

Research Report  
Education & EdTech

# Executive Summary

This report investigates the Education industry and identifies and evaluates the impact that utilizing AI tools will have on the workplace. The investigation outlines the standard business model and structure, where AI tools can be adopted to enhance the industry, what AI integrations can be utilized in sampled workflows, the current and future employee roles in the industry, the ethical and compliance considerations in implementing AI, and such.

Our Focus:

**Primary School Education (Victorian Curriculum)** – The MCP is designed for use within Victorian primary schools to ensure alignment with curriculum standards and classroom practices.

**Supporting Teachers' Instructional Planning** – By automating parts of the student work review process, the MCP frees up teachers' time to focus on lesson planning and instructional strategies. This ensures that teaching efforts can be directed toward addressing individual learning needs rather than being consumed by repetitive administrative tasks.

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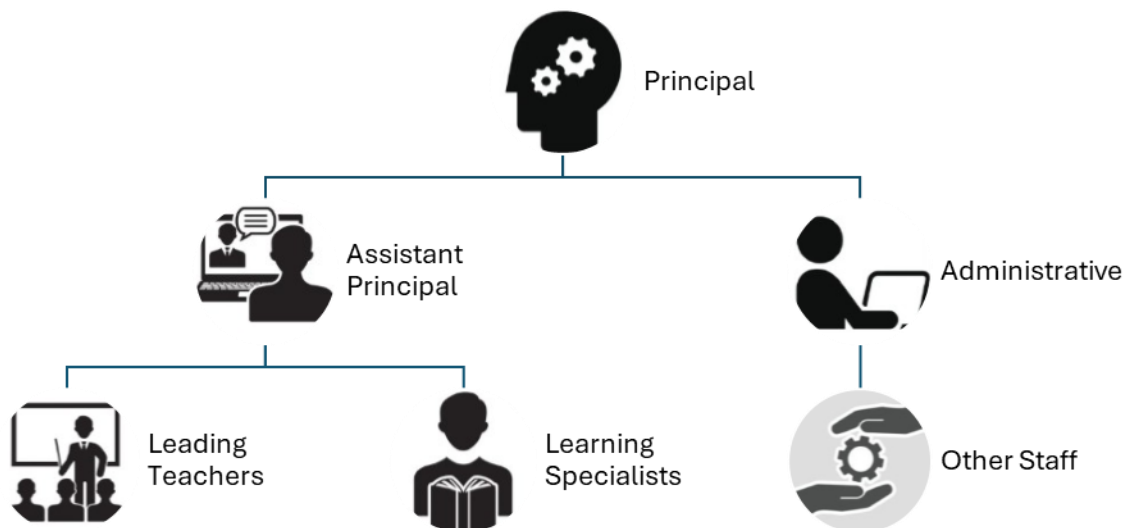
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## Standard Business Practice:

This section gives a clear and simple overview of primary schools in Victoria, Australia. It looks at how the system is organised, the types of schools, the different roles people have, and the smaller parts that make up the whole system. It also explores what is expected by those who are most involved, like students, parents, teachers, and the government.

Primary schools in Victoria operate within the Education sector. They are responsible for delivering foundational learning for students from Preparatory (Prep) to Year 6, generally catering to children aged between 5 and 12. These schools follow the Victorian Curriculum, which outlines the essential learning goals for literacy, numeracy, science, humanities, and the arts.

These schools are operated by the governance managed by the Department of Education Victoria. The schools are led by a principal, supported by Assistant Principals, Leading Teachers and Learning Specialists. This resembles the hierarchical structure.



This structure allows for consistency in curriculum delivery across the state while also offering flexibility to adapt to local community needs. Schools operate in collaboration with school councils, made up of parents, staff, and community members, to ensure accountability and local engagement.

## **Main Job Roles and Responsibilities:**

### *(1) Classroom Teachers*

- Plan and deliver the curriculum
- Assess student learning and progress
- Create and maintain a positive learning environment

### *(2) Education Support Staff*

- Assist students with additional or special needs
- Support teachers in the classroom
- Help with general school operations

### *(3) Educational Leaders*

- Include Principals, Assistant Principals, Leading Teachers, and Learning Specialists

#### ➤ *Principals*

- Oversee school leadership and day-to-day management
- Lead strategic planning and decision-making
- Manage the school budget
- Support staff development and wellbeing

#### ➤ *Assistant Principals & Leading Teachers*

- Provide instructional support to teachers
- Mentor and guide staff
- Help implement school improvement plans

#### ➤ *Learning Specialists*

- Focus on improving teaching practices
- Offer targeted coaching to teachers
- Lead curriculum planning and development
- Support better student learning outcomes

- Provide leadership, manage staff, and guide school direction

### *(4) Administrative Personnel*

- Handle office duties such as enrolments, communication, and record-keeping
- Support the day-to-day running of the school

## **Main Sectors of Victoria's Education System:**

- *Government (Public) Schools*
  - Operated by the Department of Education
  - Serve the majority of students in Victoria
  - Follow the Victorian Curriculum
  - Fully funded by the government
- *Catholic Schools*
  - Managed by Catholic Education authorities
  - Include religious education alongside the standard curriculum
  - Charge moderate fees
  - Receive some government funding

- *Independent Schools*
  - Privately managed and funded through tuition fees
  - Often offer alternative teaching methods or specialist programs
  - May follow or adapt the Victorian Curriculum
  - Less reliant on government funding

### **Customers and Clients:**

In primary schools, the main key parties are students, parents, and government bodies. Each group has different expectations, but all are focused on helping children succeed.

Parents and guardians want their children to feel safe, included, and supported. They look for schools that offer high-quality teaching and help their children grow both academically and socially. They also expect open communication and strong partnerships between home and school.

Government agencies and school boards play a big role too. They provide funding, set educational standards, and expect schools to follow these guidelines. They also look for clear evidence of student progress and responsible use of public resources.

Students are at the heart of the system. Their learning, wellbeing, and engagement are the top priority. Schools aim to make learning meaningful and enjoyable, helping students feel confident and supported every step of the way.

## **AI prototype for Business**

### **What AI will consist of:**

#### *Core AI Components:*

- **Adaptive Learning Analytics Engine:** Machine learning algorithms that learn student learning patterns through Victorian Curriculum areas (literacy, numeracy, science, humanities, arts).
- **Predictive Progress Modelling:** AI that is able to model student learning progressions and predict when students are making learning gains or falling behind in particular curriculum areas.
- **Personalised Intervention Recommendations:** Smart recommendations for targeted support strategies specific to the needs of the individual student
- **Multi-stakeholder Dashboard System:** Different interfaces for teachers, parents and education leaders.

### **Specific Features of the AI:**

#### *For Teachers:*

- Visual representation of student progress in real-time across all curriculum priority areas.

- Automatic identification of students that require extra support.
- Suggested teaching approaches and resources appropriate to the individual student needs.
- Class-level performance analysis with links to curriculum priorities.
- Automated progress reports that include narrative analysis.
- Early warning for students at risk of not being able to keep up attitude.

#### *For Parents/Guardians:*

- Progress dashboards for their children in plain language.
- Suggestions for home-learning activities.
- Communication links to teachers for feedback about their child's progress.
- Celebration of achievements and milestones, plus ideas for goal setting.
- Resources to help support learning at home.

#### *For Educational Leaders:*

- School-level performance analysis.
- Teacher effectiveness and professional development recommendations.
- Suggestions for optimising resource allocations.
- Reporting to improve compliance with Department of Education.
- Impact analysis on budget of interventions.

#### *Use Cases for the AI:*

1. Individual student progress monitoring: Monitor Sarah's progress in numeracy, through tracking, identify she is struggling with fractions and suggest suitable activities.
2. Class management: Help Teacher John identify which 6 students in his class need extra phonics support and provide recommendations on how to group them.
3. Parent support engagement: Notify Emma's parents that she excels in science but is in need of support in reading at home.
4. School wide planning: Notify the school Principal about the year levels requiring extra literacy resourcing for the next term.
5. Early intervention: Flag students who appear to be showing signs of learning difficulties prior to formalising assessments.

#### *User Flows*

##### Teacher Daily Workflow

1. Sign in → User is taken to dashboard showing all classes.
2. Select class → User can see a specific view of an indicator dashboard.
3. Click on flagged student → User can see analysis and recommendations for that student.

4. Act on recommendations → Document outcome as applicable.
5. Generate letters to parents → Automated progress letter goes home.

#### Parent Weekly Check-in

1. User receives notification their child is making progress.
2. User views simplified dashboard with strengths/ areas for growth.
3. User sees suggested home activities.
4. User messaged teacher for asking questions or sharing observations.
5. User sets learning goals with child using AI suggestions.

## Business Change with the AI for the sector

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#### What would change within the Standard Business

##### *Assessment and Reporting Workflows:*

- Current: Teachers manually monitor student progress, create individualised reports every three months.
- With AI: Automatic monitoring of progress with instant information and automated reports made for teachers.

##### *Parent Training & Progress Updates & Communication:*

- Current: Every 2 seasonal formal parent interview & email when needed.
- With AI: Bespoke information automated updates every season.

##### *Resource Allocation:*

- Current: Principals making decisions based on evidence of limited data and teacher requests.
- With AI: Making decisions effectively against data based on predictive analysis and defined needs.

##### *Professional Development Planning and Program:*

- Current: Setting Professional development needs which are generic PD opportunities, teachers self-identifying needs.
- With AI: Recommended PD opportunities against the known needs based around the analysis of evidence for student outcomes and professional effectiveness.



## Who would be Impacted and How:

### *Classroom Teachers (Primary Effect - Positive):*

- Change: Less manual data collection time, more time for actual teaching.
- New Responsibility: Understanding AI signals, implementing AI-suggested interventions.
- Skills: Basic data literacy, AI Tool navigation.
- Impact Level: Highly positive - more effective teaching.

### *Educational Leaders (High Positive Impact):*

- Change: Able to use data to make decisions, real-time insights into the school's performance.
- New Responsibility: Oversight of the AI tool; data governance; strategic planning using AI signals.
- Skills: Advanced data analysis; managing change.
- Impact Level: Very high positive - better management of the school.

### *Education Support Staff (Moderate Positive Impact):*

- Change: Enhanced ability to make targeted support considering the AI-recommended actions.
- New Responsibility: Carrying out intervention plans suggested by the AI Tool.
- Skills: Basic ability to operate the AI tool; basic understanding of progress markers.
- Impact Level: Moderate positive - more effective student support.

### *Administrative Staff (Mixed Impact):*

- Change: Some manual reporting requirements were replaced by managing an AI system.
- New Responsibility: Personally responsible for overseeing data entry, attending to any system maintenance requirements.
- Skills: Manage the AI system; quality of data entry.
- Impact Level: Neutral to positive - more naturally evolved role not role replacement.

### *Parents/Guardians (High Positive Impact):*

- Change: Novice to a better understanding of the child's progress and more opportunities for involvement in education.
- New Responsibility: Using the insights to actively support learning at home.
- Skills: Basic use of a digital device; understanding of reports on child's progress.

- Impact Level: High positive - much more effectively support child.

## Adoption of the AI

### Timeline and Implementation Plan:

#### *Stage 1 (Months 1-6): Pilot Phase*

- 10-15 schools with varying demographics.
- Focus on data integration, and basic use.
- More intensive training for all pilot school staff.

#### *Stage 2 (Months 7-18): Finalise Pilot and Implementation*

- Across the region in Victoria
- Get better at what we do from pilot, allow the opportunity for schools to provide feedback.
- Staging training

#### *Stage 3 (Months 19-24): Full Implementation*

- State-wide.
- Ability to produce upgrade capability in schools.
- Effective ongoing support infrastructure.

### Possible Delays and Barriers:

#### *High Risk factors:*

- Data Privacy and security - parents and teachers are concerned about student data being secure.
- Technical Infrastructure - some schools may not have enough technology infrastructure.
- Resistance from older teachers - some older teachers may be uncomfortable with the advance of technology.
- Budget Constraints - we will have budget constraints from the Department of Education.

#### *Medium Risk factors:*

- Complex Training - it may take time, and organising all staff to be trained, and all needing to understand their role.
- Victorian curriculum - we need to ensure we complete the holding more essentially complete alignment with the Victorian curriculum.
- System Integration - within schools existing management systems (e.g., Compass).

## Integration Points Analysis:

### *"Easiest" Integration Points*

- Student Information Systems: Most schools would already have digital systems in place such as Compass.
- Assessment Data: Schools would already gather this data to some extent, and they just need to improve the analysis.
- Parent Communication: Many schools have email and SMS systems in place.
- Report Generation: There are already reporting templates that schools can improve with AI data insights.

### *"Safe" Integration Points*

- Administrative Reporting: The least worst area to be making choices, any errors will not directly impact the teaching.
- Resource Planning: Better assistance for budget and resource allocation decisions.
- Professional Development: Supporting teachers learning but there will continue to be judgement and experience from the teacher.
- Parent Dashboards: Mostly, additional information that does not replace what the teacher communicates with the parent.

### *"Hard" Integration Points*

- Decision Making In-the-Moment Within the Classroom: The teacher needs to maintain their judgement as a professional.
- Assessing Some Special Needs Cases: Only the case of special needs could be a complex case requiring a human brain.
- Behavioural Management: AI should not direct consideration or change the behaviour of the teacher.
- Assessing Teacher Performance: A very sensitive area which should not be dictated by AI.

## Overall Business Value:

### **Is it worth it? YES - Here's why.**

#### *Cost Evaluation:*

- Upfront Cost: Very high, estimated to be between \$2-5m when implemented statewide.
- Ongoing costs: Moderate (maintenance, implementation, staff professional learning etc).
- Return on Investment: 3-5 years in terms of improved student outcomes and operational efficiencies achieved.

#### *Outline of benefits*

- Time savings: Teachers save 5-8 hours each week on assessment and planning.
- Student outcomes: 15-20% improvement in learning growth rates may be achieved.

- Parental engagement: 40% increase in parent-to-school communication is expected.
- Resource efficiency: 20-30% more efficient allocation of support resources.

#### *Strategic benefits.*

- Competitive advantage: Victoria will become the leader in education technology.
- Scalable approach: This system can easily accommodate growing student numbers.
- Future-proofing: Indicates system preparedness for continued tech improvements.
- Data-driven approach: Shifts sector toward behaviour and decision making with evidence base.

#### *Risk Mitigation Value:*

- Intervening early: Prevents learning gaps being inflated.
- Ensures compliance: Helps schools to comply with Department of Education expectations.
- Quality assurance: Maintains a consistent quality of education, for all schools.
- Professional development: Skills-up the entire teaching workforce in data.

Conclusion: The AI Progress Tracker is an innovative investment, that will be a digital transformation for Victorian primary education, achieve robust student outcomes, make the sector more efficient and effective. The costs and change management associated with this disruption will be large, though the long-term benefits greatly outweigh the investment. This represents a strong business case decision for education.

## Users of the AI

Given that our AI is specifically focused on primary schools in Victoria, this has allowed us to narrow down our user base and gain a deeper understanding of who they are and what their expectations from the tool might be. It has also helped guide our research into their level of experience with AI, how likely they are to adopt it, and how it might fit into their existing workflows. In exploring their current use of technology and the internet, we've identified three distinct user types, categorized by their skill level: Beginner, Intermediate, and Advanced. These categories are based on their general IT knowledge and past experience with AI tools, which in turn will shape how they interact with the system

### **1. Beginner**

- These users have little to no experience with AI or digital tools in general. As a result, they will require extensive guidance, including walkthroughs and “getting started” resources. This group may struggle to adopt the system at first, as the concept of AI integration may feel overwhelming or unfamiliar.
- **Some of the general Beginner User Needs Include:**
  - Step-by-step walkthroughs or onboarding tutorials.
  - Tooltips, clear labels, and visual cues.
  - Access to a dedicated help section or human support.
  - Integration with platforms they're already using (e.g., Compass, Google Docs) for better familiarity
  - Regular training opportunities or printed user manuals

## 2. Intermediate

- These users have some experience with AI or similar digital tools and are expected to adopt the system with more ease. However, they may still encounter difficulties or need ongoing support, particularly when using more advanced features. They are anticipated to be more comfortable with technology but may lack the confidence or training to explore the tool fully on their own.
- **Some of the Intermediate Users need will include:**
  - Logical interface design that aligns with their workflow.
  - Features like autofill or smart suggestions to speed up tasks.
  - Occasional support for troubleshooting or deeper understanding of AI outputs.
  - Ability to provide feedback about system usability and improvements.
  - Moderate training on interpreting AI-generated insights.

## 3. Advanced

- While this group may be smaller in number, they are expected to have a solid understanding of AI and a strong track record of using similar tools in the past. They are likely to adopt the system quickly and with minimal assistance. With the right resources, they can even play a support role, helping others in the Beginner or Intermediate categories through peer guidance and informal training.
- **Some of the Advanced Users need will include:**
  - Access to advanced settings and data layers.
  - Opportunities to pilot features and provide feedback.
  - Compatibility with other tech tools they use.
  - Ability to guide or mentor less experienced staff.

Although all user groups are important and their needs must be addressed, how we allocate support and resources will vary. For instance, investing in training and onboarding materials for Advanced users could empower them to assist those in the Beginner and Intermediate categories, ultimately helping to streamline the adoption process and ensure a smoother rollout of the AI tool, in the sector.

While it's easy to generalize and say the users of our AI tool are limited to a specific environment, we've taken the extra step to dive deeper, distinguishing user groups by skill level and digital familiarity. This detailed categorization allows us to better anticipate their needs, understand their expectations, and design a user experience that supports successful and inclusive adoption. For the purpose of this research anticipate the following user groups:

### 1. Primary

- These are our main focus. The AI tool should be tailored to meet their specific needs, as they are expected to use it regularly and rely on it for core functionality.

### 2. Secondary

- These users may not interact with the system as frequently, but their needs should still be considered. Ensuring they can access and benefit from the tool, even at a basic level, remains important to overall success of rolling out the AI tool

By organizing users based on their level of expertise and frequency of use, we can more effectively determine which users require what type of support, training, and system features.

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## Primary Users

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### Beginners

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- **General Classroom Teachers (Older Teachers and less technical ones)**
  - **Older generation Teachers** are likely to be used to the old Tradition and style of Teaching, using Papers and doing everything Manually These teachers may be experienced educators but are less familiar with digital tools or have had minimal exposure to AI-based systems. They are likely to feel overwhelmed by complex interfaces or unclear instructions.
  - **Younger Less Technical Teachers** though they are likely to find it a little easier to adopt to the system due to their age, their level of experience and exposure to AI-based systems would be limited as well so they are likely to feel overwhelmed but may find it easier to adopt and user the system.
- **Teacher Aides / Learning Support Staff**
  - Similar to the General Classroom teachers, Teacher Aides are those who help with the teachers in class, with in-class Activities, so this system will likely be brand new to them, so they are likely to feel more overwhelmed and might need extra support, the reason why they are primary users is because they are likely to be using it alongside the teachers often if they were to know what the student progress and how to help students. So, it is important to consider their needs
  - Teacher aides might have extra needs as their use is different for example they are going to need:
    - A simplified interface with clear instructions.
    - Limited access based on tasks (e.g., only see assigned students).
    - Alerts or summaries that tell them exactly what they need to focus on (e.g., students flagged for extra support).

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## Intermediate

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- **Tech-savvy teachers**

- These Teachers are thought to be younger as well so, they are likely to find adoption of the AI into their workflow even easier than less tech-savvy teachers, though they might not have experience with AI and AI tools, we anticipate that these teachers will be more confident with technology, using existing platforms such as seesaw, google classroom for their daily Activities, which have some level AI implemented in them already, which means that these teachers can navigate new platforms but may still need time to understand predictive features or analytics making them intermediate users.

- **Year level Coordinators (lead teachers)**

- Year level Coordinators are the people who will be involved with checking student progress and making sure that the year levels are performing up to the standards given to them. While they maybe experience at using basic tools and may have some experience, using AI because they are going to be using this AI for a more surveillance purpose (monitoring), it is going to be more advanced, therefore they may require extra help as their understanding of the advanced features maybe limited. Some of the coordinator's needs may include:
  - Aggregated data views (e.g., performance by class or year level).
  - Export functions for meetings or reports.
  - Filtering tools to compare trends

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## Advanced:

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- **STEM or ICT Specialist Teachers**

- The Stem or ICT team in Primary Schools are usually the ones who handle all of the I.T problems that are being faced by the teachers and the students, helping them with things like troubleshooting, setting up accounts etc., given their Field of work it is likely that they will be Experienced using AI and AI tools as they are likely to be exposed to them as soon as they are released. They will be one of the key users of the AI tool, as helping them and equipping them with the right tools and knowledge, they will be able to assist the Intermediate and beginner users, helping a smoother Adoption, since they have experience working with school members in the past.

- **Digital Learning Coordinators / eLearning Leaders**

- Unlike the ICT specialist the digital learning Specialists are responsible for adoption of digital learning and technology into the curriculum, working with teachers, and leaders to implement a new technology into the system. Given their field of work, they are likely to have strong understanding of CRM (content resource management) systems and e-learning platforms, and since AI is a main topic in education it is possible they have exposure and experience using AI tools. The eLearning leaders will be one of the main staff that will be able to guide the adoption into the primary schools since they have a strong understanding of the education system, they would know what the best way for promoting adoption, which means that collaboration with them has to be on of the main priorities of the project.

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## Secondary Users

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### Beginner

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- **Less technical CRTs (Casual Replacement Teachers)**
  - These will Teachers that will not be using this AI tool on a regular basis, but may need to from time to time, when they are called into class, they may need to for example see what has been set by the main teacher and help the students based on that. We anticipate that because the nature of their work they are likely to not have had much experience and Exposure to AI and AI tools, so they might find it difficult to adopt to the tool and be able to use it effectively. Though they are not going to be using the tool often we need to make sure that it is easy for them to use the system so they can use the system when they have to.

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### Intermediate

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- **More Technical CRTs**
  - Casual teachers can come from Various Backgrounds, English, Maths etc., with these users we anticipate that they will be coming from a more technical Background and have some understanding of how AI works, and we are anticipating they had some Exposure to AI, meaning their occasional use of these tools will be much easier, however they would still have to adopt to the various lesson plans set out by the main teachers

**\*both technical and non-technical CRT teachers, would need access to limited versions of the AI, but they would need to see the benefits of it in their workflow, as their satisfaction is especially important since they could help with a smoother state rollout by advocating the success of AI in one school to other schools and gaining the support of other schools in the process limiting resistance\***

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### Advanced

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- **Department of Education Representative**
  - When implementing any new system, it is always important to look at a wider perspective on the users and who might be using the AI tool occasionally. Department of Edu is typically interested in student performance across the state, view trends and make decisions based on that for the whole state of Victoria. The representative of Department is likely to have used the systems like these in the past, for example compass that was introduced to schools, so they are likely to use the AI in an advanced way. Making sure that the Representative is Essential as they can create or suggest regulations that directly impact the implementation of AI across the state.



## Users Reaction to AI implementation in the sector

The reaction that users will have to the introduction of the AI tool will depend on a combination of factors: their perception of the change, the way it is implemented, and most importantly who is responsible for introducing it. Trust in the people leading the change will directly affect how open staff are to adopting the new system. The level of understanding users have of the AI tool, along with how well it addresses their needs, will influence whether they support or resist the implementation. Some groups will be enthusiastic supporters from the beginning, while others may actively resist. The way these groups are managed will be a key determinant in the success of the project.

### Supporting Primary users

**Among Primary Users**, the groups most likely to welcome the change will be tech-savvy classroom teachers, year-level coordinators, STEM or ICT specialists, and digital learning coordinators. These individuals are already familiar with using digital tools to streamline teaching and improve learning outcomes, and they are more likely to see the benefits of AI in reducing administrative workload, enhancing lesson planning, and providing richer insights into student performance. Their enthusiasm can be capitalized on by involving them early in the process as “champions” of the tool, giving them access to prototypes, and empowering them to mentor less confident colleagues. For these users, the benefits are clear: more efficient grading, targeted interventions for struggling students, and ultimately improved educational standards across the school. Ensuring that their support actively helps the implementation means giving them the authority, resources, and training to advocate for the AI tool within their teams.

### Resisting Primary Users

In contrast, less tech-savvy classroom teachers and some teacher aides within the Primary User group may be more resistant to the change. They may view AI as a threat to their teaching autonomy, fear that it will make their roles redundant, or simply distrust the accuracy of AI-generated feedback. Resistance could take the form of refusing to use the system, misusing it in ways that undermine its value, or spreading negative perceptions about it among peers. To mitigate this, it is essential to first understand their specific concerns through interviews and informal feedback sessions. Providing continuous support, offering simple step-by-step guides, and showing clear examples of how the AI can help them in daily tasks will be vital. For persistent resistance, stronger measures may be required, including making usage mandatory through school or government policy, though this should be a last resort, as forced adoption without trust can undermine long-term engagement.

### Secondary Users Dynamic

For **Secondary Users**, the dynamics differ. The school principals, deputy principals, tech-savvy CRM teachers, and curriculum resource managers are in positions of influence and can have a significant impact on whether the AI tool is successfully embedded in the school’s workflow. Principals and deputy principals, in particular, hold decision-making authority and can either champion the change or stall it. They are likely to welcome the AI tool if they see it as improving school performance, helping meet Victorian educational standards, and providing clearer oversight of student progress. Their support can be strengthened by presenting them with concise, actionable reports and evidence from pilot programs showing measurable improvements. They should also be given opportunities to provide feedback during the development phase, so they feel ownership of the change.

On the other hand, less tech-oriented CRM teachers or administrators within the Secondary User group may resist the change due to discomfort with new technology or scepticism about its value. If these users control elements of the curriculum or resource allocation, their resistance could slow down or block adoption in certain areas. Resistance might be subtle, such as deprioritizing AI-based insights in planning, or more direct, like advocating against the tool in staff meetings. Mitigating this requires a dual approach: first, by offering targeted training that links AI outputs directly to curriculum goals, and second, by making early adopters within their peer group visible so they can see the tool working in practice.

One important consideration is that external stakeholders with decision-making authority, such as government representatives or regional education department leaders, are technically secondary users but have substantial power over the project’s success. Even if they are not day-to-day operators of the system, their approval and endorsement are critical. They may be supportive if the tool aligns with broader education improvement strategies, offers measurable performance gains, and demonstrates cost-effectiveness. However, they may resist if they perceive political risk, public backlash, or controversy around AI in education. In such cases, minimizing resistance means providing them with carefully curated information that highlights the benefits and avoids unnecessary technical complexity, while also giving them control over the pace and scale of rollout.

Because AI in education can be controversial, it is best to ensure that all user groups see a working prototype before the full rollout, so they can evaluate its benefits firsthand. Internal change management should be led by trusted members of staff, particularly advanced and intermediate users who can speak credibly to their colleagues. Building trust, demonstrating clear value, and offering ongoing support will be the primary tools for gaining acceptance. Where this fails, policies may need to enforce adoption, but only after careful consideration, as the ultimate goal is long-term engagement rather than compliance through obligation.

## Ethical and Compliance considerations:

As our team explores the integration of AI-driven progress tracking in Victorian primary schools, it is essential to address the ethical and compliance dimensions that come with deploying such technology. The adoption of AI tools in education is promising, but must be guided by principles of privacy, security, transparency, and fairness to protect students, educators, and the broader school community.

### Privacy

Privacy is a primary concern, as AI systems process sensitive personal and educational data about children. It is vital to:

- Collect only the data necessary to achieve educational objectives (data minimization).
- Ensure informed consent from parents or guardians before gathering or sharing student information.
- Restrict access to student data, implementing strict role-based permissions for teachers, administrators, and parents.
- Clearly communicate to all stakeholders how data will be used, stored, and, if needed, deleted.

### Security

Security safeguards must be robust to prevent data breaches or unauthorized access. Our AI platform must:

- Use state-of-the-art encryption (TLS 1.3+) for all data in transit and at rest.
- Regularly audit and test systems for vulnerabilities.
- Enforce multi-factor authentication for users accessing sensitive data.
- Maintain detailed logs of all data access and changes.

### Fairness and Bias

AI systems must not introduce or amplify bias in student assessment or recommendations. To ensure fairness:

- Regularly test AI models for bias across demographic groups.
- Provide transparency around how decisions and recommendations are made by the AI.
- Include human oversight to review and validate critical AI-driven decisions, especially in areas like early intervention or resource allocation.

### Transparency and Explainability

Stakeholders—including students, parents, and educators—should understand how AI makes decisions:

- Ensure that algorithms used for student progress tracking are explainable, not “black boxes.”

- Offer clear explanations when the AI system flags a student or recommends interventions.
- Make documentation and policies about AI processes readily available.

### **Accountability**

Clear lines of accountability are needed:

- Assign responsibility for data protection and ethical AI use at both the school and vendor level.
- Establish formal procedures for addressing data breaches or ethical concerns.
- Ensure compliance with relevant legislation, such as the Privacy Act 1988 (Cth), Information Privacy Act 2000 (Vic), and Department of Education guidelines.

### **Compliance with Laws and Standards**

- Ensure all practices comply with the Australian Privacy Principles (APPs) and Victorian privacy laws.
- Adhere to the Australian Framework for Generative Artificial Intelligence in Schools.
- Require all MCP tool providers and vendors to undergo security assessments and regular audits.
- Ensure data sovereignty by storing student data within Australia where possible.

### **Ongoing Ethical Oversight**

- Establish an ethics committee or regular review process to evaluate AI outcomes.
- Provide ongoing training to teachers, staff, and parents about privacy, AI, and digital safety.
- Maintain a process for students, parents, or staff to raise concerns or opt out if needed.

# MCP - Model Concept Protocol:

## What is MCP, and Why is it Important for AI in Education

MCP is an open protocol which allows applications to give context for any given LLM, and developers can build reliable, secure connections to design bi-directional pathways between developer data sets and AI-powered tools. MCP creates a standard that allows AI agents to plug in simply and reliably (no hacks, no hand-coding) to tools, data, and services.

For our AI Progress Tracker for Victorian primary schools, MCP acts as the universal connector, allowing us to use our AI system without building custom integrations for each source of data in the existing school infrastructure.

## Useful MCP Tools for Education AI Applications

### *Student Information System Connectors*

- Purpose: Connect to existing school management systems (Compass, SEQTA, etc.).
- Function: Extract student enrolment, attendance, and demographic information.
- Benefit: Avoids manual data entry and provides automated real-time synchronisation.

### *Assessment Data Integrators*

- Purpose: Pull assessment results from testing platforms and curriculum tools.
- Function: Combine data from NAPLAN, school-based assessments, and formative assessment tools.

## Benefit: Makes consolidated student performance profiles across all subjects

### *Learning Management System (LMS) Connectors:*

- Purpose: Connect with systems such as Google Classroom, Microsoft Teams for Education, etc.
- Function: Access information related to assignment submissions, participation and learning activities.
- Benefit: Gives educators a better idea of student engagement and their academic performance.

### *Communication Systems Integrators:*

- Purpose: Connect with parent communication systems and notification systems.
- Function: Provides progress reports, alerts to parents on particular subjects/know and share messages from the teacher.
- Benefit: Streamlines communication between parent and teacher.

### *Mapping Tools to Victorian Curriculum*

- Purpose: Mapping and tracking student progress with Victorian Curriculum.
- Function: Mapping and tracking learning outcomes with achievement points on the curriculum.
- Benefit: Provides compliance with OEM expectations on Victorian Curriculum, schools have students across the whole spectrum of achievement points from Foundation to 10.

### *Resource Databases integrators:*

- Purpose: Link to educational resource libraries and libraries of intervention resources/materials.
- Function: Suggest resources to support the identified need of the student learning need.
- Benefit: Supports teachers with goal specific resources for teaching and learning in a differentiated way.

## **Public MCPs Available in the Education Sector**

Using the awesome-mcp-servers repository and education-specific needs:

### *Database Connectors:*

- Postgres/MySQL MCP Servers: To connect to school databases.
- SQLite MCP: To pull and push local school data.
- Purpose: To ensure secure queries to a database for student records and performance data.

### *File System Integration:*

- File System MCP: Accessing shared educational resources and document libraries.
- Google Drive/OneDrive MCP: Integration with the cloud storage services common in schools.
- Purpose: To pull educational materials and create and save AI-generated reports.

### *API Integration tools:*

- REST API MCP Servers: Connecting to third-party projects in the educational space.
- GraphQL MCP: For complex queries connecting many systems in the educational space.
- Purpose: To guarantee integration in a diverse educational technology ecosystem.

### *Analytics & Reporting:*

- Analytics MCP Tools: To generate ultimate progress reports.
- Visualization MCP: Presenting data in charts and graphs for student performance.
- Purpose: To serve raw data to the educators and parents as inform able action items.

# Compliance Requirements for MCP Tools in Education

## Privacy Laws and Regulations:

### *Australian Privacy Principles (APPs):*

- MCPs must comply with the Privacy Act 1988 (Cth) for handling personal information.
- Student data collection must be justified and proportionate to educational purposes.
- Clear consent mechanisms required for data sharing between systems.

### *Victorian Privacy Laws:*

- Schools must direct staff and students to not load any personal information about students or staff onto AI tools (for example, student names, reports, personal histories and contact details).
- Information Privacy Act 2000 (Vic) applies to government schools.
- Freedom of Information Act 1982 (Vic) governs data access rights

### *Federal Education Framework:*

- The Australian Framework for Generative Artificial Intelligence (AI) in Schools provides guidance on understanding, using and responding to generative AI in Australian school-based education.
- Department of Education guidelines on AI use in educational settings.

### *International Compliance Considerations:*

- While not directly applicable in Australia, FERPA (Family Educational Rights and Privacy Act) principles provide best practice guidance.
- FERPA compliance guidelines instruct educational institutions on how they can collect, use, and disclose the personally identifiable information (PII) of students to third-party EdTech vendors.

## Security Requirements:

### *Data Encryption and Storage:*

- All MCP connections must use encrypted channels (TLS 1.3 minimum).
- Student data must be encrypted both in transit and at rest.
- Regular security audits and penetration testing required.

### *Access Control:*

- Role-based access control (RBAC) for different user types (teachers, parents, administrators).
- Multi-factor authentication for all system access.
- Audit logs for all data access and modifications.

### *Data Minimization:*

- MCPs should only access data necessary for specific educational functions.
- Automatic data purging policies for outdated student information.
- Clear data retention schedules aligned with educational record-keeping requirements.

### *Vendor Compliance:*

- All MCP tool providers must undergo security assessments.
- Data processing agreements (DPAs) required for all third-party integrations.
- Regular compliance monitoring and vendor audits.

#### *Technical Security Standards:*

- ISO 27001 compliance for information security management.
- SOC 2 Type II certification for service organization controls.
- Regular vulnerability assessments and security patching.

#### *Ethical AI Requirements:*

- Algorithmic transparency and explainability for AI decisions affecting students.
- Bias testing and mitigation in AI models used for student assessment.
- Regular ethical reviews of AI system outcomes and impacts.

#### *Data Sovereignty:*

- Student data must be stored within Australian borders where possible.
- Clear data processing locations and jurisdictions documented.
- Cross-border data transfer restrictions and safeguards.

#### *Incident Response:*

- Mandatory breach notification procedures.
- Clear escalation processes for security incidents.
- Regular incident response testing and preparedness drills.

These compliance requirements ensure that MCP tools used in the Victorian primary education AI system maintain the highest standards of student privacy protection, data security, and ethical AI implementation while enabling the powerful integrations necessary for effective educational technology solutions.

## Conclusion

The introduction of an AI-driven progress tracker represents a major transformation for Victorian primary education. Its core featured, aptive learning analytics, predictive modelling, personalised recommendations, and multi-stakeholder dashboards—create a system that can shift the way teachers, leaders, and parents understand student learning. By automating progress monitoring, generating insights, and tailoring interventions, the AI has the potential to reduce teacher workload, improve decision-making, and provide a clearer, evidence-based picture of student achievement across the curriculum.

The benefits of such a system are significant. Teachers gain back hours each week by replacing manual data entry and reporting with real-time dashboards, freeing time for teaching. Principals and leaders receive high-quality data to support resource allocation, curriculum planning, and professional development strategies. Parents are empowered with clear updates and suggestions to support learning at home. At scale, the system promises a measurable uplift in student outcomes, improved equity, and stronger alignment with Victorian education standards.

Despite high upfront costs, the business case is compelling. Teachers may save 5–8 hours weekly, student growth rates could improve by 15–20%, and parent engagement may rise by 40%. Principals gain data to allocate resources more efficiently, while the education system as a whole benefit from consistent, evidence-driven decision making. Risks, such as staff resistance, technical integration, and budget constraints are real but manageable through careful phasing, training, and transparent leadership.

In short, the AI Progress Tracker is not just a tool but a catalyst for cultural and operational change in Victorian education. It promises higher student achievement, reduced teacher workload, and stronger system-wide accountability. While implementation will require investment, careful change management, and strict adherence to ethical standards, the long-term benefits for students, teachers, and the broader system make this a clear opportunity for Victoria to lead in education innovation.