

**Dragon Professional Individual** 

**Assessor Recommendations Guide** 

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#### Introduction

Dragon Professional Individual is a speech recognition solution which can be recommended to support a wide range of disabilities. Dragon Professional Individual allows students to dictate written work accurately and effortlessly. Dragon can support students with dyslexia and other SpLDs to help with spelling, grammar, composition and written expression. It can also provide support to students with severe physical disabilities and allow students to control their entire computer with just their voice.

## Key features and benefits of Dragon Professional Individual

#### **Key Features:**

- Accurate speech recognition: Dragon Professional Individual uses advanced speech recognition technology that is designed to accurately transcribe the spoken words into text with up to 99% accuracy.
- Customisable vocabulary: Dragon Professional Individual allows users to add their own custom vocabulary to improve accuracy and recognition of industry-specific terms and phrases.
- **Voice commands:** Students can use voice commands to perform various tasks such as creating new documents, opening applications, and sending emails.
- **Compatibility:** Dragon Professional Individual is compatible with a wide range of applications, including Microsoft Office, Google Docs, and most popular web browsers.

#### Benefits:

- Increased productivity: Dragon Professional Individual can help you increase productivity by allowing you to dictate documents and perform tasks quickly and efficiently.
- **Improved accuracy:** With its high accuracy rate, the software can help students reduce errors and improve the quality of their work.
- **Customisation:** The ability to customise the software to students' specific needs can help streamline their workflow and save time.
- Accessibility: Dragon Professional Individual can be particularly helpful for students with conditions that make typing difficult, impossible or painful

• **Increased creativity:** without the distraction of spelling students can use Dragon Professional Individual to express their thoughts and ideas quickly and easily.

## Who is the Dragon Professional Individual for?

**Dragon Professional Individual** can be recommended for students who have general difficulty composing their thoughts and ideas in writing, or for those who have difficulty with operating a keyboard.

This could be as a direct result of a diagnosed specific learning difference (SpLD), a physiological, or psychological diagnosis.

## **Specific Learning Differences (SpLD's)**

- Dyslexia
- Dyspraxia or Developmental Coordination Disorder (DCD)
- Dyscalculia
- Dysgraphia
- Speech and language difficulties
- Attention deficit hyperactivity disorder (ADHD)
- Attention deficit disorder (ADD)

## **Autistic Spectrum Disorder (ASD) / Aspergers**

- Childhood disintegrative disorder
- Pervasive developmental disorder
- q22 deletion syndrome

#### **Mental Health**

- Anxiety
- Depression
- Post Traumatic Stress Disorder (PTSD)
- Obsessive Compulsive Disorder (OCD)
- Borderline Personality Disorder (BPD)
- Dissociative disorder
- Attention deficit hyperactivity disorder (ADHD)
- Attention deficit disorder (ADD)

#### **Physical**

- Arthritis
- Scoliosis
- Sciatica
- Raynaud's syndrome
- Fibromyalgia

## Unseen / other

- ME / Chronic Fatigue Syndrome (CFS)
- Sickle cell anaemia
- Long Covid
- Multiple Sclerosis (MS)
- Brain injury
- Sickle cell anaemia
- Postural orthostatic tachycardia syndrome (POTS)

## **Hearing Impairment**

- Bilateral hearing loss
- Tinnitus
- Misophonia
- Phonphonia

## **Visual Impairment**

- Glaucoma
- Strabismus
- Diabetic Retinopathy
- Dry Eye
- Low Vision
- Myopia (Nearsightedness)
- Stargardt Disease

# Areas of study where Dragon Professional Individual can be recommended.

## **Specific Learning Differences (SpLD's)**

- Dvslexia
- Dyspraxia or Developmental Coordination Disorder (DCD)
- Dyscalculia
- Dysgraphia
- Auditory Processing Disorder
- Attention deficit hyperactivity disorder (ADHD)
- Attention deficit disorder (ADD)

**Dragon Professional Individual** can help students diagnosed with a specific learning difference and who have general difficulty with compositional tasks such as note-taking or essay writing.

By converting speech to text, **Dragon Professional Individual** also supports students' who find it easier to articulate themselves verbally.

## Research and Reading

- Dragon Professional Individual can be used to support the research process, by allowing students to quickly and easily dictate their notes, as opposed to typing or writing them.
- By dictating research notes using **Dragon Professional Individual**, this can help improve concentration, comprehension and retention of information.
- Using voice control or voice commands to go directly to specific websites removes the need to visually navigate menus and work with different applications or browser tabs can reduce distraction. This method of navigation enables tasks to be performed quickly, before focus is lost.
- Using dictation to support research and reading can also help where there are problems with task initiation. Commands such as "Open Moodle" or "Go to Reading List" provide an immediate action.
- Students with phonological processing issues may have difficulty with reading comprehension due to difficulties with decoding and processing written words.
   Dragon Professional Individual can provide an alternative solution that can help students improve their single word reading.
- Used in conjunction with Pro-Study, Dragon can be used to dictate and classify research notes, helping where organisation is difficult.
- With ivvi Notes, students can record spoken academic content and use
   Dragon to refine this, thereby aiding the transition from research to writing.

- **Dragon** can also be paired with TTS technology, such as TextAid. After dictating research notes, TextAid's text-to-speech facility can read the text aloud to help with comprehension, and error detection.
- With mind-mapping software, such as MindMeister, **Dragon** can be used to dictate research ideas or keywords to aid memory as well as planning and revision.

#### Writing and Reviewing Academic Work

- For students with an SpLD or ADHD, writing tasks can be mentally exhausting and require more effort.
- As speaking is faster, and takes less cognitive effort than typing, **Dragon Professional Individual** can help reduce the cognitive load and effort required for writing by converting spoken words into text.
- Dragon Professional Individual can help students express their ideas more easily and fluidly. By allowing students to dictate their thoughts, they can focus more on content creation and less on the mechanics of writing.
- Where there are weaknesses in working memory, **Dragon** allows students to speak ideas as they think, rather than try to remember and write complex ideas at the same time. Speaking allows an individual to focus on content generation rather than multi-tasking between spelling, grammar and structure.
- Dragon supports proofreading. Hearing dictated text read aloud can assist with error detection and can also help to jog memory as ideas unfold.
- Dragon Professional Individual allows students to avoid issues with spelling, missing words, homophones, holding ideas in memory, as well as the clarity and concision of their written self-expression. Dragon is more accurate than MS Word Dictate or Google Voice Typing, offering a customisable vocabulary; it can also learn from user speech patterns.
- Speeds of around 100 words per minute are possible with **Dragon Professional Individual**, this is often much faster than students can type making it easier for them to keep on top of their written work.
- Dragon Professional Individual supports students who have difficulty with written expression and can verbalise their thoughts and ideas more effectively.
- Dragon Professional Individual can support students who have been diagnosed with dyspraxia or other conditions which affect fine motor control and typing accuracy.

- Dragon can be used in combination with mind-mapping applications, such as MindMeister to dictate brainstorming ideas directly into a mind-map to support planning.
- ivvi Notes can also be utilised to record thoughts which can then be refined using Dragon.

#### Note-taking in Lectures and Seminars

- Dragon Professional Individual can be used to dictate notes taken during taught sessions. This allows students to create more accurate and reliable learning resources. Furthermore, the process of dictating not only also aids concentration, but also improves retention of information.
- Dragon can also be utilised to refine notes, to add formatting or structure e.g. adding Bold to headings or dividing content into paragraphs. This can be helpful for students with dyslexia or dyspraxia.
- Dragon Professional Individual can be used as a transcription tool for any recordings taken during taught sessions. For example, if an individual records lectures or other taught sessions with a digital recorder such an OM Systems LS-P5.

#### Time management and organisation

 Dragon Professional Individual is an effective efficiency tool which can be used to speed up all compositional activities, thereby compensating for additional time spent on other aspects of study (e.g.research and reading).

## Access to and use of technology

- Dragon Professional Individual can enable students to interact with a computer in a way that compensates for common barriers including handwriting and typing difficulties, as well as memory and attention deficits.
- Where there are attention-related difficulties, using voice to navigate applications and control a computer can reduce distraction and/or overwhelm from menus and toolbar options. Voice commands can help to bypass visual navigation.
- It is possible to dictate directly into emails, documents, PDFs and forms which is especially useful to overcome spelling, grammar or word retrieval difficulties.
- For individuals with co-occurring motor coordination difficulties (DCD/Dyspraxia)
   Dragon provides alternative access without the need to use a standard mouse or keyboard.
- Custom voice commands can be used to perform repetitive or complex steps.

## Practical Sessions, Placements, Field Trips and Additional Course Activities

 After a practical session, Dragon can be used to verbally reflect on the experience and to create a summary. This can be helpful to process and recall learning in a structured way after the event.

#### **Examinations and Timed Assessments**

 Dragon Professional Individual can be used as an effective revision aid for exams. As by speaking information out loud using Dragon Professional Individual not only does this improve comprehension, but also memory formation.

#### Social Interaction and Communication

Dragon Professional Individual can be used to practice oral presentations.
 The students can then review the transcript of what was said and enhance areas that require improvement.

## **Autistic Spectrum Disorder (ASD) / Aspergers**

A student with Autism Spectrum Condition (ASC) can experience a range of difficulties with study, depending on their individual profile. Information processing difficulties may present due to literal thinking. Students with ASC may interpret instructions or questions very literally, leading to misunderstandings in assignments. There can be difficulties grasping abstract or theoretical material without concrete examples. Executive functioning challenges can lead to issues with planning and organisation. Students with ASC can experience difficulty breaking tasks into steps, prioritising assignments, and managing deadlines. Issues with task initiation and switching may also present, and students with ASC may find it hard to start tasks or switch between different types of work. There can be struggles with estimating how long tasks will take or sticking to schedules. Noisy study spaces, bright lights, or crowded classrooms may be overwhelming and distracting. High stress and perfectionism can present and worries about getting things exactly right can cause anxiety or avoidance. Group work and collaborative tasks may also prove challenging.

**Dragon Professional Individual** can help students who have difficulties with written expression, or those who experience heightened levels of cognitive load when engaged with study related activities.

## Research and Reading

- **Dragon Professional Individual** can support students with ASD or Asperger's where there are difficulties with reading comprehension or auditory processing.
- **Dragon Professional Individual** can be used to support the research process, by allowing students to quickly and easily dictate their notes, as opposed to typing or writing them.
- For students with ASC who may experience fine motor difficulties, or who become easily fatigued, voice input can help to reduce the demand when summarising research. This method can also reduce sensory overload caused by constant screen interaction.
- By dictating research notes using **Dragon Professional Individual**, this can help improve concentration, comprehension, and retention of information.
- While not all individuals with ASC have these challenges, students with phonological processing issues may have difficulty with reading comprehension due to difficulties with decoding and processing written words.
   Dragon Professional Individual can provide an alternative solution that can help students improve their pronunciation of unfamiliar words.
- Using Dragon Professional Individual to support reading and research

tasks supports verbal thinking. Many students with ASC think more fluently in this way and may find expressive writing slow and mentally exhausting.

- The use of **Dragon Professional Individual** means that it's possible to search databases, websites, and switch between open windows and applications using voice commands. This can help with distraction levels and reduce reliance on visual scanning reducing sensory overload.
- Dragon can be used to dictate summaries directly into Pro-Study to help break down research tasks into manageable units.

#### Writing and Reviewing Academic Work

- For students who are diagnosed with ASD or Asperger's, writing tasks can be mentally exhausting and require more effort.
- **Dragon Professional Individual** makes it easier for students to articulate complex ideas and arguments when they are experiencing fatigue, heightened anxiety, and stress, as speaking generally requires much less cognitive processing than typing.
- Students who use **Dragon Professional Individual** can dictate at speeds of around 100 words per minute, often much faster than they can type, making it easier for them to keep on top of their written work.
- Using voice rather than typing can reduce perfectionism and cognitive overload. This can also support emotional regulation when undertaking tasks such as writing which can prove overwhelming at times.
- Students can use Dragon Professional Individual to overcome issues with keeping pace with their train of thought, clarity of expression, spelling, using incorrect homophones and missing words.
- Dragon can also be used in conjunction with mind-mapping software such as MindMeister to aid planning and visual organisation. This can be especially helpful for literal thinkers.

## Note-taking in Lectures and Seminars

- **Dragon Professional Individual** can be used to dictate notes taken during taught sessions. This allows students to create more accurate and reliable learning resources. Furthermore, the process of dictating not only also aids concentration, but also improves retention of information.
- Dragon Professional Individual can offer support for notes management and organisation. Students with ASC may find it difficult to organise concepts/ideas or identify what is important. With Dragon, students can talk through and structure their notes building a clearer understanding. This can help to process and structure lecture material in a way that supports their cognitive style.

- Dragon Professional Individual can be used as a transcription tool for any
  recordings taken during taught sessions. This can help students better
  understand written or spoken language by providing a visual representation of
  the words. This strategy can also be used in conjunction with lecture recordings.
- Ideas can also be dictated to mind-mapping software using **Dragon**, to visualise connections between concepts.

#### Time management and organisation

- Dragon Professional Individual is an effective efficiency tool which can be used to speed up all compositional activities, thereby compensating for additional time spent on other aspects of study (e.g research and reading).
- By using Dragon for screen navigation, it is possible to open folders, applications and documents with ease, which helps to keep an individual on track, reducing distraction and decision making and sensory overload.
- It is possible to dictate to-do lists and assignment deadlines into calendars and planners, for example, Outlook, Google Calendar or MeisterTask. This allows for effortless recording of upcoming tasks and supports sequencing and predictability. This strategy can also reduce overwhelm as there is no need to use complex interfaces and it's possible to focus on one task/step at a time.
- To externalise internal planning, Dragon can be used to dictate or speak aloud daily tasks or weekly plans. This can be useful to self monitor.

## Access to and use of technology

- Dragon Professional Individual can enable students to interact with a computer in a way that compensates for common barriers including handwriting and typing difficulties, as well as memory and attention deficits.
- Using voice to control to navigate applications and control a computer can reduce distraction and/or overwhelm from menus and toolbar options. Voice commands can help to bypass visual navigation.
- It is possible to dictate directly into emails, documents, PDFs and forms which is especially useful to overcome word retrieval difficulties.
- For individuals with co-occurring motor coordination difficulties (DCD/Dyspraxia)
   Dragon provides alternative access without the need to use a standard mouse or keyboard.
- Custom voice commands or macros can be used to perform repetitive or complex steps.

## Practical Sessions, Placements, Field Trips and Additional Course Activities

 The Dragon Anywhere app (sold separately) can be used to dictate notes or any other information when on the go.

- Any notes taken using the **Dragon Anywhere app** (sold separately) will be transferred to the student's computer, allowing them to access this information on their computer.
- After a practical session, Dragon can be used to verbally reflect on the experience and to create a summary. This can be helpful to process and recall learning in a structured way after the event.
- Dragon Professional Individual can also be used to dictate lab reports or field observation reports. This can support written expression, but can also help to transfer practical learning into academic outcomes seamlessly. Combining mind-mapping software such as MindMeister can also help students to visually map practical findings.

#### **Examinations and Timed Assessments**

 Dragon Professional Individual can be used as an effective revision aid for exams. As by speaking information out loud using Dragon Professional Individual not only does this improve comprehension, but also memory formation.

#### Social Interaction and Communication

- **Dragon Professional Individual** can help students communicate by allowing them to transcribe their thoughts and ideas instead of having to speak them out loud.
- Many students with ASD or Asperger's experience social anxiety or difficulty with social interactions. By using **Dragon Professional Individual**, they can reduce their anxiety by avoiding the need to speak in social situations.
- Dragon can help with any expressive language difficulties. Thoughts can be dictated to develop fluent verbal expression (without having to write or type initially). This can be less anxiety provoking. This can support preparation for oral communication including group work.
- Dragon can be used to prepare contributions for group work. Scripting ideas in advance can help to lessen anxiety.
- Dragon can be used to prepare for presentations. Content can be drafted and refined to aid delivery and to pace spoken content.
- For some students with ASD or Asperger's, using Dragon Professional Individual can reduce their full dependence on non-medical helpers, as they can use the software to communicate their needs and thoughts independently.

#### **Mental Health**

- Anxiety
- Depression
- Post Traumatic Stress Disorder (PTSD)
- Obsessive Compulsive Disorder (OCD)
- Borderline Personality Disorder (BPD)
- Dissociative disorder
- Attention deficit hyperactivity disorder (ADHD)
- Attention deficit disorder (ADD)

**Dragon Professional Individual** can help students who have been diagnosed with a mental health condition which affects their ability to communicate their thoughts clearly.

**Dragon Professional Individual** can help reduce the cognitive load and effort required for writing and reading by converting spoken words into text.

#### Research and Reading

- Dragon Professional Individual can be used to support the research process, by allowing students to quickly and easily dictate their notes, as opposed to typing or writing them.
- By dictating research notes using **Dragon Professional Individual**, this can help improve concentration, comprehension, and retention of information.
- Where symptoms such as fatigue, anxiety or poor concentration can make traditional computer-based research and browsing difficult, Dragon can be utilised to undertake research collection via voice. This can make research tasks less mentally and physically demanding.
- To aid engagement where concentration is poor or where dissociation is an element of the diagnosis, instead of pausing to gather research notes, it is possible using Dragon to dictate summaries and notes. This supports active rather than passive reading.
- In combination with Pro-Study, Dragon can be used to dictate source summaries before exporting the detail into organised folders for essay planning. This strategy will support the transition to writing, where task orientation and time management are impacted.
- Dragon can reduce the cognitive burden of research and reading and improve engagement, focus and the retention of information.

#### Writing and Reviewing Academic Work

- During times of low energy or poor concentration, Dragon can be used to verbalise thoughts instead of typing. This can help to reduce mental and physical strain and fatigue. This strategy can also be helpful where there is fear of a blank page.
- Students with certain mental health conditions, such as schizophrenia or bipolar disorder, may experience difficulty communicating their thoughts coherently. Dragon Professional Individual can help these students organise their thoughts and express them more clearly.
- Dragon can assist with verbal planning. It can enable a flow of ideas without the pressure of writing and editing, which can reduce anxiety around perfectionism in writing structure.
- For those students with a mental health condition, writing tasks can be mentally
  exhausting and require more effort than for those without the condition. **Dragon**Professional Individual can help reduce the cognitive load and effort required
  for writing by converting spoken words into text.
- Dragon Professional Individual should make it easier for students to communicate complex ideas and arguments when they are experiencing fatigue, as speaking takes less cognitive processing and typing.
- Where planning can feel overwhelming, Dragon can be used to talk through assignment plans, creating draft structures.
- Dragon can aid focus while presenting ideas in print as it is possible to revise text and formatting using the same input method.
- Dragon can be used with mind-mapping tools such as MindMeister to create outlines for assignments.
- ivvi Notes can be used to record reflections, helpful to integrate practical learning.
- Lernabl can be combined to add prompts dictated via voice.

#### Note-taking in Lectures and Seminars

- Dragon Professional Individual can be used to dictate notes taken during taught sessions. This allows students to create more accurate and reliable learning resources. Furthermore, the process of dictating not only also aids concentration, but also improves retention of information.
- Dragon Professional Individual can be used as a transcription tool for any recordings taken during taught sessions.
- **Dragon Professional Individual** can help students better understand written or spoken language by providing a visual representation of the words.
- Where processing difficulties arise from a diagnosed condition, or where a
  diagnosed condition can bring dissociation, a student may use an audio
  note-taking app and in conjunction with **Dragon** dictate key points afterwards.
  This can help with reflection and avoid overwhelm during lectures.
- Combining **Dragon** with lecture recording tools such as Glean or ivvi Notes or a
  digital recorder such as the OM System LS-P5 can allow for verbal annotation,
  and this can help to compensate for mental health related processing delays.
- Lecture content can be summarised using **Dragon** post-lecture, while the
  information is fresh in the mind. This can reinforce understanding, without the
  need to write notes and can aid memory.

#### Time management and organisation

- Dragon Professional Individual is an effective efficiency tool which can be used
  to speed up all compositional activities, thereby compensating for additional time
  spent on other aspects of study (e.g research and reading). This will also help
  reduce the anxiety around engaging with study related tasks.
- By using **Dragon** for screen navigation, it is possible to open folders, applications and documents with ease, which helps to keep an individual on track, reducing distraction and decision making and minimising screen fatigue. This can accommodate low energy days.
- It is possible to dictate to-do lists and assignment deadlines into calendars and planners, for example, Outlook, Google Calendar or MeisterTask. This allows for effortless recording of upcoming tasks and supports sequencing and predictability. This strategy can also reduce overwhelm as there is no need to use complex interfaces and it's possible to focus on one task/step at a time.
- Dictating a project plan can help to break down large complicated tasks into manageable units. This encourages step by step thinking.

#### Practical Sessions, Placements, Field Trips and Additional Course Activities

- In some cases, where there are problems of fatigue or pain when writing, or brain fog, an individual might use an audio note-taking app or a digital voice recorder, such as the OM Systems LS-P5 to record notes during practical sessions. When notes are re-played, Dragon can be used to dictate summaries.
- Voice notes can be given more structure by combining this strategy with ivvi Notes.

#### Access to and use of technology

- Using voice to control to navigate applications and control a computer can reduce distraction and/or overwhelm from menus and toolbar options. Voice commands can help to bypass visual navigation.
- It is possible to dictate directly into emails, documents, PDFs and forms which is especially useful to overcome word retrieval difficulties.
- Voice commands can be used to perform repetitive or complex steps to reduce overwhelm and procrastination.
- Dragon can support journalling or reflection for practical teaching which can be useful for overwhelm or low self efficacy.

#### **Examinations and Timed Assessments**

 Dragon Professional Individual can be used as an effective revision aid for exams. As by speaking information out loud using Dragon Professional Individual not only improves comprehension, but also memory formation.

#### Social Interaction and Communication

- Dragon Professional Individual can help students communicate by allowing them to transcribe their thoughts and ideas instead of having to speak them out loud.
- Where there is panic or anxiety about the delivery of oral presentations, Dragon can be used to script and then rehearse the material aloud.
- Many students have social anxiety or difficulty with social interactions. Dragon
  can be used to practice responses to social or group work questions/scenarios.
  This can help to build confidence and can also be useful for conditions including
  selective mutism and or social anxiety.

## **Physical**

- Arthritis
- Scoliosis
- Sciatica
- Raynaud's syndrome
- Fibromyalgia

The **Dragon Professional Individual** can be recommended for conditions which have a direct impact on cognition, processing speed, concentration, and executive functioning skills. Often side-effects of students' medication can exacerbate these issues.

Facets of many physiological conditions can have a detrimental impact on students' neurological state. For example, conditions such as Fibromyalgia can leave students experiencing brain fog (aka Fibro Fog).

**Dragon Professional Individual** can help reduce the cognitive load and effort required for writing and reading by converting spoken words into text.

#### Research and Reading

- Dragon Professional Individual can be used to support the research process, by allowing students to quickly and easily dictate their notes, as opposed to typing or writing them.
- By dictating research notes using **Dragon Professional Individual**, this can help overcome condition related issues with writing or typing. The process of dictation also improves concentration, comprehension and retention of information.
- Where pain and/or fatigue can make computer interaction challenging and it
  may be difficult to remain seated for long enough to complete research
  tasks, Dragon can be used for voice controlled browsing and screen
  navigation, which can allow for hands-free research, reducing physical
  effort.
- Visual fatigue or brain fog can make it challenging to conduct computer-based research for sustained periods of time. In addition to using voice control or voice commands to go directly to specific websites and to visually navigate menus, using Dragon alongside TTS technology, such as TextAid, can promote multi-modal learning.
- Using a verbal strategy, students can use Dragon to talk through key
  arguments from readings, helping to summarise information and process
  complex concepts. This can be helpful at times of low energy,and can allow
  for active engagement when concentration is poor. This can help to break
  down research tasks into manageable chunks. This strategy will support the
  transition to writing, where energy is low and tasks may appear
  overwhelming as a result.

#### Writing and Reviewing Academic Work

- For students with mobility impairments, such as those with paralysis or tremors, using **Dragon Professional Individual** can provide an alternative to typing. This can improve accessibility to technology and allow them to use devices independently.
- Pain, fatigue or reduced mobility can make it difficult to use a keyboard or mouse. Dragon's voice dictation and full computer interaction enables hands-free academic writing. This can also help to preserve energy and reduce strain on joints and aid posture.
- Where the presence of brain fog hinders academic performance, Dragon can be used to develop free flowing ideas in print without worrying about structure or the mechanics of typing and language.
- Where physical or cognitive symptoms make it challenging to navigating longer pieces of work, Dragon's voice commands can aid navigation, reducing the need to scroll through large volumes of text and facilitating review and editing.
- Where there are mental barriers or blockers to getting started, Dragon can be used to create initial drafts of work, with less effort.
- Dragon can be used alongside mind-mapping software, e,g, MindMeister. This
  can allow an individual to generate ideas aloud converting them into an essay
  structure without the use of a mouse or keyboard. This can help to reduce
  physical strain.
- A wireless headset can be recommended as this will allow students to continue working when they are unable to remain seated and need to stand, stretch, or lie down to alleviate physical discomfort.
- For students with physical disabilities, typing can be slow, tedious and often painful. By using **Dragon Professional Individual**, they can produce written documents more quickly and efficiently, improving productivity.
- TTS software can be combined to read content aloud for proofreading support.
- ivvi Notes can be used to record short sections of writing for review which can be improved and polished using Dragon.

- For students with physical disabilities that cause brain fog and can affect their ability to type accurately, **Dragon Professional Individual** can provide a more accurate method of inputting text.
- For those students with a physiological condition, writing tasks can be physically exhausting and require more effort than for those without the condition. **Dragon Professional Individual** can help reduce the cognitive load and effort required for writing by converting spoken words into text.
- Dragon Professional Individual makes it easier for students to communicate complex ideas and arguments when they are experiencing fatigue, as speaking takes less cognitive processing and typing.

#### Note-taking in Lectures and Seminars

- Dragon Professional Individual can be used to dictate notes taken during taught sessions.
- This allows students to create more accurate and reliable learning resources.
   Furthermore, the process of dictating not only also aids concentration, but also improves retention of information.
- Where processing difficulties arise from a diagnosed condition, or where a
  diagnosed condition can bring dissociation, a student may use an audio
  note-taking app and in conjunction with Dragon dictate key points afterwards.
  This can help with reflection and avoid overwhelm during lectures.
- Combining Dragon with lecture recording tools such as Glean or ivvi Notes or a
  digital recorder such as the OM System LS-P5 can allow for verbal annotation,
  and this can help to compensate for disability-related processing delays.
   Students can engage with the audio content and review the mind-map created
  on ivvi, a strategy to support executive functioning.
- **Dragon Professional Individual** can be used as a transcription tool for any recordings taken during taught sessions.
- Lecture content can be summarised using Dragon post-lecture, while the information is fresh in the mind. This can reinforce understanding, without the need to write notes and can aid memory.

#### Time management and organisation

• **Dragon Professional Individual** as an efficiency tool which can be used to speed up all academic activities, thereby compensating for additional time spent on other aspects of study (e.g. research and reading). This will also help reduce the stress around engaging with study related tasks.

- By using Dragon for screen navigation, it is possible to open folders, applications and documents with ease, which helps to keep an individual on track, reducing distraction and decision making and minimising screen fatigue. This can accommodate low energy days.
- It is possible to dictate to-do lists and assignment deadlines into calendars and planners, for example, Outlook, Google Calendar or MeisterTask. This allows for effortless recording of upcoming tasks and supports sequencing and predictability. This strategy can also reduce overwhelm as there is no need to use complex interfaces and it's possible to focus on one task/step at a time. A physical condition can bring feelings of overwhelm when the condition affects energy levels, pain thresholds, dexterity or when flare ups require constant adaptations.
- Dictating a project plan can help to break down large, complicated tasks into manageable chunks.

#### Access to and use of technology

- Using **Dragon** voice to navigate applications and control a computer can aid with navigation to overcome issues interacting with a computer via standard input, and can overcome any difficulties with the mechanics of typing. Voice commands can help to bypass standard navigation.
- It is possible to dictate directly into emails, documents, PDFs and forms which is especially useful to offer an alternative input method and improve accessibility.
- Voice commands can be used to perform repetitive or complex steps to minimise keystrokes and reduce the steps required in a process, where energy is low.
- Where there is limited mobility and/or pain, Dragon can support journalling or reflection for practical teaching, reducing a reliance on writing by hand or using a keyboard.

#### Practical Sessions, Placements, Field Trips and Additional Course Activities

- In some cases, where there are problems of fatigue, physical pain and/or brain
  fog, symptoms that impact the ability to take notes, an individual might use an
  audio note-taking app or a digital voice recorder, such as the OM Systems
  LS-P5 to record notes during practical sessions. When notes recorded in this
  way are re-played, Dragon can be used to dictate and transcribe summaries.
- Audio notes can be given more structure by combining this strategy with ivvi Notes.

#### **Examinations and Timed Assessments**

 Dragon Professional Individual can be used as an effective revision aid for exams. As by speaking information out loud using Dragon Professional Individual not only does this improve comprehension, but also memory and recall.

#### Social Interaction and Communication

- Dragon can be used to prepare and rehearse for oral presentations, Where
  physical exhaustion is a factor or there is discomfort, this strategy can improve
  confidence where symptoms could otherwise impact processing speed or
  clarity of delivery.
- Dragon can provide communication support in real time. It can aid the ability to speak through a device where direct speech may be limited.

#### Unseen / other

- ME / Chronic Fatigue Syndrome (CFS)
- Sickle Cell Anaemia
- Long Covid
- Multiple Sclerosis (MS)
- Brain injury
- Sickle cell anaemia
- Postural orthostatic tachycardia syndrome (POTS)

The **Dragon Professional Individual** can be recommended for conditions which have a direct impact on cognition, processing speed, concentration, and executive functioning skills. Often side-effects of students' medication can exacerbate these issues.

Facets of many physiological conditions can have a detrimental impact on students' neurological state. For example, conditions such as chronic fatigue syndrome, postural orthostatic tachycardia syndrome or fibromyalgia, can leave students experiencing brain fog, or fibro fog (fibromyalgia).

Even Long Covid is known to have a detrimental impact on executive functioning skills, also affecting students' neurological pathways.

## Research and Reading

- Dragon Professional Individual can be used to support the research process, by allowing students to quickly and easily dictate their notes, as opposed to typing or writing them.
- By dictating research notes using **Dragon Professional Individual**, this can help overcome condition related issues such as brain fog or fibro fog with writing or typing. The process of dictation also improves concentration, comprehension, and retention of information.
- Dragon can be used for voice controlled browsing and screen navigation, which can allow for hands-free research, reducing physical and cognitive effort.
- Visual fatigue or brain fog can make it challenging to conduct computer-based research for sustained periods of time. In addition to using voice control or voice commands to go directly to specific websites and to visually navigate menus, using **Dragon** alongside TTS technology, such as TextAid, can promote multi-modal learning.
- Using a verbal strategy, students can use **Dragon** to talk through key arguments from readings, helping to summarise and process complex concepts. This can be helpful at times of low energy, and can allow for active engagement when concentration is poor.
- **Dragon** can integrate seamlessly with TTS, such as TextAid, Natural Reader or Read Aloud in MS Edge. Dragon can be used to navigate an online article and

then TextAid can read the content aloud. This strategy is helpful for individuals with processing challenges when dealing with large volumes of text.

 Research can be organised by voice, by creating folders, saving articles and renaming documents all through voice navigation and control. Pro-Study can then be utilised to organise research. This approach can offer cohesion for students who need to reduce cognitive and/or physical exertion.

#### Writing and Reviewing Academic Work

- For students with conditions such as Chronic Fatigue Syndrome or Multiple Sclerosis (MS), typing can be physically exhausting and exacerbate symptoms.
   Dragon Professional Individual can help reduce the physical strain and effort required for writing, helping to conserve energy.
- Fatigue and physical discomfort can affect cognitive function and cause difficulties with memory, attention, and concentration. By using **Dragon Professional Individual**, students can more easily record their ideas and complete writing tasks, improving productivity.
- Mental fatigue is a common symptom of many unseen conditions, and tasks that require sustained mental effort can exacerbate this symptom. Using Dragon Professional Individual can help reduce mental fatigue by allowing students to vary their input method.
- Students with fluctuating energy levels can use Dragon to brainstorm ideas and to capture thoughts before they are forgotten. Voice commands can also be used to generate assignment headings, reducing effort.
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- Dragon can support memory and cognitive processing difficulties by offering support for reviewing and editing coursework. Dragon makes it easy to navigate a lengthy document, find relevant sections, and correct errors via voice.
- By replacing standard keyboard and mouse input with speech, Dragon can help to reduce cognitive effort and physical strain. This is helpful where an individual can experience a flare up of symptoms, and an inconsistent ability to use a single approach, and is an ideal pacing strategy.
- Dragon can be paired with mind-mapping tools such as MindMeister to easily generate essay plans.
- ivvi Notes can also be combined with Dragon as an audio strategy to dictate and save voice notes to support writing. ivvi Notes complements Dragon by offering visual organisation of transcribed content. Students can use Dragon to dictate their own contributions into ivvi Notes while it records and transcribes from another audio source.
- ivvi Notes can be used alongside Dragon, with ivvi capturing and transcribing

spoken content from others, while Dragon lets users dictate their own ideas directly into the map or notes.

#### Note-taking in Lectures and Seminars

- Dragon Professional Individual can be used to dictate notes taken during taught sessions.
- This allows students to create more accurate and reliable learning resources.
   Furthermore, the process of dictating not only also aids concentration, but also improves retention of information.
- **Dragon Professional Individual** can be used as a transcription tool for any recordings taken during taught sessions.
- ivvi Notes can also be used side by side with Dragon where an audio strategy is beneficial to record speech or reflections.
- When paired with audio recordings (lecture capture, recordings from note-taking apps or from a digital voice recorder e.g. OM Systems LS-P5, it is possible for an individual to review the recording and use Dragon to dictate paraphrased notes or personal reflections. **Dragon** can convert any spoken summaries into organised and editable notes.

## Time management and organisation

- Dragon Professional Individual as an efficiency tool which can be used to speed up all compositional activities, thereby compensating for additional time spent on other aspects of study (e.g research and reading). This will also help reduce the stress around engaging with study related tasks.
- To maintain structure and organisation ,even on days where energy is low and memory is poor, Dragon permits voice-controlled task management. It is possible to interact hands free with calendars and planners and task lists including MS Outlook, Google Calendar and MeisterTask. This can reduce the physical and cognitive effort required to stay organised supporting memory and avoiding missed deadlines.

## Access to and use of technology

- Using voice to control to navigate applications and control a computer can reduce overwhelm cognitive and visual fatigue. Voice commands can help to bypass visual navigation.
- It is possible to dictate directly into emails, documents, PDFs and forms which is especially useful to overcome word retrieval difficulties where brain fog is present. Dictating instead of typing can reduce the physical and mental energy required to produce written output.

- Natural speech input is often easier than forming written sentences during brain fog.
- Voice commands or macros can be used to perform repetitive or complex steps to reduce effort where energy is low and brain fog is present. Command-based workflows can also improve focus as well as organisation.
- Where there is limited mobility and/or pain, **Dragon** can support journalling or reflection for practical teaching, reducing a reliance on writing by hand or using a keyboard.

#### Practical Sessions, Placements, Field Trips and Additional Course Activities

- Where there are problems of fatigue, physical pain or brain fog, symptoms that impact the ability to take notes, an individual might use an audio note-taking app or a digital voice recorder, such as the OM Systems LS-P5.to record notes during practical sessions. When notes are re-played, Dragon can be used to dictate summaries. Dragon can also transcribe audio.
- Voice notes can be given more structure by combining this strategy with ivvi Notes.

#### **Examinations and Timed Assessments**

 Dragon Professional Individual can be used as an effective revision aid for exams. As by speaking information out loud using Dragon Professional Individual not only does this improve comprehension, but also memory and recall/

#### Social Interaction and Communication

- Students with unseen disabilities may experience difficulties that aren't immediately visible to others, but symptoms can significantly affect confidence, processing speed, self expression and memory impacting communication in an academic, social or group work setting.
- Using Dragon it is possible to compose messages or scripts in advance that can be used during online/remote learning to support spontaneous communication where it's necessary to volunteer a response.
- Dragon can be used to build presentation skills over time through rehearsal and practice. When used with tools such as ivvi Notes or a digital voice recorder e.g. OM Systems LS-P5, this can build fluency and allow for self-evaluation, by engaging with the audio.

• Where memory is impacted, Dragon can also be used to create speaker's notes. Research notes can build presentation content and cue cards can be created.

## **Hearing Impairment**

- Bilateral hearing loss
- Tinnitus
- Misophonia
- Phonophobia

**Dragon Professional Individual** can help students who have been diagnosed with a hearing impairment which affects their ability to compose written work effectively.

Many students with a hearing impairment have difficulty with their command of written English. **Dragon Professional Individual** allows students to vary their input method.

#### Research and Reading

 For students with a hearing impairment who have difficulties with their command of written English, or slower language processing and understanding of complex academic language, by dictating research notes using **Dragon Professional Individual**, this can help improve concentration, comprehension and retention of information. Dragon can help by allowing students to rephrase complex text using familiar words.

This strategy would not be effective for students who only communicate using BSL.

- Where there has been limited exposure to phonetics, by speaking notes aloud using Dragon, students can develop skills in sentence structure, vocabulary and grammar aiding language development.
- As Dragon is voice driven, it can allow a student to dictate notes, and this can be valuable when reading complicated texts as it will allow a student to verbally process and rephase academic content in their own words. This can help to build English language proficiency and aid comprehension.
- Combining this strategy with Pro-Study offers an integrated package of support for both reading and research, one that will allow an individual to develop confidence in academic language comprehension and use through structured and verbal processing.

#### Writing and Reviewing Academic Work

- Hearing impairments, especially if present from a young age can affect language development. Where there are problems with spelling and grammar, with Dragon thoughts can be spoken aloud allowing for a more natural development of written content, where ideas can flow, and the focus on spelling and correctness is removed.
- Dragon has built-in vocabulary support, and its word predication can help students find and use the correct words more easily, reducing spelling mistakes and grammatical errors. Dragon uses contextual recognition to choose the correct word form. It is also possible to add custom words or academic terminology to Dragon's vocabulary.
- For many students with hearing impairment, typing can be exhausting and time-consuming. Dragon Professional Individual can help reduce the effort required for writing and allow students to conserve energy.
- Writing can be challenging for students with hearing impairment due to difficulties with reading, understanding and retaining information. By using Dragon Professional Individual, students with hearing impairment can more easily record their ideas and complete writing assignments more efficiently.
- Dragon can be used to dictate headings and formatting options, reducing manual effort.
- Where proofreading is challenging, Dragon can support voice driven review.
   Documents can be easily navigated by voice and corrections can be made via voice. This encourages active engagement with the document, removing writing fatigue and uncertainty allowing an individual to feel more in control of the process.
- Students with hearing impairments such as tinnitus may find it challenging to
  focus on reading, comprehending and formulating written ideas simultaneously.
   Dragon Professional Individual can reduce the cognitive load by allowing
  them to concentrate on composing their thoughts orally and then transcribing
  them into written form.
- For students with a hearing impairment, transcription errors can occur when they mishear or misunderstand spoken language. **Dragon** converts spoken words into written text, allowing students to dictate essays, reports, and assignments rather than typing, supporting the creation of accurate content. Transcripts created with Dragon can also be imported into word processors for further editing.

## Note-taking in Lectures and Seminars

- Dragon Professional Individual can be used to dictate notes taken during taught sessions.
- This allows students to create more accurate and reliable learning resources. Furthermore, the process of dictating not only aids comprehension, but also memory formation.

- **Dragon Professional Individual** can be used as a transcription tool for any recordings taken during taught sessions.
- Dragon can be used to annotate slides or lecture handouts. This pre-lecture task can support engagement and help structured note creation, particularly where captions or transcripts are available.
- If lectures are recorded, when content is replayed, Dragon can be used to dictate reflections. This strategy also works well with ivvi Notes to store this additional information next to audio timestamps. This strategy will be helpful to process dense and complex academic content.

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#### Time management and organisation

- **Dragon Professional Individual can be used** as an efficiency tool to speed up all compositional activities, thereby compensating for additional time spent on other aspects of study (e.g research and reading). This will also help reduce the stress around engaging with study related tasks.
- Using Dragon can reduce visual load. By integrating with tools such as
  Outlook or Google Calendar, voice commands can be used to create calendar
  events and add deadlines. Dragon can also be used to break down large
  tasks into smaller steps. Reducing screen time can be important when
  hearing impairment coexists with concentration difficulties or visual fatigue or
  strain.

#### Practical Sessions, Placements, Field Trips and Additional Course Activities

• Useful integration is the combination of **Dragon** with an OM-System LS-P5 digital recorder to record during practical sessions. The LS-P5's voice balancer function automatically makes smaller voices louder when voices are at different levels due to the distance between the presenter/speaker and the recorder. Where there is a reliance on lipreading, a recording is helpful to reduce fatigue from sustained listening or lip-reading. The LS-P5's Zoom microphone mode allows students to record focused speech even from a distance and review the content at a later date. For students with a hearing loss or an auditory processing disorder (APD) additional mental effort is often required to follow spoken content. Dragon can be used to easily transcribe recordings from fieldwork/practicals.

#### **Examinations and Timed Assessments**

 Dragon Professional Individual can be used as an effective revision aid for exams.

#### Social Interaction and Communication

- Dragon Professional Individual can be used to practise communication skills by transcribing conversations and providing feedback on grammar, vocabulary, and tone. This can in turn increase confidence and self-esteem in social situations.
- Recorded rehearsals once transcribed can be replayed using TextAid or a captioning tool to aid self review.
- Dragon can be used with MS PowerPoint to create Speaker's notes to support presentation delivery.

## **Visual Impairment**

- Glaucoma
- Strabismus
- Diabetic Retinopathy
- Dry Eye
- Low Vision
- Myopia (Nearsightedness)
- Stargardt Disease

**Dragon Professional Individual** can help students who have been diagnosed with a visual impairment that affects their ability to compose any form of written work.

**Dragon Professional Individual** helps visually impaired students by transcribing their thoughts or ideas accurately and more effectively.

## Research and Reading

- **Dragon Professional Individual** can be used to dictate notes during the research process. This can help students with sight loss to capture important information accurately and efficiently
- With Dragon it is possible to navigate computer applications, webpages, documents and research databases using voice control. This can reduce the reliance on visual tracking.
- Voice activated searches can also aid research tasks with less reliance on vision. Dragon Professional Individual can be used to search for information online, helping students with sight loss to find relevant sources and access information more efficiently.
- Reference lists can be built by voice, and by combining Pro-Study it is possible to organise these sources into categories.

#### Writing and Reviewing Academic Work

- Writing can be a slow and laborious process for students with sight loss, as
  they may need to navigate digital documents or other materials using screen
  readers. Dragon Professional Individual can improve productivity by allowing
  them to speak their ideas more quickly and efficiently.
- Dragon Professional Individual can provide audio feedback on grammar, syntax, and other aspects of writing, helping students with sight loss to improve their writing skills and make corrections as they go.
- Dragon Professional Individual can help students with sight loss compose text much faster than would be possible when typing, and with a high degree of accuracy.
- This will avoid any difficulties related to the operation of computer keyboards, and the use of a computer screen.
- Dragon Professional Individual can help students who have difficulties viewing screens for extended periods. As when students are using Dragon Professional Individual, they do not need to constantly look at the screen when composing their work.
- Difficulty seeing the screen can also extend to document formatting or cursor position. Voice commands enable complete navigation without the need to see the screen, and items can be located faster by voice than with screen reader/magnification software.
- Dictating ideas also helps to generate ideas more quickly, without the need to focus on the more mechanical aspects of typing and screen orientation, ideas can flow more freely, without distraction.

## Note-taking in Lectures and Seminars

- For students with sight loss, it can be difficult to follow fast-paced information delivery in taught sessions and to view visual media including presentation slides and whiteboards/blackboards or overhead projectors. Dragon can be used alongside an audio note-taking strategy. For example, an OM System LS-P5 digital recorder can be used to capture lectures and when replaying the recording. The LS-P5 offers a tactile button-based interface with a permanent and predictable layout. The buttons have different shapes and functions for ease of use. It is possible to add additional text, notes can be transcribed using Dragon. Voice commands can be used to structure and to save notes.
- Dragon can also be used for personal reflections, or adding additional content to notes to reinforce meaning.

#### Time management and organisation

- By reducing the time and effort required to access and process visual information, **Dragon Professional Individual** can help students with sight loss to be more productive in their studies.
- Typing can be a slow and laborious process for students with sight loss, particularly if they are using screen readers to navigate digital documents.
   Dragon Professional Individual can be used to capture notes more quickly, improving efficiency.

#### Access to and use of technology

- Voice-driven note creation reduces the need to visually interact with the keyboard or screen.
- Post-lecture transcription gives flexibility depending on energy and focus.
- Many applications are compatible with screen readers like JAWS, NVDA and also work smoothly alongside Dragon.
- Cloud syncing allows access across devices and backup for later review.

## Practical Sessions, Placements, Field Trips and Additional Course Activities

Useful integration is the combination of Dragon with an OM-System LS-P5
digital recorder to record during practical sessions. The LS-P5 can be used in
practical teaching events to capture a clear audio recording which can be
reviewed at a preferred pace to ensure effective engagement with the content
delivered without a reliance on visual materials or the use of a note-taker.
Personal notes and reflections can be added, and Dragon can be used to
transcribe the recording.

#### Examinations and Timed Assessments

- Dragon Professional Individual can be used as an effective revision aid for exams. As by speaking information out loud using Dragon Professional Individual, this helps students with sight loss to review and memorise material more effectively.
- Dragon Professional Individual can be used to take notes during study sessions, helping individuals with sight loss to capture important information accurately and efficiently.