yes | |
| Flash score recorded for analysis? | Yes | |
| Macromedia Captivate Simulations | Yes | |
| Participant is prompted using material generated with Macromedia Captivate | | |
| Wizard to assist authoring | Yes | |
| Can apply score for whole simulation? | Yes | |
| Can evaluate and score each interaction participant makes within the simulation? | Yes | |
| Score recorded for analysis? | Yes | |
| True/False | Yes | |
| Participant is asked whether they think a statement is true or false. | | |
| Wizard to assist authoring | Yes | |
| Max no. of choices | 2 True and False | |
| Display choices vertically or horizontally? | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Yes/No | Yes | |
| Participant is prompted to state whether they agree or disagree with a statement. | | |
| Wizard to assist authoring | Yes | |
| Max no. of choices | 2 Yes and No | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Multiple Choice | Yes | |
| Participants select one choice from several. | | |
| Wizard to assist authoring | Yes | |
| Included standard multiple choice, true false, Yes/No, and Likert scale, etc. | Yes | |
| Max no. of choices | No reasonable limit | |
| Shuffle choices each time question is presented? | Yes | |
| Keep last choice last when shuffling for situations with "None of the Above", or, "All of the Above" choices? | Yes | |
| Ability to shuffle all but the last two choices when shuffling choices? | Yes | |
| Can specify horizontal or vertical layout of choices | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Multiple Response | Yes | |
| Participants selects several choices from many. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Max no. of choices | No reasonable limit | |
| Shuffle choices each time question is presented? | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Assign different scores to different choices, or different combination of choices? | Yes | |
| Assign a score only if the participant gets entire answer right (right/wrong marking)? | Yes | |

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| Can exclude last choice from shuffling? | Yes | |
| Can exclude last two choices from shuffling? | Yes | |
| Can specify horizontal or vertical layout of choices | Yes | |
| Assign different feedback to different choices, or different combination of choices? | Yes | |
| Matching | Yes | |
| Participant has to match two lists but is prevented from matching the same choice twice. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Limits on either of the two lists to match | No reasonable limit | |
| Shuffle choices in lists each time question is presented? | Yes | |
| Can generate drag and drop Flash animated choices for Matching questions? | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Assign different scores to different matches, or combination of matches? | Yes | |
| Assign a score only if the participant gets entire list matched correctly (right/wrong marking)? | Yes | |
| Assign different feedback to different matches, or combination of matches? | Yes | |
| Pull-Down List | Yes | |
| Participant has to match a list of choices against a pull down list of options. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Max no. of choices | No reasonable limit | |
| Max no. of options | No reasonable limit | |
| Shuffle choices each time question is presented? | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Assign different scores to different choices, or combination of choices? | Yes | |
| Assign a score only if the participant gets entire answer right (right/wrong marking)? | Yes | |
| Assign different feedback to different choices, or combination of choices? | Yes | |
| Rank in Order (Ranking) | Yes | |
| Participant ranks a list in order. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Max no. of choices | No reasonable limit | |
| Max no. of options | No reasonable limit | |
| Can generate drag and drop Flash animated choices for Matching questions? | Yes | |
| Shuffle choices each time question is presented? | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Assign different scores to different choices, or combination of choices? | Yes | |
| Assign a score only if the participant gets entire answer right (right/wrong marking)? | Yes | |
| Assign different feedback to different choices, or combination of choices? | Yes | |
| Matrix | Yes | |
| Participant is presented with several multiple-choice questions. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Max no. of choices | No reasonable limit | |
| Max no. of options | No reasonable limit | |
| Shuffle choices each time question is presented? | Yes | |
| Insert audio, video, multimedia, Flash, graphics, fonts and equations in text of choices, even when shuffled? | Yes | |
| Assign different weights/scores to different choices or combination of choices? | Yes | |
| Assign a score only if the participant gets entire answer right (right/wrong marking)? | Yes | |
| Assign different feedback to different choices? | Yes | |
| Numeric answer | Yes | |
| Participant enters a number in response to the question. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Prevent entry of text by user? | Yes (providing browser can run JavaScript) | |
| Allow entry of whole number, real numbers and scientific numbers with exponents? | Yes | |
| Allow multiple numeric entry areas? | Yes | |
| Assign score of your choice to getting question right? | Yes | |
| Assign score to getting question right within a range? | Yes | |
| Assign scores to more than one number or range? | Yes | |
| Spoken Response | Yes | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Can record and store voice responses to questions? | yes with WIMBA connector | |
| Educator or trainer can playback responses for grading? | yes with WIMBA connector | |
| Participant can play back response during assessment? | yes with WIMBA connector | |
| Text Match | Yes | |
| Participant enters some text in answer to the question. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Allow variable height and width of text answer area, including long scrolling areas for entry? | Yes | |
| Assign different scores to different answers? | Yes | |
| Author can choose to ignore or use letter case in scoring? | Yes | |
| Assign different feedback to different possible answers? | Yes | |
| Look for keywords and absence of keywords? | Yes | |
| Automatic mis-spelling check | Yes | |
| Report for manual grading of essay questions | Yes | |
| Fill in Blank | Yes | |
| Participant is presented with a statement with blanks (missing text), and enters text within the blanks. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Number of different text entry areas permitted? | No reasonable limit | |
| Allow more than one correct answer for each gap? | Yes | |
| Allow partial marking (score for each gap right)? | Yes | |
| Allow different feedback for each gap? | Yes | |
| Author can choose to ignore or use letter case in scoring? | Yes | |
| Select a Blank | Yes | |
| Participant is present with a statement with a pull-down list indicating a missing word or phrase. The participant has to select the missing text from the pull-down list. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |

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| Number of different text entry within pull-down list? | No reasonable limit | |
| Allow more than one correct answer for each pull-down list? | Yes | |
| Allow partial marking (score for each possible selection)? | Yes | |
| Allow multiple pull down lists within a paragraph. | Yes | |
| Hotspot | Yes | |
| Participant clicks on a graphic to indicate their choice and a marker graphic is moved to that position. | | |
| Wizard to assist authoring including WYSIWYG HTML Editor | Yes | |
| Define your own background graphic? | Yes | |
| Define your own marker graphic? | Yes | |
| Define areas on the graphic as rectangles, circles or polygons? | Yes | |
| Drag and Drop | Yes | |
| Participant has to drag and drop images to a certain position, normally on top of another graphic. | | |
| Wizard to assist authoring | Yes | |
| Define your own static graphics? | Yes | |
| Define up to 10 movable graphics? | Yes | |
| Assign different scores to different areas that you move the moveable graphics to? | Yes | |
| Java question types | Yes | |
| Participant interacts with a custom developed Java application. | | |
| Define your own question types using Java? | Yes (documented on web site) | |
| Other question types | Yes | |
| Participant interacts with a custom developed question type developed in QML. | | |
| Define your own question types without needing programming from Questionmark? | Yes (documented on web site) | |

| Assessment Presentation Features | Perception | Competitive Product |
|--|--------------------------------------|---------------------|
| How questions are presented | | |
| Present each question on its own screen? | Yes | |
| Present questions in a list? | Yes | |
| Specify order in which questions appear? | Yes | |
| Divide assessment into separate blocks or sections? | Yes | |
| Option to make answering question(s) in a block mandatory? | Yes | |
| Allow free movement around an assessment? | Yes | |
| Allow restart of assessment, from where you left off, when technical issues cause problems? | Yes | |
| Save As You Go | | |
| Allow participants to save their answers without affecting their progress through the assessment? | Yes | |
| Allow auto-save to save participant's answers without affecting their progress through the assessment? | Yes | |
| Time limit | | |
| Set time limit for a assessment | Yes | |
| Allow un-timed question blocks to provide introductions/information and prompt for demographics? | Yes | |
| Display time remaining | Yes (optional) | |
| Provide warning when time limit is about to expire | Yes (optional) | |
| Selection and Sequencing | | |
| Randomly select questions from topic, or sub-topics at run-time? | Yes | |
| Select questions using tags, and/or combinations of tags? | Yes | |
| Use a hierarchical system of topics to randomize from (including randomizing from subtopics)? | Yes | |
| Mix questions from different topics randomly? | Yes | |
| Shuffle choices within a question? | Yes | |
| Jumps | | |
| Jump within an assessment based on current score or based on results of a question? | Yes | |
| Link to another assessment based on assessment score? | Yes | |
| Link to a web page, or application, based on results from a question, topic score or assessment score? | Yes | |
| Final page at end of assessment | | |
| Present different final pages depending on topic score or assessment score achieved? | Yes | |
| Assign an Assessment Outcome based on total score e.g. "Pass" or "Fail" to the assessment? | Yes | |
| Assessment Outcome can be based on total score, and pre-requisites such as topic score, if required? | Yes | |
| Go to a new assessment or program depending on the Assessment Outcome? | Yes | |
| Feedback | | |
| Optional item level prescriptive feedback? | Yes | |
| Optional topic based prescriptive feedback? | Yes | |
| Optional assessment score based feedback? | Yes | |
| Optional topic based feedback and scoring | Yes | |
| Automatically send email at end of assessment | Yes | |
| Display feedback at end of each block or section? | Yes | |
| Display feedback after each question? | Yes when each question is a block | |
| Graphics in assessments | | |
| Number of graphics per question, choice, or feedback? | Unlimited | |
| Graphics formats supported? | GIF, JPEG, PNG, WMF, DIB, BMP | |
| Allow wallpaper / background graphic | Yes | |
| Multimedia | | |
| Sound fully supported | Yes | |
| Video Multimedia fully supported | Yes | |
| Macromedia Flash and Macromedia Captivate supported | Yes | |
| Question Layout | | |
| Allow content to change look and feel for different assessment styles | Yes | |
| Use style sheets to control content layout? | Yes | |
| Allow content to change look and feel to match web site or applications | Yes | |
| All text presented to participants can be changed without programming? | Yes | |