

Overview

The College's pedagogical framework, A.S.P.I.R.E, provides a structured approach to teaching and learning for young men. A.S.P.I.R.E is grounded in research on the delivery of classroom instruction and classroom management, drawing heavily on Marzano's (2007), *Art and Science of Teaching* but also encompassing aspects of boys' education endorsed by Alloway, Hawkes, Lillicoe, Lingard, Masters, Rowe and Trent and Slade.

The framework utilises Marzano's "Ten Instructional Design Questions" and embeds them in six key elements, to suit the local context of St Brendan's College. The Elements of: <u>A</u>ctive Processing; <u>S</u>tructure; <u>Procedural Practice</u>; <u>Instruction</u>; <u>Rules and Routines</u>; and <u>E</u>-Learning, encourage our teachers to "A.S.P.I.R.E to be the best teachers of boys" and our students to A.S.P.I.R.E to achieve to the best of their abilities in the classroom.

The framework is deliberately titled as "pedagogical", rather than as a "learning framework". The emphasis of the framework is on what the teacher does in the classroom and how they direct learning to engage students and enable them to achieve in their subject areas. This is in contrast to a learning framework, where the onus is upon the student to develop habits and attitudes to facilitate improved classroom performance. For optimal learning to occur, optimal teaching must play a significant role. Thus "pedagogy" (the method and practice of teaching) is the basis of this. Hattie (2009), citing Hedges, notes as much as twenty one percent in student achievement gains can be attributed to teacher effectiveness alongside student application.

To this end, the framework combines features of directed teaching and of constructivist teaching. It does not, as is often the case in educational theory, contrast these teaching approaches or validate one method as better than the other. Rather, the complex nature of the classroom is recognised and each approach is given significance at different phases of the teaching cycle. In allowing a level of flexibility, the teacher, more comfortable with one approach to the other, can still use the framework and A.S.P.I.R.E across all six elements, ensuring that pedagogical practices across the school are applied with a level of consistency and accountability, so that all students in all classes may, too, A.S.P.I.R.E in their learning.

Furthermore, the framework is implicitly underpinned by the E.R.E.A Touchstones, most notably that of "Liberating Education". This Touchstone is best expressed when teaching and learning experiences are authentic, relevant, dynamic and creative, enabling all in the community to work to the best of their abilities and realise their potentials. It is precisely this that the framework endeavours to achieve, through enhanced practitioner delivery and practice. The College's Peer Mentoring programme for teachers is based in A.S.P.I.R.E, encouraging the reflective practice and on-going development of all teachers.

The framework enables us to, "A.S.P.I.R.E to be the best teachers of boys".



E-learning: Teachers utilise information technology to support, extend and assess learning.

Rules & Routines: Teachers frequently reinforce the adherence to, and a lack of adherence to, rules and

procedures, to enhance the learning

environment.

Active Processing: Teachers facilitate learning experiences in which students can construct meaning, by interacting with and manipulating content information (Declarative Knowledge).

A.S.P.I.R.E

Instruction: Teachers deliver content in an engaging manner and use effective questioning strategies to support student understanding and evaluation.

Structure: Teachers follow agreed practice patterns including: identifying learning goals, structuring learning activities and learning phases, and appropriately transitioning between phases.

Procedural Practice: Teachers help to deepen student understanding and allow them to master controlled processing (automaticity), through practice and repetition of skills, strategies and processes.

A.S.P.I.R.E to be the best teacher of Boys



Active Processing

In learning:

- Summarise and note-take into personal, abbreviated forms.
- Create vocabulary glossaries and spelling lists.
- Use non-linguistic tools to demonstrate understanding: graphic organisers, pictographs, hierarchies, timelines, mnemonics and enactments.
- Examine similarities and differences:
 - Compare using "Sentence stems", Venn diagrams and "Concept attainment"*.
 - Classify using "Double Bubbles"* and charts.
- Promote cooperative strategies like, "Jigsaws" and "Write-Arounds".
- Identify basic patterns and relationships through metaphors.
- Demonstrate meaning through "Cloze Exercises" and "3 Level Guides".
- Revise and add new knowledge to the topic.

Structure

In class:

- Identify the learning goals "What the student will understand and be able to do today".
- Segment each lesson into phases:
 - Orientate
 - Immerse with a "Smart Start" or warm-up.
 - o Enhance the knowledge base.
 - Deliver or demonstrate content knowledge or a "Critical Input Experience".
 - Deepen new knowledge with "Guided Practice" and feedback.
 - Generate and test ideas and theories.
 - Culminate
 - Wrap-up with a "Smart Finish". or review.
- Ensure that "closed or discrete" tasks precede the "open or reflective" tasks (building up).
- Ensure logical and smooth transitions between activities with clear links to previous knowledge.
- Complete administrative tasks (roll marking) during the guided-practice, or self-directed phases.

Procedural Practice

In teaching:

- Provide a clear model of any skill, strategy or process, prior to, or in conjunction with the teaching of the process.
- Pose a problem, prompt a query, or provide a puzzle as a starting point for deep learning.
- Make predictions, or draw conclusions and confirm or disconfirm each.
- Teach the points for supporting a conclusion (TEEL):
 - Topic
 - Evidence
 - Explanation
 - Links/justifications
- Expose students to faulty logic, weak references, exceptions and/or misinformation to encourage evaluation.
- Utilise investigation and decision making tasks.
- Provide constraints, parameters and scaffolds for problem-solving, prediction and decision making tasks.



Instruction

In teaching:

- Preview content information prior to delivery using "Advance Organisers"* or "K.W.L's"*.
- Chunk "Declarative and Procedural Knowledge" into clear teaching steps.
- Identify stopping points for the boys to restate, discuss, describe, make predictions, or reflect.
- Implement effective questioning:
 - Pose inferential questions,
 "Elaborative Interrogation" at some stopping points.
 - Develop a system for distributing questions and attention equally.
 - Consider the "Wait Time Rules" when questioning.
 - Devote time to addressing incorrect responses.
 - Restate or simplify questions for success.
 - Demonstrate gratitude for responses received.
- Use physical movement to activate thinking.

Rules & Routines

In and out of class:

- Consistently apply the "Agreed Standards" of St. Brendan's College.
- Restrict behavioural rules to a manageable number.
- Model appropriate behaviours and responses.
- Implement both positive and negative consequences.
- Acknowledge adherence to rules through verbal and non-verbal techniques:
 - Praise and recounts.
 - Smiles, nods and thumbs-up.
 - "Catch the boy being good".
 - Phone/email home.
 - o Tangible rewards.
- Acknowledge a lack of adherence to rules by "Graduated Actions":
 - "Stimulus cueing" verbal comments or a desk tap.
 - Silence and eye-contact.
 - Proximity and by "Occupying the room".
 - "Direct-cost consequences" (R.T.P, detentions etc.)
- Refer to the College Behaviour Management Policy.

E-Learning

In learning:

- Orientate:
 - Create "Mashups", concept maps, mosaics or "Wordles"*.
 - Use "Concealment strategies" to arouse interest.
 - Contribute to a blog, wiki or digital pin-board, such as "Padlet"*.
 - Use "Polling Technology" to gauge pre-knowledge, or for revision.

Enhance

- Complete on-line tutorials and quizzes.
- Revise using Digital Flash Cards.
- o Play interactive content games.
- Import articles or information and use highlighting tools to summarise.
- Annotate text, photos or PDFs.
- Re-order or recreate instructional steps, timelines or sequences.
- Reconstruct text into a logical form to demonstrate comprehension.

Culminate

- Produce a "Flipping Book", an interactive game or a tutorial.
- Create a single page animated PowerPoint or "Prezi"*.
- Maintain a digital folio of work with annotations.
- Use the prescribed school based elearning environments for assessment.

Active Processing – Extra

Active

Graphic

Organisers

- Active Processing is a model of instruction that focuses the responsibility for learning on the boy and notes that to learn, boys must do more than just listen: they must in some way act upon and manipulate the content material. Marzano offers five fundamental strategies for Active Processing including: summarizing, non-linguistic representation, questioning, reflection and cooperative learning.
- Martin (2002) pre-dating Marzano suggests: debates, role-plays, partner narratives and visual construction of concepts (spider grams, graphic organisers and mind maps) as examples of "Active Processing" tools.
- Technology allows for text to be efficiently restructured and for the creation of new products, not just the consumption of other people's content. These attributes make technology integral in "Active-Processing".
- Marzano verifies the role of the teacher in the process and insists that their guidance, and interaction with the content and the student is fundamental.
- Graphic organisers (also known as knowledge maps, concept maps, cognitive organizers, or concept diagrams) are communication tools that use visual symbols to express knowledge, concepts, thoughts, or ideas and the relationships between the ideas.
- Venn Diagrams are a common organiser for comparing (identifying similarities and differences); a strategy endorsed by Marzano during the "Guided Practice" session of an active lesson.
- **Double Bubbles** are a variation of the Venn-diagram concept, suited to the classification of information.

- Declarative knowledge is described by Marzano as informational, or more generally content.
- After the initial "Critical Input Experience", "Declarative Knowledge" is best developed through repeated revision and review.
- Revision activities should be spaced close together and require that new information be added to the topic with each exposure.
- 3 Level Guides are a tool which can support boys in comprehending text. The three levels: literal, interpretive and applied, guide the reader to focus on relevant information and to develop an opinion. They are effective revision tools, being closed at the literal level but requiring greater input at the interpretive and applied levels.

Declarative Knowledge

• Cloze exercises consist of a portion of text with words removed.

Replacing the missing words requires the ability to understand context and vocabulary in order to identify the correct words.

Cooperative Strategies

- **Jigsaws** are group tasks involving topics and subtopics. Boys are assigned a subtopic to become an expert. They share their knowledge with other subtopic experts to become as knowledgeable as possible, before returning to the original group to teach the material.
- Concept Attainment: Boys try and determine a topic/idea or principle by being shown or examining examples which have, or do not have, a link to the idea or topic. They try to find similarities or differences in the examples, before classifying them and eventually identifying the topic.
- Write-arounds: The teacher creates a sentence starter and asks a boy to finish the sentence. The boy passes the paper/tablet/iPad to the right and the next boy adds his sentence and on it goes.
- **Note-taking**: Marzano (2007) cautions on the appropriate time to take detailed notes and advises that only key words or phrases be written whilst students are observing or participating in a "Critical Input Experience". Further; notes which record student thoughts on one side of the page and complement these thoughts with pictures, have the added advantage of processing new knowledge in two modalities.



Structure - Extra Information

Intent

Enhance

- **Establish goals** for the unit of work and for the individual lesson, at the beginning of each. The goals should be drawn from the College work programs and from the Australian Curriculum documents.
- Goals can be an explicit content point, skill, process or general understanding of a topic. For
 example: "Today's goal is to look at sophisticated vocabulary that we can use to write our
 report", or "Today's goal is to practise our use of quadratic formulas".
- A clear learning goal should be evident at the start of every lesson and clarified verbally and/or in written form.
- Lillicoe (2000) proposes that outlining the intent of the task or activity, "provides boys with a specific reason", or "a compelling why" to participate.
- Enhance: Engage with the concept and skills in order to consolidate learning.
- Teachers deliver or demonstrate the key content or skill and provide a model. Marzano refers to this important information as the "Critical Input Experience" and notes that its prior identification, will determine the success of the lesson.
- Teachers engage in "Guided Practice"; scaffolded or supported attempts at the task. The use of sentence starters, incomplete paragraphs or graphic organisers are useful in this phase.
- Teachers supervise the boys during individual responses and during the construction of answers to questions.

- **Orientate:** This is the process of activating prior knowledge of the topic and giving the student a learning map of the unit. Teaching strategies in this phase include immersion in a particular genre or introduction to a concept by providing engaging experiences.
- Smart Starts: The use of activities at the beginning of the lesson and unit to stimulate and awaken the intelligence/interest and orientate the students to the topic. Hawkes (2001) suggests, "Teachers pay particular attention to the start of a lesson to make use of the **primacy effect**; the ten-minute learning window upon entry to the classroom".
 - Discrete or closed tasks are finite and have an identifiable end. Hawkes (2001) notes that boys often feel more confident with these types of activities, as it allows them to say with certainty that the task has been completed. Examples include: spelling tests, review/revision, quizzes, word match ups, un-jumble words, Fast 20s or Acrostics. These may be in digital or kinaesthetic format, or simply hand written.
 - Culminate: In this phase the boys bring their new understanding or skills together with their previous understanding or skills and integrate the two. Teaching strategies in this phase of the unit will generally involve more extended tasks.
 - Teachers check for understanding of lesson intent or critical input experiences through verbal questioning, quizzes or written summaries at the end of the lesson.
- Smart Finishes make use of the "recency effect" (Hawkes, 2001), the significant time for learning at the end of the lesson where the relevance and implications of the learning are reiterated to the boys.
- Transitions: The movement between activities should be clear and purposeful and boys should always have work to continue on with, if they have finished one activity. The goal should be to never leave boys without something to do. Rowe & Rowe (2000) insist that: "boys be kept busy, to eliminate navel-gazing and opportunities for bad behaviour". The teacher may stop class work to deliver instructions regarding the next learning experience or alternatively, independent, extension or extra tasks should be available within the unit, written on the board, or accessible through the on-line learning environment.

Orientate

Culminate

• Administrative Tasks: Roll marking, homework checks, conferencing collections, or checking for preparedness for class (pens, books) should be done whilst the boys are engaged in independent learning activities – never as lesson starters! Martin (2002) notes that the impact of the "primacy effect" is often wasted by these tasks that do not relate to the learning goals or unit intent.



Procedural Practice - Extra Information

- Procedural Knowledge is exercised in the performance of a task. It is orientated towards skills
 and strategies. Many Queensland Syllabuses refer to Procedural Knowledge as "Processes"
 and further classify these into lower and higher order.
- "Procedural knowledge" answers the question, "What can you do?" (Study.com, 2015).
 "Procedural knowledge" relies on action words, or verbs, and involves the completion of a series of steps to attain an outcome.
- Investigation tasks which involve the generation and testing of a
 hypothesis about past, present or future events in response to a
 question, sit at the upper end of Marzano's Procedural scale.
 In placing them at this level, Marzano makes a clear
 connection to Bloom's Taxonomy.
- Reflection opportunities are critical for Procedural tasks.
- Decision making tasks require students to select from equally valid alternatives presented by the teacher.
- Marzano views decision making as a fundamental procedural skill, because it forces boys to generate and test a hypothesis and confirm or deny their original position.
- When creating decision making tasks, the criteria or supportive information
 on which the final decision will be made, should be provided. This replicates the College
 assignment design process of stating the genre, stating the Key Term and stating the
 supportive documentation.
- Decision making matrices can be co-created as a joint task, or provided by the teacher to assess the criteria for each alternative.

- Practice of procedural tasks should be structured so that the boys focus on only a small part of the
 overall procedure. Gradually, the sessions should become more complex and combine all of the
 segments.
- As with the revision of "Declarative Knowledge", practice of procedural tasks should force the boys
 to add, delete or change elements of the material, not simply learn by rote methods. This
 "restructuring", requires the boys to question their knowledge and
 ultimately leads to greater learning accommodation.
 - Problem solving tasks are a useful practice strategy for "Procedural Knowledge" as they create unusual contexts and scenarios.
 This challenges boys to determine what must be done differently.
 - Close monitoring is needed during the initial practice sessions to ensure a high probability of success.
 - Identify, state, outline or define the topic.
 - Provide evidence (grounds) Evidence may consist of:
 - o matters of common knowledge or factual information.
 - expert opinion or personal observations.
 - experimental data or results.
 - Explain and discuss the nature of the evidence. Marzano refers to this as "backing" and notes that it establishes the validity of the evidence.
- Link Justify how the evidence supports the claim and the level of certainty or exception (qualifiers), to the materials used as evidence.
- Church (2009), explaining the process of learning in the digital age, presents Bloom's Taxonomy as a literal hierarchy stating:
 - o before we can understand a concept we have to remember it
 - o before we can apply the concept we must understand it
 - o before we can analyse it we must be able to apply it
 - o before we can evaluate its impact we must have analysed it
 - before we can create, we must have remembered, understood, applied, analysed and evaluated it.
- While conjecture exists as to whether Marzano would endorse this over-simplified representation of the learning of Procedural Knowledge, it nonetheless provides a useful summary for teachers and classroom practitioners.



Procedural Knowledge

Decision Making

Supporting Conclusions

Practice

Instruction - Extra Information

- Chunking is the process of presenting new material in small parts, or teaching in small steps (Rosenshine, 2002). Marzano insists that boys can only digest a few bits of information at one time and too much swamps the working memory, reducing the benefits of the critical input experience.
- · Lessons should be chunked in terms of time and material. For adolescent boys, ten to fifteen minute blocks will suffice before a change of topic, concept or a task re-direction should occur.
- Lesson chunks should be presented visually as well as orally (Albar, 2015) and the approximate time for the completion of each chunk should be specifically indicated.
- Four to five bits of information are a sufficient target for the working memory to process in any one chunk.
- Post-Teacher-Question Wait Time: After posing a question, wait three seconds before requesting a response.
- Within-Student Pause Time: Allow a further three seconds for students to think during pauses, while they are answering or asking a question.
- Post-Student-Response Wait Time: Allow a pause between when one boy responds to a question and another follows up with a response.
- Teacher Pause Time: While presenting content, pause to allow students to process and "soak in" the new information.
- Impact Pause Time: Use uninterrupted pauses to create anticipation.

- Inferential questions require boys to elaborate on information they have experienced and often to go beyond what is presented. Inferential questions can be relatively simple in structure, consisting of 'how', or 'what' statements.
- Elaborative interrogation is a form of extending inferential questioning by asking follow up questions. At a basic level the teacher can simply ask a 'why' statement! Prompting for evidence in the boy's response will assist them connect to the topic.
 - Marzano (2007) notes that every time a boy proffers a response he puts himself at risk. Teachers should therefore acknowledge the response,
- identify the specific parts that were accurate/inaccurate and be particularly strict with negative comments from other boys. Questioning
 - As a fail-safe, a boy should be allowed to pass on a question to avoid embarrassment.
 - One of the most effective ways to ensure that boys engage in new content is for them to provide answers or comments in a classroom question session. Statistically however, many boys remain silent. To avoid this, the following are recommended:
 - o Call on the boys who do not raise their hands.
 - Target every desk.
 - o Get the boys to nominate another student who has to answer.
- Randomly select names from prepared student labels or digital list generators.
- Ask the boys alphabetically by Christian name or by surname.
- Introduce digital voting (Zoomerang, Polldaddy, Kahoot) and get the boys to support their responses.
- Regardless of the questioning system used, when acknowledging correct responses, praise should be used judiciously. It must also be explicitly focused on the response. Vague or critical feedback will have little impact on learning.
- A teacher's response to a boy's answer is just as important as the question asked. A response can redirect when an incorrect answer is given, identify areas of misunderstanding, or probe for further explanation when a partial answer is provided.
- Chunking, observes Martin (2002), provides regular milestones and presents the work as manageable in the eyes of the boy. In support, the House of Representatives Standing Committee (2002) state, "structured programs are better for boys because they like to know what is expected and they like to be shown the steps along the way to achieve success".



Chunking

Wait Time

Rules

Questioning **Systems**



Rules and Routines - Extra

Graduated

Actions

Model

and

Maintain

- Graduated Actions are the steps taken by the teacher to deal with behavioural problems.
 These steps may progressively move from low-level acknowledgement, to more direct actions and generally involve the following:
 - o Employing silence.
 - Looking at the boy.
 - Moving in the direction of the boy and maintaining proximity.
 - Making a verbal request, quietly and privately to the boy.
 - Stopping the class and confronting the behaviour directly and publically and making an
 explicit statement of the consequences if the behaviour continues. It is at this point that
 the first RTP question set could be implemented.
 - Applying a "direct cost consequence". This is a negative outcome for the boy and would typically be the asking of the second RTP question set, removal from the class or the initiation of a detention.
 - Contacting the parents should be introduced if repeated infringements of the rules becomes evident.
- Teachers must frequently reference and reiterate the rules, rather than assuming that the boys will behave.
- Behavioural requests must be kept simple, be direct and address the behaviour (action).
- Any consequence enacted by the teacher must have an obvious connection to the misbehaviour.
- Teachers must "be the adult" in every situation.
- Avoid belittlement, personal insults or humiliation.
- Avoid punishing the group for the actions of a few; boys find it inherently unfair.

- Occupying the Room means being a presence physically or visually, to eliminate the chance of behavioural problems. It involves:
 - o Moving to all sections of the room systematically and frequently.
 - Delivering messages or instructions from different locations.
 - o Being aware of the boy you cannot see when offering assistance to another individual.
 - o Making eye contact with every boy through regular sweeps of the class to catch their gaze.
 - o Getting "out from behind the desk" during instruction as it acts as a barrier.
 - Stimulus cueing involves providing a cue to selected boys before inappropriate behaviours occur. It necessitates a conversation with the boy at some stage prior to the lesson wherein a prearranged signal is decided upon between the teacher and boy.
 - The signal may be a tap on the desk or shoulder, as the teacher walks past.

Agreed Standards

Occupying

the Room

• Agreed Standards are the practices identified by the College Leadership Team that are to be implemented by all teachers, regardless of faculty or subject differences:

- Line-up outside the room before entry.
- Raise hands to speak or ask questions.
- Remain seated unless directed to do otherwise.
- Teachers to be addressed as Sir, Ms/Mrs or by surname (No nick names).
- No calling out to other students across the classroom.
- Hands-off other boys and the property of other boys.
- "Off the air" for teacher instructions, or for other student comments or responses.
- Stand behind chairs at the end of the lesson for final instructions.
- Leave the room neat and tidy.
- Rules must have positive as well as negative consequences if the sense of fairness, integral to educating boys, is to be effective. Classroom management works on the basis that the teacher reinforces the adherence with the rules and procedures not only through obvious consequences, but also through positive reinforcement of appropriate behaviours.
- Underpinning all rules and routines is the necessity to maintain the dignity of all persons. Basic manners ("please" and "thankyou"), general greetings ("Good morning" and "Good afternoon") and basic politeness are the expected norm.



E-Learning - Extra Information

- A "Mashup" is a digital summary/display of a topic containing images and text from various sources. They appeal to boys as there is no mandated structure.
- A "Wordle" is a digital tool for generating "word clouds" from text provided by the user.
 Mashups and Wordles can be generated by the boys, or prepared by the teacher and the text or images categorised by the boys under headings.
- Concealment activities hide or partially hide diagrams, text, images or symbols. Sections of
 the diagrams or text are revealed as the boys respond
 to the questions about the underlying image or text.
- Name It tasks ask the boys to provide a single word, or sentence to describe an image or object. The responses can be posted to "Collaborative Pinboards" like "Padlet", "Lino-it", or "Corkboard Me".
- Digital writing templates enable boys to identify the components to be included in particular genres.
- Hypothesis generators and "Key Term" generators, provide the basic scaffolding for the completion of procedural tasks, or when researching complex concepts.
- Flipping software enables boys to produce PDF magazines, books, comics and articles with professional style.
- Boys can design interactive games that focus on deepening their "Declarative Knowledge".
 "Digital Jeopardy, Who wants to be a Millionaire and Scatter" templates are all available as free source or through sites like "Quizlet".
- Single page presentations require the manipulation of animation, transition and slideshow functions and add an element of interest to a PowerPoint.

- Flashcards have a question on one side and the answer on the other. Digital flashcards are beneficial when revising "Declarative Knowledge", or for confirming understanding after a "Critical input experience".
- PDF and Word annotation tools enable boys to highlight text and criteria sheets, identify key points
 and note-make on an existing document or image.
- **Snipping Tools** allow boys to copy relevant sections of text, record their responses to on-line quizzes, capture reference sources and reconstruct texts or images.

• Remember:

 Audio and visual recording technology can be used as an alternative to a written explanation; particularly when the steps involved to solve a problem, or the process undertaken needs to be expanded upon.

Enhance

Practicalities

- o Pre-review, state and restrict the number of internet sites from which the boys have to find their research information.
- Provide short tasks for the boys to complete while waiting for laptops to turn on, or for web pages to load.
- Insist on laptop screens being closed or tilted down during periods of instruction.
- Supervise from the rear of the room when individual laptop work is being completed.
- Endeavour to use comparable electronic options for physical products or devices
 utilised in the classroom: rulers, magnifying glasses, note-taking sheets, dictionaries, atlases,
 calculators or compasses are some examples.
- Replicate the digital tools used as part of the learning experience in the assessment procedures and vice versa.
- Provide notice of a coming shift of activity so that the boys have sufficient time to finalise what they
 are doing e.g. "In two minutes I will ask you to join me for the next activity!" Alternatively, use a
 countdown tool prior to stating critical information.
- Simply put, "Boys like machines, boys like graphics, boys like independence and boys like new and interesting things. All these coalesce with the computer" (Hawkes, 2001).

Orientate

Culminate

• The greatest strength of information computer technology (for boys) however, lies in the area of literacy. In addition to other resources and mediums in the teaching of literacy, using ICT can complement and enhance literacy learning. Martin (2002) states, "ICT also has the potential to offer students more expanded opportunities for written communication. This may be particularly useful for students who do not have strong written skills". Hawkes (2001) supports Martin, noting "contemporary software allows boys to present written work in a legible form, provides feedback on spelling and allows easy rewrites and editing. This leads to improvements in the self-esteem of the boys".







A CATHOLIC SCHOOL FOR BOYS IN THE EDMUND RICE TRADITION

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