

Explicit Teaching & Inquiry Learning in the Big Picture Design for Learning



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INTRODUCTION

This article considers the teaching and learning methodologies of the **Big Picture Learning Design**, and explores how aspects of both **Explicit Teaching** and **Inquiry Learning** interact within the design to produce learning that is highly engaging, deeply meaningful and of an appropriate pace and cognitive load to suit the diverse needs of high school students.

Explicit Teaching is often posited as the antithesis of Inquiry Learning, however, the two are not mutually exclusive and can co-exist on a spectrum from teacher-led learning through to guided independence. This is because once students have developed initial skills and content knowledge in an area of new learning, and developed a certain amount of ‘fluency’ through practice and feedback, they are then able to apply these in increasingly independent and often novel ways. (Martin & Evans, 2018 and McDowell, 2023)

What is Explicit Teaching?

Explicit Teaching is a teacher-led approach aimed at breaking new learning into small, manageable steps which can ensure that learners in a classroom have the opportunity to grasp, practise and consolidate new information, and can also reduce the ‘cognitive load’ on students. It is characterised by teachers providing students with statements about rationale, a series of scaffolds, many opportunities for checking understanding, providing support and feedback until independent mastery has been achieved (Archer & Hughes, 2011).

What is Inquiry Learning?

Inquiry Learning, also referred to as Project-Based Learning, is an approach in which students are encouraged to learn through research, investigation and discovery with varying degrees of teacher guidance and cognitive load.

Types of Inquiry Learning can range from ‘structured inquiry’ (which involves teachers determining questions, methods and often results) through to ‘open inquiry’ where learners develop their own inquiry questions, research methods and end-products and seek input from a variety of experts.

In a Big Picture Learning setting, an open inquiry approach is used. The student’s curiosity and commitment to a topic of inquiry is the starting point for rich learning that is supported and scaffolded in a variety of ways by teachers and mentors inside and outside school which could include their advisory teacher, subject specialist teachers, TAFE teachers, and mentors in trades, industry, academia, arts, sport and business.

The experience of Big Picture Learning is that students who are deeply immersed in an understanding of concepts and practices that they have selected and pursued, often above or outside of the standard secondary education curriculum, are highly motivated to seek the knowledge and explicit guidance that they require, and to persist and achieve.

In what follows, we will consider the ways in which the Big Picture design for learning combines the best of explicit teaching and inquiry approaches to learning, in order to reflect how we learn in life and at work; through a mixture of real-world need, guidance, and intellectual curiosity.

But first, an outline of the design’s key components is required.

WHAT IS THE BIG PICTURE DESIGN FOR LEARNING?

passion

Each student has a personalised learning plan endorsed by their family and designed around their interests and passions, with links to the curriculum.



Students take courses and work on a variety of projects in areas of personal interest that they design and manage.



Students learn in small groups of 17 known as an ‘advisory’ where there is a culture of belonging, support and respect.



They also complete practical projects while on internship with an expert mentor in the community, to gain experience in a field of interest.



Students collect evidence of their learning in a portfolio and regularly present their work at a public exhibition to teachers, mentors, peers and family. This is the basis of their assessment throughout school.



The International Big Picture Learning Credential is an education passport awarded to all senior students on pathways to employment, training and university.

Learning through interests & passions

The design entails students learning through their passions and interests both inside and outside school. Their learning is not organised around subjects, timetables, multiple teachers and classrooms, or exams.

Learning in advisory

An advisory consists of 17 students and one consistent teacher over time. Each student has their own work space and a place at the common table where the group regularly comes together to learn. Each day begins with a check-in, a goal setting session, and a group discussion or instructional workshop. Students also learn to manage their own time and projects, and to evolve into independent learners. However, they are not expected to do this overnight.

Personal Learning Plans

Students develop personal Learning Plans around their interests in consultation with their teacher and family. In the early years, this occurs with a high degree of consultation between the student, their teacher and family, but as the years progress the student requires less guidance.

Leaving to learn

Students regularly learn on internships with expert mentors in the community to try out interests, develop relevant skills, and build their networks. Where desired, students also 'leave' to do school electives, external courses, seminars or workshops that are connected to their passions and interests.

Personal Interest Projects

Students work on a range of interest projects connected to their Learning Plans that they design, research and produce. These usually address several of the Learning Goals at a time.

Assessment via exhibition

Every term students exhibit their learning to a panel of teachers, peers, family and mentors. This allows them to demonstrate their strengths and the depths of their knowledge. As every student is pursuing individual interests, there are no standardised exams.

The 6 Big Picture Learning Goals

Students connect their work to 6 Learning Goals which are designed to broadly cover the key areas of learning that a young person needs to be successful in life:

1. Empirical Reasoning
2. Quantitative Reasoning
3. Social Reasoning
4. Communication
5. Personal Qualities
6. Knowing How to Learn

The International Big Picture Learning Credential (IBPLC)

Students can complete all of their secondary schooling using the forms of the Big Picture Learning design and its end-of-school credential known as the IBPLC.

Assessment is based on capturing and measuring a broader range of capacities and knowledge than is traditional.

The IBPLC transcript includes assessment results alongside personal elements such as a Video Profile and Online Portfolio. Since 2020, graduates have been successfully transitioning to employment, training and university using this non-ATAR pathway accepted by over 40% of universities in Australia.

HOW DOES THE BIG PICTURE LEARNING DESIGN APPROACH EXPLICIT TEACHING?



In conventional classrooms there is an underlying assumption that everyone needs to learn the same skills and knowledge in the same sequence and at the same pace, and that everyone has the same cognitive capacity.

In the Big Picture Learning classroom however, every student's curriculum is personalised. The student actively determines the sorts of skills and knowledge they would like or need to develop according to their personal interests and ambitions. The underlying philosophy is that learning that is personally relevant leads to high levels of motivation and engagement.

Although every student is working on diverse topics, they are not working alone in an unsupervised or uncontrolled manner. There is a constant interplay between learning as a group, and learning as an individual; between 'explicit guidance' from a teacher or mentor, and independent practice and production.

1. Presenting new information

When students first join a Big Picture academy they are inducted into the language, concepts and processes of the design. Students receive guides, templates and models for all aspects of the design. Advisory rooms display key concepts, and examples of student work in key areas.

Every day begins and ends with a check-in and check-out at the communal table where students are encouraged to clarify new learning, ask questions, share insights with peers or report on progress.

Students in a new advisory spend several weeks becoming familiar with the structures and culture associated with this new way of learning, taking incremental steps to explore their interests, to find out about themselves as learners, and to connect with the community, before being expected to propose an inquiry project, or venture towards independent learning.

2. Scaffolding learning

The role of advisory teacher is that of a generalist teacher who guides the learning of students one-by-one, helps them to develop their ideas and research, scaffolds their literacy and numeracy development, provides feedback and support, connects them to people, resources and places related to their interests, and explicitly teaches them independent learning skills.

Advisory teachers regularly plan and sequence explicit guidance sessions that scaffold students in aspects such as:

- Managing their time by day/week/term
- Planning and goal-setting
- Understanding each of the Learning Goals
- Developing projects
- Writing proposals, presentations, book reviews
- Writing for varied purposes and audiences
- Constructing Learning Plans
- Public speaking
- Preparing for exhibition four times a year
- Learning to express and critique an argument
- Making contact with mentors in the community
- Curating their best work in an online portfolio



These scaffolding sessions might be scheduled workshops for the whole advisory, for a small group of students, or one-on-one sessions with individual students.

For example, when a student is preparing to contact a new mentor to ask about setting up an internship, they will be supported to learn about telephone and email scripts, appropriate tone and vocabulary, the language of explanation and persuasion, initiating and concluding a formal conversation, etc.

At other times when learning research techniques, students will be shown how to construct a survey, undertake a literature review, design an experiment, collate and analyse data or annotate research papers.

At the same time, students are regularly learning outside the classroom.

3. Learning through explicit teaching outside school

The Big Picture Learning Design is unique in its mandate that students leave the classroom to learn through internships in areas of interest, one day a week, every week of the school year. Working alongside an expert mentor (who may be a tradesperson, business operator, professional, artist, academic or a specialist subject teacher from the mainstream or TAFE), students receive much explicit instruction and feedback, and have the opportunity to learn by doing in a real-world context.

In some cases they are first learning by 'doing' which later leads to 'knowing' the specialist language and theory associated with that field.

Such learning alongside mentors helps students to learn specialist content, knowledge and skills pertinent to their fields of interest.



For example, **Kristen** learnt about the life cycle of seahorses by working in an aquarium with her mentor Chris who taught her about breeding their food sources, feeding, cleaning their tanks, and reproduction. The mentor also passed on his passion for marine conservation.



David, now in his final year of medicine, learnt about surgery from his mentor Jill, a surgical assistant who taught him about hygiene protocols, body systems, surgical techniques and arranged for him observe operations on patients. She also suggested topics and concepts to research back at school to prepare him for his experiences in the operating theatre.



Toby, a Year 10 student said that he benefits from opportunities on his aquaculture internship to learn hands-on and develop understanding, before approaching texts on the topic. He learnt to gut fish in under 10 seconds and about the food safety standards associated with smoking, storing and packaging fish for public consumption.

“It was just a different style of learning. I could do my stuff at my own pace and get help when I needed to. It was great to get out on internship and get hands-on because some kids can’t learn without hands-on activities too, sometimes.”

Learning outside school is particularly important for students interested in emerging industries not addressed by traditional vocational training providers, or in fields not easily accessible to school students, such as psychology, surgery, aviation, or radio broadcasting.

Big Picture Learning is nimble and agile, able to match students to adults in the world outside school who can explicitly teach students about the latest thinking and technology, as and when they need it.

Students are also afforded many opportunities to access traditional explicit instruction via external seminars and workshops, online courses, or mainstream electives.



4. Providing regular feedback

Students regularly receive constructive feedback and guidance about their learning (a key component in the explicit teaching tool bag) at scheduled one-on-one meetings with their advisory teacher, during Learning Plan meetings with their teacher and family, while on internship with mentors, and at exhibitions where they present what they have learned each term to a panel of peers, teachers and family members.

After an exhibition, a student has a debriefing with their advisory teacher to consider feedback that was received, to decide what to act upon and to unpack any other challenges or opportunities that arose. They also receive a narrative written by their advisory teacher, that considers how well they have covered the Learning Goals and any areas for improvement.

By the end of Year 10, most students have learned a lot about their learning capacities, their interests, their personal goals and how they are changing as young people, all of which has made their learning highly relevant and interesting to them.

5. Using new measures of assessment

In a personalised approach to learning, there are no standardised test or exams to measure and monitor progress (though a student can seek out such tests by choosing to study board-approved subjects in mainstream if it is related to their field of interest).

Instead, in Big Picture settings, students exhibit their learning to panels of family, peers and teachers each term where the robustness of their knowledge is questioned and tested, and their communication skills are observed.

In Years 11 and 12, students are assessed against a set of developmental progressions based on the quality of their work over time. They are not compared against each other, nor is assessment limited to a single assessment event. Samples of their work form the basis of assessment judgements and are used as evidence.

With the advent of the **International Big Picture Learning Credential (IBPLC)**, students are emerging well-prepared to transition to destinations after school. Many are gaining entry to competitive university courses in Biomedicine, Law, Physiotherapy, and Science without requiring an ATAR. This is because they can demonstrate deep and sustained interest, specialist knowledge and practical experience in specific fields of interest that are a good match to degree courses on offer.

Preliminary findings from a national longitudinal study led by Pro Vice Chancellor John Fischetti, of Human and Social Futures at the University of Newcastle, indicates that for Big Picture alumni who have entered tertiary study:

1. The importance of the support of an advisory teacher as a guide, coach and mentor to shape and mould each student's personalised learning journey in real time and without prescription was a significant factor in shaping participants' trajectories.
2. Participants noted that the confidence, self-efficacy, and self-regulation that each had developed as a result of being in charge of their own learning journey was significant.
3. The opportunity to build strong relationships/connections/support systems with a range of adults (mentors, teachers, and family) and peers builds confidence.
4. The experience that comes from overcoming challenges both before and during the Big Picture journey by doing real work for real purposes with real guidance is significant for all participants.

Big Picture students who have gone on to complete university degrees where they encounter lectures and tutorials that tend to be less structured than is the norm in secondary schools, find that the guided independence aspect of the Big Picture Learning design has actually equipped them very well for tertiary study. (Prof Fischetti J. et al – *Graduate Research Project*, 2023)



Former student **Savannah**, whose Senior Project in Year 12 involved an experiment to track and analyse biodiversity of bird life in three national Parks using bio-acoustics, explains how in school she would discuss her learning at a weekly check-in with her advisory teacher where the teacher's questions helped her to unpack her thinking, illuminate avenues of inquiry, and take concepts and break them down into manageable chunks. Savannah also received explicit guidance around writing scientifically, following a method, making sense of data, and more.

Now at university studying Environmental Science, Savannah reflects upon how able she now is to drive and manage her learning at university:

"I feel that I am never stuck; I just haven't asked the right question or found the right person to help me."

6. Integrating student wellbeing and learning

Positive relationships, sense of purpose and wellbeing are an intrinsic part of the way schooling is organised in Big Picture schools. Being explicitly taught how to manage their own time, organise and plan their work and evolve into independent learners, is a significant factor in how the Big Picture Learning design creates active and confident learners.

Learning through personal interest (though always within a supportive learning community), assists students to rekindle an enjoyment of learning and a willingness to attend school.

All of these factors free up capacity cognitively and emotionally for a student to focus on their learning.



This is exemplified by a student such as **Anika**, who started with a passion for animals and set out to research their behaviours, anatomy and genetics. She identified questions of interest with guidance from her teacher and sought out mentors to build up her content knowledge.

She regularly read and wrote about the topic, chose to study the elective Biology in the mainstream, and with help from her Biology teacher, learnt to structure a scientific report.

Out of school she obtained practical experiences in a veterinary clinic, alongside a veterinary nurse and doctor. She wrote reflective journal entries about her experiences, and completed Certificates II and III in Animal Studies.

In the senior years of high school she produced a scientific thesis about the impact of dog health on people living in remote Indigenous communities. After completing a university degree in Animal Health Sciences, Anika was employed in her dream job as a trainer of guide dogs.

CONCLUSION

This article has explored the ways in which the Big Picture Design for Learning exemplifies aspects of both Explicit Teaching and Inquiry Learning.

There are many factors at play and at stake in assisting young people to learn, and the flexibility to move up and down the spectrum from a controlled Explicit Teaching approach through to a more independent Inquiry approach is essential in order to expose learners to novel situations and information, provide opportunities to develop and apply knowledge and skills, while always considering the role of motivation, agency and wellbeing in a student's disposition to learn.

Throughout its 18 year history in Australia, BPLA has seen how its new ways for organising school, new forms for structuring learning both inside and outside school, and new measures for assessment with its emphasis on personal relevance and the agility to respond to students where they are at, deeply engages people in learning, and assists them to make successful transitions upon graduation.

GLOSSARY OF TERMS

Explicit Teaching/Instruction	An approach to teaching which breaks down knowledge and facts into manageable chunks, models each step and checks students' understanding. These practices are associated with theories about information processing and cognitive load.
Inquiry learning	An approach to teaching and learning in which students are encouraged to actively construct knowledge through research and problem-solving with varying degrees of teacher guidance.
Open Inquiry	A form of inquiry-based learning where learners are encouraged to develop their own questions, develop investigative methods and do the research/ learning and to present their results.
Structured Inquiry	A form of inquiry-based learning where teachers determine the question and method of achieving the result and the learners work to produce the result and to provide an explanation for it based on evidence collected during the process.
Direct Instruction	This was a suite of resources developed in the USA in the 1960s which is highly scripted and follows a pre-determined sequence of skill acquisition sequence. Also a term currently used in the USA to mean the same as explicit instruction.

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